

**Meeting Title:** Generator Owner Operator Forum  
**Meeting held on:** 8<sup>th</sup> October 2018, UKPN, Newington House, 237 Southwark Bridge Road, London, SE1 6NP.

**Attendees:** Customers:

Tim Kirby – Ecogen  
 Aiden Morris – AMP  
 Toby Read – Veolia  
 Paul Swinney – Kiwi Power  
 Naveed Iqbal – Strathclyde University  
 Federica Rappoli – Light Source  
 Xuna Li –Sun Credit  
 Tim Jones – GTC  
 Khaslil Bijle – Sweco  
 Russel Fleetwood – TFL  
 Bob Harris – TFL  
 Michael Scott-Robinson – TFL  
 Mayokun Fowler – Sun Credit  
 John Hill - Ecotricity

UK Power Networks

Richard Wilson (RW) – Outage Planning Manager, Network Operations  
 Sam Wagiciengo – EHV Maintenance Manager (SPN) Network Ops  
 Steve Halsey – Distributed Energy Resources Manager, Connections  
 Nigel Turner – Distributed Energy Resources Analyst, Connections  
 Bill d’Albertanson – Emergency Planning Manager

Number	Item
1	RW welcomed everyone to the meeting and explained how importance of UKPN communicating with our Generator/key stakeholders and welcome feedback to help us improve our services etc.
2	<p><u>G59/99</u></p> <p>Most in room aware of G98/99 changes. Some customers have Inflight schemes currently under G59, made aware these need to be energised before 27<sup>th</sup> April 2019 or will need to go through the G99 process.</p> <p>Also existing sites with major change after 27<sup>th</sup> April i.e. inverters will need to be G99 compliant.</p>

	<p>Will UKPN run workshops to explain difference between G59/99? ENA have run a number of workshops which was attended by stakeholders and DNO's.</p> <p>SH said that yes UKPN are planning workshops utilising ENA training/workshop material, included a number of detailed slides highlighting changes and new processes.</p> <p>Aiming to arrange workshop end of November. This will provide knowledge &amp; training, highlighting what customers/UKPN need to cover.</p> <p>Changes to DNO testing regime? Work in Progress – UKPN fees based on work involved in testing, G99 likely to be over a 2 - 4 month period to issue Operational notices i.e. FON/ION. Across band B, C &amp; D could be longer than current G59.</p> <p>SH recommended people attend UKPN joint workshop with SSEN on 23<sup>rd</sup> October as there will be a session on G98/99 from key ENA people.</p> <p>Offers under current G59 testing fee, after 12<sup>th</sup> October 2018 will have warning that if energised after 27<sup>th</sup> April this will require G99 fees. UKPN writing to all inflight projects.</p> <p>UKPN updating website so G99 forms more prominent than G59 so to encourage customers to use them for now on.</p> <p>UKPN set up a Mailbox G98_G99@ukpowernetworks.co.uk which can be used if customers have any questions.</p> <p>ICP/IDNO development? Apply to IDNO as usual who should then notify the DNO.</p>
3	<p><b><u>UKPN projects</u></b></p> <p><b>Power Potential</b> – Pilot with potential to expand if required</p> <p>Light Source/Veolia looking to get involved.</p> <p>Aimed at 33kV and above but will look at 11kV. Aiden Morris enquired about connections at 11/132kV? RW said its worth discussing further.</p> <p><b>Flexibility</b> – UKPN held an event 1<sup>st</sup> October to launch scheme. 25 flexibility zones across UKPN footprint, resources to avoid reinforcement</p> <p>Piccolo platform best way to engage – used by 5 of the 6 DNO's.</p> <p>Kent Active System Management – possibility of expanding into further into UKPN regions of SPN/EPN.</p> <p>Develop contingency analysis (CA) software and forecasting tools that can be used to run the distribution network closer to its limits, by moving away from conservative, 'worst case' assumptions.</p> <ol style="list-style-type: none"> <li>1. ICCP (Inter Control Centre Protocol) link</li> <li>2. Load and generation forecasting</li> <li>3. CA tool</li> </ol>

