

## Power Potential Regional Market Advisory Panel

Outcomes, 27 September 2019

### Participants:

Panel Chair	Dame Fiona Woolf	Chair, Regional Market Advisory Panel
Panel Members	Julie Finkler	BEIS
	Andrew Robbins	Innogy
	Andrew Kriss	Lightsource
	Ian Larive	Low Carbon
	Louise van Rensburg	Ofgem
	Frank Gordon	Renewable Energy Association
	Dimitrios Agriostathis	Vattenfall
	Toby Reid	Veolia
	Ned Ponsonby	Zenobe
Representing National Grid ESO	Paul Lowbridge	Balancing & Revenue Services Manager
Representing UK Power Networks	Ian Cameron	Head of Innovation
Power Potential project team attendees	Dr Biljana Stojkovska David Preston Dr Rita Shaw Mike Robey	Project Lead, National Grid ESO Commercial Workstream Lead, National Grid ESO Project Lead, UK Power Networks RMAP Secretariat, for National Grid ESO
<b>Apologies</b>	Hanae de Rochefort, Association for Decentralised Energy; Doerte Schneemann, BEIS; Alastair Martin, Flexitricity; Fernando Morales, Highview Power; Goran Strbac, Imperial College London; Alex Howard, Origami Energy, Sammy Blay, Reactive Technologies; Sotiris Georgiopoulos, UK Power Networks	

<b>ACTIONS</b>	
	SLIDES CIRCULATED 30 September
1	Schedule a webex call 1 week before Mandatory Trial start to confirm participants are ready and understand activities and responsibilities.
2	Project Team (through Kellie Dillon, UKPN) to schedule 1-2-1s with each DER to confirm arrangements, approach and data for the Mandatory Trials.
3	Project Team to communicate the trial start dates to the wider market.
4	Project Team to schedule a webex call to go through the Optional Trials in the first or second week of December, to allow time to address user feedback afterwards.
5	Send Reactive Commercial Procedures to Louise. <i>(Post-meeting note: emailed 30 Sept and available at: <a href="https://www.nationalgrideso.com/document/140786/download">https://www.nationalgrideso.com/document/140786/download</a>)</i>
6	Project team to continue exploration of options to include synchronous plant in the trials and update RMAP on progress.
7	NGESO to respond to request for DER to see market information to inform their commercial approach.

<b>ACTIONS</b>	
8	Project Team to review opportunity to provide IDD (Interface Design Description) at a later date, noting this would be an additional cost but enable more automation in DER control room.
9	Project Team to provide an update on the project plan at next meeting.
10	Project Team to confirm whether multiple accounts per DER will be provided or multiple access to single DER access account.

### Panel discussion

<b>Agenda Item</b>	<b>Panel Members</b>	<b>Panel comments and project team responses</b>
System readiness	DA  FW  LvR  JF PL  DA	<ul style="list-style-type: none"> <li>• Settlement functionality not tested yet? <ul style="list-style-type: none"> <li>○ A manual solution will be applied to the Mandatory and Optional Trials if the automated solution is not in place in time.</li> </ul> </li> <li>• What type of defects remain? Gremlins to iron out or issues the project team are really grappling with? <ul style="list-style-type: none"> <li>○ Additional time has been built in to the plan to accommodate an additional release of DERMS to resolve defects.</li> <li>○ The minimum viable product for DERMS in the Mandatory Trials is in place and recent performance issues are being resolved.</li> </ul> </li> <li>• Clarify the trial phases <ul style="list-style-type: none"> <li>○ Wave 1 Mandatory Trials (of the reactive and active power service, short trials with each individual DER within a 2-week period)</li> <li>○ Wave 1 Optional Trials (reactive power only for 11 weeks, 24 hours per day, 7 days per week)</li> <li>○ Wave 2 Commercial trial (DER compete against other trial participants)</li> <li>○ Wave 3 Market trial (DER compete against all other options available to NGENSO)</li> </ul> </li> <li>• Clarify the reason for the delay; technical or DER readiness? <ul style="list-style-type: none"> <li>○ Technical issues</li> </ul> </li> <li>• Please share details of unexpected issues that have arisen and expected issues that have not been significant. <ul style="list-style-type: none"> <li>○ A change to the Framework Agreement was required, that once DER availability is accepted, if an issue occurs with the system, will enable dispatch from a Control Room Engineer's screen. Project team do not intend to use this approach, but it will allow the service to continue in limited circumstances if an unexpected issue arises.</li> <li>○ PAS – DERMS connectivity has taken time. Testing is complete with simulated functionality and the team are planning to prove functionality week commencing 30 September.</li> <li>○ Set up has been challenging for security configurations to be able to receive and send specific messages. This needed additional specialist resource and the fault-finding activity was challenging. All issues now resolved.</li> <li>○ Some updates were required to the interface schedule and the lab tests have been completed for all DER that provided controllers.</li> <li>○ New cabling has been installed between UKPN's RTU at the DER site and the DER control system.</li> <li>○ Integration has presented lots of challenges, more than the team had envisaged and this needed external help to be brought in.</li> </ul> </li> <li>• Great benefit in being able to control this remotely. Will this be expanded? <ul style="list-style-type: none"> <li>○ That is the ambition, but the trials are key to inform this for distribution connected assets. There is an existing approach for transmission assets.</li> </ul> </li> </ul>

