

Power Potential Regional Market Advisory Panel

06 January 2021

Participants:

Panel Chair	Dame Fiona Woolf	Chair, Regional Market Advisory Panel
Panel Members	Alastair Martin	Flexitricity
	John O'Toole	Gresham House
	Fernando Morales	Highview Power
	Goran Strbac	Imperial College London
	Flo Silver	Ofgem
	Alex Howard	Origami Energy
	Sammy Blay	Pexapark Limited
	Andrew Robbins	RWE
	Ned Ponsonby Sam Collier	Zenobe Energy
Representing National Grid ESO	Julian Leslie Colm Murphy	Head of Networks Electricity Market Change Delivery Manager
Representing UK Power Networks	Matt White	Lead Power System Development Engineer
Power Potential project team attendees	Dr Biljana Stojkovska David Preston Dr Rita Shaw Kellie Dillon Kameesh Phillips Mike Robey Enda Mimmagh	Project Lead, National Grid ESO Commercial Lead, National Grid ESO Project Lead, UK Power Networks DER Relationship Manager, UK Power Networks Senior Commercial Analyst, National Grid ESO RMAP Secretariat, National Grid ESO ZIV Automation (DERMS technology provider)
Apologies	Julie Finkler, BEIS Ian Larive, Low Carbon Louise van Rensburg, Ofgem	Chris Buckland, Lightsource BP Rickard von Poten, Lightsource BP Ian Cameron, UK Power Networks Dimitrios Agriostathis, Vattenfall

Notes and actions:

Progress on previous actions

Action: RMAP members to let Mike or Kellie know if they are not on the e-newsletter distribution list and would like to be added.

Colm requested inclusion on the list and Sammy's details have been updated (resolved).

Wave 1 Optional Trials

Rita and Biljana presented slides 04-28.

Alastair queried the data loading issue and whether 10 second updates is achievable. Alastair asked whether there were limitations on the number of sites that could be supported per Grid Supply Point (GSP)

Rita noted that this is not considered a barrier to the Wave 2 trials or to future 'business as usual'. The project team have already implemented changes to the DERMS design and associated infrastructure ready for Wave 2 with up to 10s updates, to better manage and

handle the volume of data traffic.

Action: Rita believed this was in the hundreds or thousands (of sites per GSP) and would check and confirm this.

Biljana highlighted the need to see improvements in the speed, accuracy and consistency of DER service delivery.

Alastair asked if the stability issue was associated with PID (proportional integral derivative) or a proportional controller?

DERMS uses a proportional controller with the DER assumed to have a PI controller. Rita noted that oscillations were not observed during commissioning with a single voltage set point, but this had arisen during the trials when the service was running and set points are updated. This is being investigated with DER and DERMS.

Alastair raised whether the inconsistency in delivery might be associated with teething of a new service or something else.

Biljana agreed that it appeared to be related to the newness of the service.

Alastair reflected that service delivery experience, familiarisation and some coding modifications sounded all resolvable.

Biljana and Rita agreed.

Ned requested individual performance data for Zenobe's site, requested vs actual.

Biljana confirmed that this would be shared individually and that the project team will arrange meetings with each DER to review.

Rita explained we have already followed up with DER on multiple individual issues, such as when we saw DER coming out of service, but not on overall performance.

Action: Project team to follow up with DER to explain their performance results (Wave 1 and updates in Wave 2), to provide further insight for DER to improve in Wave 2

Sammy asked whether any technology-specific issues had been identified.

Biljana emphasised that the presentation was technology agnostic and that some issues may be technology specific and offered to provide more information to Sammy offline.

Rita also noted that the issues were very site-specific.

Sammy queried whether there had been any concerns with Remote Terminal Unit (RTU) performance.

Rita reported there had been no issues with signal transfer through RTUs.

Andy acknowledged the time saving resulting from the bulk upload function and thanked the project team for developing this.

Slide 35

David explained the End of Service report will be shared shortly after the end of Wave 2

Wave 2 Trials

The Wave 2 commercial trial service delivery began at 11am today (during the meeting) and was recognised as another important milestone for the project.

David presented a summary of the Wave 2 commercial trial approach and the intention for market reporting during the trials. The project team will email market reports to DER trial participants directly, rather than publishing online, given the limited number of trial participants.

