



Western Power Distribution - DG Owner Operator Forum

12 August 2020





Our Engagement Groups

Our Workshops & Events

How are we delivering?

Have your say

[Home](#) / [Distributed Generation Owner Operator Forum](#)

Distributed Generation Owner Operator Forum

We hold a regular forum aimed at owners and operators of MW scale renewables connected to WPD's network. Working in partnership with Regen, these meetings provide an opportunity for DG owners and operators to engage with us, contribute towards improved processes and tackle arising issues.

Previous areas of discussion have included:

- WPD work to address grid constraints;
- Improving communication with generators on outages and constraints; and
- Potential approaches for forecasting and mitigating outages.

Meeting notes & slides from previous events

2020



23 April presentation slides

PDF / 2 MiB

Future Forum Meeting Dates



12 August 2020 (webinar)

If you or a colleague would like to join the forum then please contact Olly at Regen on: ofrankland@regen.co.uk for further details.

Attendance is free of charge and limited to MW scale owner/operators of DG assets.



Western Power Distribution Generation Portal

[Click here for our Post Energisation Document](#)

This leaflet has been designed to try to offer you a synoptic review of some areas you may wish to investigate further with us and that may pop into your mind once you have a connection to your site.

Remember we are here to help you connect into our network, so please take a moment to familiarise yourself with the document's contents, and for those of you



Agenda

14.00 **Introduction, action review and objective setting from the chair and WPD**

14.15 **Improving industry and WPD communications to address outages/constraints**

- Update on the impact of COVID-19 on outages and communication
- Forum member feedback on communication
- Report back from single point of contact
- Latest information regarding the outage portal
- Brief overview of constraint process

14.45 **Distributed Generation Community KPI's**

15:00 Break – 10 mins

15.10 **Accelerated Mains Loss of Mains Change Programme and the impact of COVID-19 on connections**

Peter Aston, primary system design manager, Western Power Distribution

15.50 **AOB**

16.00 **Close**

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

- WPD Engineer submits an Outage Request via WPDs OMS.
- This will include Circuit ID, work being undertaken and preferred dates.






westernpower.co.uk

Outage & Constraint Management

Outage Planner Imports Outage & Combines Outages (where possible)

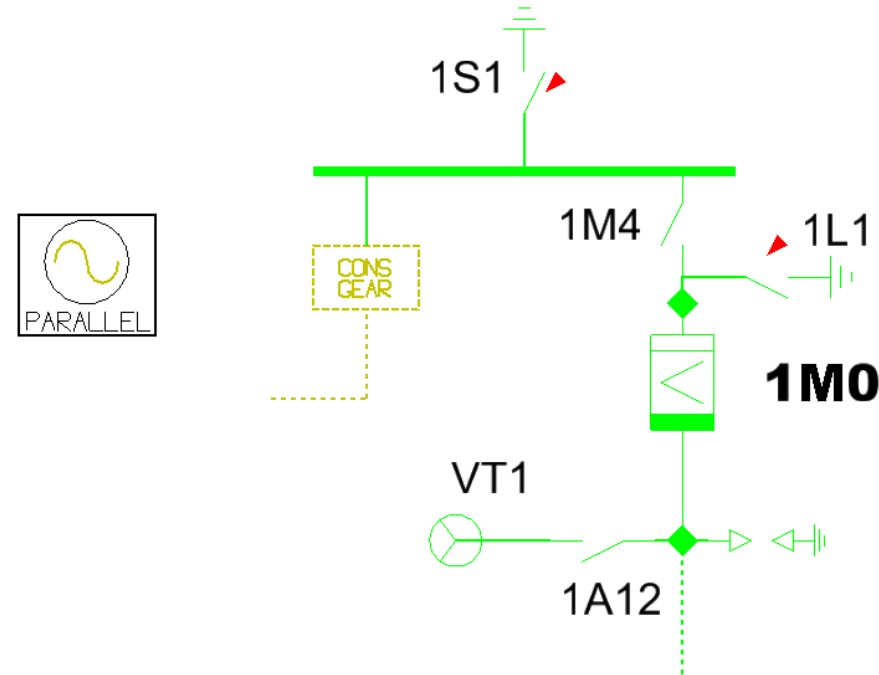
- Outage Planner checks if any DG customers are affected by requested outage.
- If yes, they will look through the OMS to check if there are any other outages planned on the same circuit.
- Engineers are asked for dates where both teams are available, and outage is combined into one single outage to reduce impact on DG customers.
- Outage is then studied in detail by WPD Outage Planner, before it is Approved (or Provisionally Approved if more details are needed).
- Outage then appears on WPD DG Portal, and is sent out via WPD 4 Week Report (when outage is within 4 weeks). WPD Engineer sends Formal Notification.