<b>Commercial update</b>	JF LvR  AR	<ul style="list-style-type: none"> <li>• Amendment to the Framework Agreement. <ul style="list-style-type: none"> <li>◦ 1 DER has already signed the variation to the Framework Agreement.</li> </ul> </li> <li>• Can DER participate in other services? <ul style="list-style-type: none"> <li>◦ Yes.</li> </ul> </li> <li>• Is this financially more attractive than STOR? <ul style="list-style-type: none"> <li>◦ STOR is an active power service, whereas Power Potential is primarily a reactive power service and ideally these products will be stackable opportunities for DER. For active power, STOR is a mature market with high levels of liquidity whereas Power Potential will be in a trial phase. STOR has an availability component and utilisation rates set months in advance. In effect, any active power utilisation (within Power Potential) is likely to be considered against the rates available within the balancing market and from reserve providers.</li> </ul> </li> <li>• During the Mandatory Trial, are DER compensated if they are removed from delivering another service? <ul style="list-style-type: none"> <li>◦ Yes, for active power.</li> </ul> </li> </ul>
<b>Mandatory Trial</b>	DA  NP  AR	<ul style="list-style-type: none"> <li>• What about active power during the optional trials? <ul style="list-style-type: none"> <li>◦ Active power service is not active during the Optional Trial, but a screen will ask DER to provide their expected operating level during the Optional Trials.</li> </ul> </li> <li>• Will DER user screen show NGENSO need? <ul style="list-style-type: none"> <li>◦ No. Agree to provide demonstration of the User Interface during AoB of this meeting.</li> </ul> </li> <li>• Need to have real users testing the user interface.</li> <li>• Project Team to notify the market of the trial start dates.</li> <li>• Schedule a webex call 1 week before Mandatory Trial start to confirm participants are ready and understand activities and responsibilities.</li> <li>• Project Team (through Kellie Dillon, UKPN) to schedule 1-2-1s with each DER to confirm arrangements, approach and data for the Mandatory Trials.</li> <li>• Project Team to schedule a webex call to go through the Optional Trials in the first or second week of December, to allow time to address user feedback afterwards.</li> </ul>
<b>Synchronous plant</b>	IL  FW TR FW  FW	<ul style="list-style-type: none"> <li>• Note that other synchronous plants have previously self-excluded from participating due to the high technical cost of participating and the current exploration of alternative approaches may change this.</li> <li>• Agree that maintaining a non-discriminatory level playing field is key.</li> <li>• Cost and resource are issues preventing being ready in time for trial start.</li> <li>• If commercial reality is insoluble, it will not be easy to resolve the technical issues.</li> <li>• Recognise this needs urgent consideration and ideally we would like to see Veolia and other synchronous plants participating in the trials. <ul style="list-style-type: none"> <li>◦ Project team to continue exploration of options to include synchronous plant in the trials and update RMAP on progress.</li> </ul> </li> </ul>
<b>Previous actions</b>	LvR IC	<ul style="list-style-type: none"> <li>• Project Team to review opportunity to provide IDD (Interface Design Description) at a later date, noting this would be an additional cost but enable more automation in DER control room.</li> <li>• Project Team to provide an update on the project plan at next meeting.</li> <li>• Origami presentation actions: Asset register discussed at ENA and feedback provided to Origami.</li> </ul>
AoB	NP/IL/AR	<ul style="list-style-type: none"> <li>• Would be good to have visibility of the DER effectiveness and prices against other approaches like statcoms and large generators. <ul style="list-style-type: none"> <li>◦ The project will publish market information during wave 1 ahead of the wave 2 trials.</li> <li>◦ The project team will provide each DER with their effectiveness (Mvar at their point of connection versus Mvar at the Grid Supply Point). Note that there is not a market during the wave 1 trials.</li> </ul> </li> </ul>

	NP	<ul style="list-style-type: none"> <li>○ NGESO to respond to request for DER to see market information to inform their commercial approach.</li> </ul>
	NP	<ul style="list-style-type: none"> <li>• Note that for alternative transmission service providers the Obligatory Reactive Power Service (ORPS) cost is not the only cost to NGESO as there will also be related Balancing Services MW costs; how will these be considered against the cost of local DER reactive power costs?</li> <li>• What volume of Mvar will be within the project? Enough to be of interest? <ul style="list-style-type: none"> <li>○ 140 Mvar range (-70 / +70 Mvar), so sufficient to be of interest.</li> <li>○ Most participants are connected to 2 of the Grid Supply Points within the project area.</li> </ul> </li> </ul>
	AR	<p><b>Ad hoc demonstration of User Interface</b></p> <ul style="list-style-type: none"> <li>• Important to get real users to access the user interface and road test it.</li> <li>• Clarify “P” (active power / MW) and “Q” (reactive power / Mvar) <ul style="list-style-type: none"> <li>○ P service always overrides Q (for example if offering FFR at the same time).</li> </ul> </li> <li>• DERMS user interface access accounts need to be set up for each participating DER. <ul style="list-style-type: none"> <li>○ Project Team to confirm whether multiple accounts per DER will be provided or multiple access to single DER access account.</li> <li>○ Will require a default contact / supervisor access at each DER.</li> </ul> </li> </ul>
	AR	
	FW	
<b>Close</b>	FW	<ul style="list-style-type: none"> <li>• Next meeting mid-late January 2020</li> </ul>