Slides 38 & 39 – Market Report template

Action: DER invited to feedback on proposed content by emailing:

box.PowerPotential1@nationalgrid.com and powerpotential@ukpowernetworks.co.uk

David noted the units used in the right-hand column within the table on slide 39 were under review and may be amended to £ or £/Mvar hour, and that budget tracking may be

removed.

Ned queried whether the project team expected to spend all of the DER trial participation payment budget.

David emphasised that the trials were for price discovery and could not guarantee that the budget would be exhausted. The intention is not to create a race to the ceiling price (that National Grid, Electricity System Operator (NGESO) would be prepared to pay).

Ned noted that the counterfactual does not have a ceiling or TAC (Target Average Cost) and that the existence of a ceiling prevents true price discovery.

Matt and Rita raised NGESO counterfactuals and queried whether NGESO could share the prices of asset-based alternative solutions.

David noted that the Wave 2 trials are ultimately comparing the reactive power service with a building a network asset solution. Data relating to such potential counterfactuals exists within documents such as the [Electricity Ten Year Statement](#) and network owner RIIO-2 proposals¹. There will also potentially be similar assets coming forward within the stability pathfinders² but these will not be known during the Power Potential trials. The Pathfinder Project has a static requirement so is not directly comparable.

For the market reporting template Fiona highlighted the importance of establishing both what information can be provided and also what response is needed from the market to create the competitive environment and transparency. Another way of looking at this is understanding what has been left out of the template.

David advised that the Market Report will be drawn from NGESO's Platform for Ancillary Services (PAS) system data, which is aggregated at GSP level. It will share the TAC range and the reporting will illustrate what behaviour emerges (from DER and NGESO) during the trial.

Kellie asked if DER were happy with this data being presented at a GSP level noting that the price reflected may not be an average price across multiple DER bids where a single DER is participating in the trial at a GSP.

Action: David indicated that he would be happy to have views from DER to confirm that reporting average price per GSP is OK. Kellie offered to follow up on this point with each participating DER.

The project team has agreed that feedback on this and the other aspects of the Market Report will be sought when the initial Market Report is emailed to DER on 11th January. We should also reiterate that feedback on any aspect of the Market Reporting is welcome throughout the trial as providers become more informed through experience.

Ned and Andy confirmed that they needed to further review the market report with example data from the trials before providing feedback.

Reactive Power Operational Requirement Scenarios – slide 41: Rita queried whether the presented scenarios will change the volume of service that NGESO procures.

Biljana confirmed that the scenarios change network requirements. Network scenarios are indicative and show how NGESO will simulate the market during the trials. Network scenarios give indication of system need, but do not give indication for the price or any change in how bids will be assessed.

Slide 42 – DER ranking and NGESO procuring DER service. Rita asked whether the volume

¹ <https://www.nationalgrideso.com/our-strategy/riio/riio-2-final-business-plan> and <https://www.ukpowernetworks.co.uk/internet/en/about-us/RIIO-2/>

² <https://www.nationalgrideso.com/research-publications/network-options-assessment-noa/network-development-roadmap>

requirement will be shared.

David advised this will not be shared. NGENSO will consider the requirement, what has been nominated and the TAC alongside the project budget.

Ned asked whether DER would know the effectiveness of other participating DER.

David advised this will not be shared. DER will receive details of their own effectiveness, but not of others. Rita noted that the project team had taken advice on this.

Fiona asked if there is only one way of calculating effectiveness.

Rita responded that this is an objective rather than subjective calculation, based on load-flow with a specific network model under defined network conditions but had only small variation with network loading. Expect this approach needs to be clear in a BAU application.

Action: UKPN project team to share with each DER their effectiveness percentage at their associated GSP (as defined in Market Procedures).

Effectiveness means the expected MVar at the GSP e.g. if DER provided 1 Mvar at their point of connection and were assigned an effectiveness of 80%, NGENSO would see 0.8Mvar when assessing the DER bids on the PAS system at GSP level.

Action: Project Team to provide background to RMAP on how effectiveness calculated.

Rita asked if DER understood the utilisation factor and how this was being applied.

David advised that market reports would look ahead two weeks (although an interim approach will be provided during this first week). It will be distributed via Kellie on email to participating DER.

Fiona raised how RMAP will be kept informed and recommended focussing on the DER participants initially during this commercial trial and then bring in RMAP fortnightly updates.

Rita noted that the project team has confirmed the Wave 2 service windows up to 18 January.

Action: Mike to schedule next RMAP meeting