	<p>Owls Hatch – this site shows excellent accuracy, as shown on the slides, Actual were 26.13MW 67% against forecasted 26MW 66%.</p> <p>Working with Quintas to improve accuracy of forecast models using historic/weather pattern algorithm etc.</p> <p>Planned outage saved 4,230 MW/h</p>
4	<p><b>Operational issues</b></p> <p>Outages – customers asked to complete form (link on UKPN website) so UKPN can collate information and monitor outcomes. Consider increasing resources if required i.e. if there is an increase in number of enquiries/requests.</p> <p><b>Nat Grid can't tell UKPN who bidding for services.</b></p> <p>Services offered – Webpages for Generator Owners and Operators resources (see link below). Updated to be more streamlined and easier for customers to find relevant information.</p> <p><a href="https://www.ukpowernetworks.co.uk/electricity/generator-owner-or-operator">https://www.ukpowernetworks.co.uk/electricity/generator-owner-or-operator</a></p> <p>Customers asked who has looked at this areas and consider the following:</p> <ul style="list-style-type: none"> <li>• Does it suit your needs?</li> <li>• What should be different, what needs adding/Removing?</li> <li>• Would an online form be easier or do you prefer the downloadable form that you can reuse?</li> </ul> <p>As part of UKPN's Incentive in Connection Engagement initiative we are working on many parts of the external website; all works are in a planned series so changes will be phased in.</p> <p>Who should ask for outage/fault? Usually Asset Owner/Operators but sometimes UKPN receive request from number of parties for same site.</p> <p>Information customers of outage – RW team is carrying out exercise to refresh contact list to ensure we have the correct contact names for each sites etc.</p> <p><b>Training for Operators better understand tripping/inter tripping</b></p> <p><b>BT line into tripping GSM Sam depends on area availability</b></p> <p><b>Power Factor – export volt limit in connection agreement.</b></p> <p>ANM customers – single number/point of contact, currently ANM customers liaise with UKPN Smart Grid Team, looking to fully integrate Business as Usual. Training for customer services teams will be in Q3/4</p>

	<p>DG Mapping Tool – now show outages in EPN but UKPN considering rolling out further to cover SPN.</p> <p>Constraints in offer – challenging. If Customer knows constraints at time of connection agreement, go to link????</p>
5	<p><b><u>Feedback</u></b></p> <p><u>Issues on site? Could we do anything different?</u></p> <p>Power quality harmonics? Monitors will be installed where there are issues, likely to increase due to more inverters on network. UKPN are only aware of these issues at 11Kv when customer raises any.</p> <p>Particular sites?</p> <p>Kevin Hann – 2MW 11KV what capacity? DG Mapping Tool insufficient information, it would be useful to have more frequent DG surgeries, SH UKPN are looking into this, potentially increase to weekly and allowing customers better access to key people.</p> <p>Khail Bijle – to provide contact information regarding discussion around transient issues with transformers and requirements for Snubbers and transient resistors.</p>
6	<p><b>Black Start – Bill</b></p> <p>Risk H41 – National Power Outage.</p> <p>Most likely cause of total failure of national transmission system is conserved extreme weather event combined with malfunction of automated safety systems.</p> <p>How can DER on UKPN network help if black start required i.e. in event of national black out? Number of challenges highlighted including no notice failure of supply, gradual re-energisation of network – not able to prioritise specific users or areas.</p> <p>Aiden Morris would expect Transmission to know more. Advantage allow Generator to come on line quicker.</p> <p>Kevin Hann – how it works i.e. island mode – Bill D explained it's likely to be adding to main power stations gradually coming online</p> <p>TFL have 7 day reserve for generation if major outage – when they come back online, wait for DNO to notify i.e. in sync with the network.</p> <p>There are 6 zones across the system and requirement of 3 power station per region i.e. totalling 18.</p>

<p><b>7</b></p>	<p><b>Outage planning software solution</b></p> <p>Research carried out by Solar Trade Association (STA) indicates that in the period 2015 to 2017 the lost production of solar generators as a result of outages on the electricity distribution network equates to approximately 1% of total installed capacity, representing approx. £10m per year across the industry.</p> <p>The Best Industry Practice Manual looks at impact of outages on generation customers; details reasons for such outages and how both parties should collaborate to help minimize this where possible.</p> <p>Should the link/reference to this on UKPN Website?</p> <p>Network vision – enable 1,080MWh of renewable generation per year saving 344 tonnes of CO<sub>2</sub> equivalent effect of planting 172,000 trees every year.</p> <p>Build &amp; trial Outage Planning &amp; Tracking tool, includes customer-facing portal. May 2018 to May 2020 EPN initial trial, funded through Network Innovation Allowance.</p> <p><u>Customer requirements?</u></p> <p>Aiden Morris asked can DNO link into customers systems, Communications ICCP between National Grid/DNO could do the same but at what cost? Automated system, web port? Minor delays.</p> <p>RW How receive signal required by Customer?</p> <p>Open Network – ENA 5 key worlds including Customer experience.</p> <p>Network management system i.e. where are outages? Difficult even have to describe symbols and basic details.</p> <p>Capacity trading – UKPN happy to facilitate, how? UKPN bring C together discuss tech issue but not commercial.</p>
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