

Power Potential Regional Market Advisory Panel

29 July 2020

Participants:

Panel Chair	Dame Fiona Woolf	Chair, Regional Market Advisory Panel
Panel Members	John O'Toole	Gresham House
	Fernando Morales	Highview Power
	Goran Strbac	Imperial College London
	Alex Howard	Origami Energy
	Rickard von Poten	Lightsource BP
	Sammy Blay	Reactive Technologies
	Andrew Robbins	RWE
	Dimitrios Agriostathis	Vattenfall
	Ned Ponsonby	Zenobe Energy
Representing National Grid ESO	Graham Stein	Network Operability Manager
Representing UK Power Networks	Ian Cameron	Head of Customer Services and Innovation
Power Potential project team attendees	Dr Biljana Stojkovska David Preston Dr Rita Shaw Kellie Dillon Mike Robey	Project Lead, National Grid ESO Commercial Lead, National Grid ESO Project Lead, UK Power Networks DER Relationship Manager, UK Power Networks RMAP Secretariat, National Grid ESO
Apologies	Julie Finkler, BEIS Alastair Martin, Flexitricity Ian Larive, Low Carbon	Chris Buckland, Lightsource BP Louise van Rensburg, Ofgem Frank Gordon

Notes and actions:

2	<p><u>Progress on previous actions</u></p> <p>Action: ESO Team to publish the Market Trial example ahead of the Wave 2 trials Published at https://www.nationalgrideso.com/document/173971/download</p> <p>Action: Share revised delivery forecast for DER payments</p> <p><i>Previously shared, 13 May:</i> Based on a 1st September start for Optional Trials, this would shift the timescale for the participation payments to early November 2020 - early January 2021. For a DER providing 24/7 availability in the trials, the first payment would be in the first week of November. The exact payment timings would depend on when DER offer sufficient availability to meet the payment thresholds; the project team can advise any DER based on their specific circumstances.</p> <p>The timescale for payments for the Wave 2 Market Trials would be in line with accepted availability and utilisation in a given month being paid 24 working days following month end. The calculation and timing of trial payments is set out in the DER Framework Agreement and Market Procedures.</p>
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Project update

Rita presented slides 5-17 covering the project's progress and assessment of the confidence and risks associated with achieving the planned 01 September Wave 1 Optional Trial start date. A final checkpoint (go / no-go for 01 September Optional Trials start) takes place on 14 August. That decision will consider:

- Is the system on track to go live in w/c 24th August? e.g. DERMS 18.2 testing is on track
- How many DER have commissioned (expect 3), and timescale/ risks of remaining commissioning.
- How many DER have passed Mandatory Trial, and timescale/ risks of achieving 4 before 1st September.

Ned responded that the presentation was self-explanatory.

John welcomed the proposed weekly updates between now and the optional trial start to keep RMAP members informed of progress and confidence in the 01 September start date. John felt the 14 days' notice was sensible.

Kellie queried if DERs were satisfied with the approach or if they needed any more support from the delivery team.

Andy appreciated the regular contact and flagged the need to continue to liaise with their SCADA engineers to ensure they are both ready and available when required.

Fiona challenged Rita to summarise overall confidence in readiness. Rita summarised 80% confidence in the software, with a higher level of risk in getting DER through commissioning and Mandatory Trials in time for 01 September.

Fiona queried the status of DER user training on the DERMS platform, reported as 10 out of 29. Kellie noted that this has now grown to 13 users. Rita noted risk is for DER to assess whether they have sufficient registered users to cover sickness, holiday etc.

Biljana noted 100% confidence in the DERMS system developed by ZIV and that the concern is related to DERMS integration with other systems e.g. PowerOn-RTU-DER and PAS. Also, the risk with Mandatory Trials is not on the duration of the trials, but the time needed to resolve any issues that may be identified.

Wave 1 Optional Trials

Biljana presented slides 18-20. Rita noted that overall learning from the Wave 1 trials would be published and Biljana clarified that the slides presented the additional information that would be reported on a fortnightly basis, specific to each participating DER.

Wave 3

Biljana introduced and David presented the decision to not proceed with the Wave 3 trials. The project is forecast to exceed its budget by more than £1m, which the two network licensees had agreed to finance, but it was necessary to limit the cost overrun and ensure that the project focuses on the objectives of the original project. This can be delivered through the Wave 1 (technical) and Wave 2 (commercial) trials. Biljana asserted that the budget for payments to the DER participants was protected and continued to be available to the trial participants. As too, is the budget for the remaining software development.

David also highlighted that due to the wider delays in the project the opportunity for learning in Wave 3 was reduced by a reduction in the time available (reduced from 6 to 2 weeks) and

lower likelihood of system conditions facilitating Wave 3 opportunity during winter periods (late March). He also noted NGENSO control room needed to prioritise managing post-COVID impacts.

Ned questioned whether the project's investment in the software and UKPN-NGESO system communications was now a sunk cost. Will it be thrown out or used in the future? David stated that we hope to take forward many elements. Biljana noted that learning has been shared with Ofgem in July and that the project has generated lots of transferable learning (design of Virtual Power Plant (VPP) is easily transferable to any other part of GB network) relevant to other regions within Great Britain.

Sammy queried how, without Wave 3, a future commercial service with networks assets be judged? What about bidding behaviour? David restated that the project has had to focus on delivering the bid learning in the current situation.

Andy stated that this decision was clearly disappointing to say the least. Everyone has invested time and effort in the project and he'd like to think that embedded assets can compete with incumbent providers. The comment made about size of service provider is not necessarily correct when location is also considered. The comment about the additional cost of Wave 3 processes doesn't look strong; Wave 3 is not that different from Wave 2.

David responded that there is currently no concept of economic dispatch of reactive power in the control room, ESO Control Room systems would alter for Wave 3 and this required input from a variety of teams. Biljana noted the teams that would be affected including Operability, Network Access Planning, Voltage Strategy, Electricity National Control Centre and it had been estimated that Wave 3 would incur an additional £80k - £100k of costs. Biljana also emphasised the need for the project team to focus on delivering everything that is still required for the 01 September start to the Optional Trials.

Andy acknowledged that keeping Wave 1 and 2 trials going is important to deliver learning. But he emphasised that as a strategic project he would have thought that the benefits of seeing the project through to Wave 3 would be seen by the network licensees as a key string to the bow of ESO-DSO co-ordination in a low carbon network. You would think you would carry on with that learning and development e.g. with COVID-19, ESO had to rush to bring in Optional Downward Flexibility Management (ODFM). Continuing to Wave 3 would demonstrate ESO and UKPN commitment to taking things forward.

Biljana stressed that it was the intention to do Wave 3 while project was in good financial situation and not under time pressure. However, the significant risk on starting on 01 September and delays of 18 months of trials start contributed to this challenging and not an easy decision.

Ned noted that Wave 3 has additional costs and that Power Potential project may not be the cheapest solution to set up, but it sounds like ESO will continue to rely on conventional fossil fuel generation to provide reactive power. Has ESO analysed the difference in costs and savings? It could be cheaper to provide the service from lower cost generators and rebalancing should be added to the cost. David responded that the Mersey pathfinder is providing insight on a static service, but for dynamic voltage control this would be a theoretical study. Ned stated that it should be possible to study South East requirements, balancing costs, ORPS (Obligatory Reactive Power Service) costs versus other options.

Ned noted that tenders such as the Mersey Pathfinder take longer to run than bidding for dynamic reactive power close to realtime. David reflected that most potential embedded providers in the long-term Mersey pathfinder had not been able to continue in the process to the commercial stage due to DNO level restrictions (i.e. power factors being applied or lead

times for reinforcement).

Ned stated a market based approach has got to be preferred, as running a tender process like Mersey takes time, and the Power Potential software architecture for the market approach has now been developed. David emphasised that this would require significant ESO Control Room changes to facilitate (such as the introduction of systems to allow economic dispatch), as well as potential changes to the ORPS regime which may be part of any future reactive market reform review.

Sammy questioned whether UKPN intended to take forward any of the Power Potential platform for flexibility management at a DNO level? For example, RTU – DER to manage active power constraints? It's an example of an advanced whole-systems platform, offering services to GSP level. Ian stated that UKPN's ultimate aim is to continue unlocking value for its customers, and that UKPN is ready to deliver Power Potential and other services as required. UKPN integrated its Active Network Management programme and Power Potential delivery to get the benefit from this common approach. So, the simple answer is yes, the Power Potential approach will stay in place for the future.

Fernando asked what synergies existed between Power Potential and the ESO's Black start project with Scottish Power Energy Networks. He highlighted it could be useful to look for synergies and potential opportunities for UKPN. Biljana confirmed that there was transferable learning as voltage control and droop control had similar requirements. This had been shared with Ofgem two weeks ago.

Fiona summarised that the removal of Wave 3 was a disappointment for those that have been following this project over time. For project delivery, weekly reports to RMAP are welcomed and that RMAP looked forward to receiving the outcome of the Steering Committee's 14 August go / no-go decision to proceed to Optional trials on 01 September. Fiona requested that Kellie continues to share the updates with all RMAP members.

Action: Project Team to circulate weekly updates to RMAP members

Action: Project Team to share outcome of 14 August go / no-go review.

Any Other Business

Action: Mike to schedule next meeting for October, once initial Wave 1 Optional Trial results are available.