The screenshot shows the '36191 - Taunton GT3' outage entry in the WPD Outage Planner. The interface includes a header bar with the user 'Danielle Greedy' and a 'Go to outage:' dropdown. Below this is a tabbed menu with 'Work Details' selected. The 'Work Details' tab contains several fields: 'Substation Name' (empty), 'Circuit Name' (Taunton GT3), 'Category' (Substation Installation Works), 'Outage Name' (Taunton GT3), and 'Work detail' (Replacement of Taunton Main GT3). To the right of these fields are 'Outage id' (36191), 'Toga Number' (empty), 'Portfolio' (North 132 kV), and 'Proposed Points of Isolation' (empty). At the bottom of the form are buttons for 'Save Outage', 'Delete Outage', 'Copy Outage', 'Main Menu', and 'Notify Requestor'. A footer bar shows 'Record: 1 of 1', a 'Filtered' status, and a search bar.

Outage & Constraint Management

Planned Constraints / Interruptions

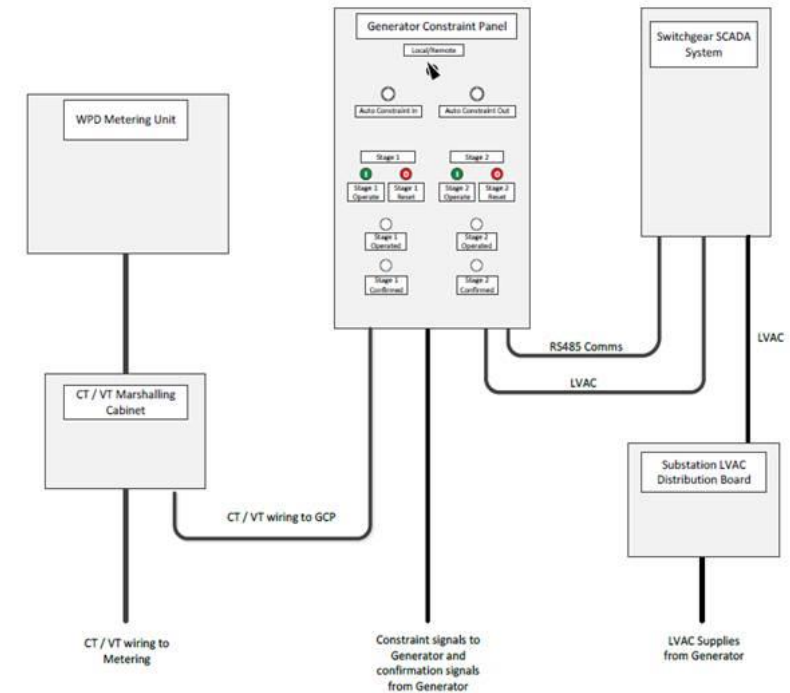
- For planned outages we liaise with the DG owner / operators directly to apply constraints and then monitor the import / export via WPDs network diagram.
- On day of a planned outage, WPD contact the DG customer to ensure they are ready for their constraint. Once constraint is in place, this is marked on our Power On network diagram in the WPD Control Room.
- Analogue alarms are then monitored throughout the duration of the outage. Constraint is then lifted after WPD confirm outage is complete with customer.



Outage & Constraint Management

Connection Control Panels (CCP)

- WPD employ CCPs to manage day-to-day activity of DG sites
- CCP gives customer two signals;
Stage 1 Constraint
Stage 2 Constraint
- Level of permitted export (or import) under these stages is pre-agreed in the Connection Agreement.
- Settings are then loaded into the panel to allow it to be used in two different ways;
Voltage Constraint Scheme
Soft Inter-Trip Scheme
- A full description of WPDs CCP panels (diagram shown to the right) can be found at www.westernpower.co.uk/downloads/18907



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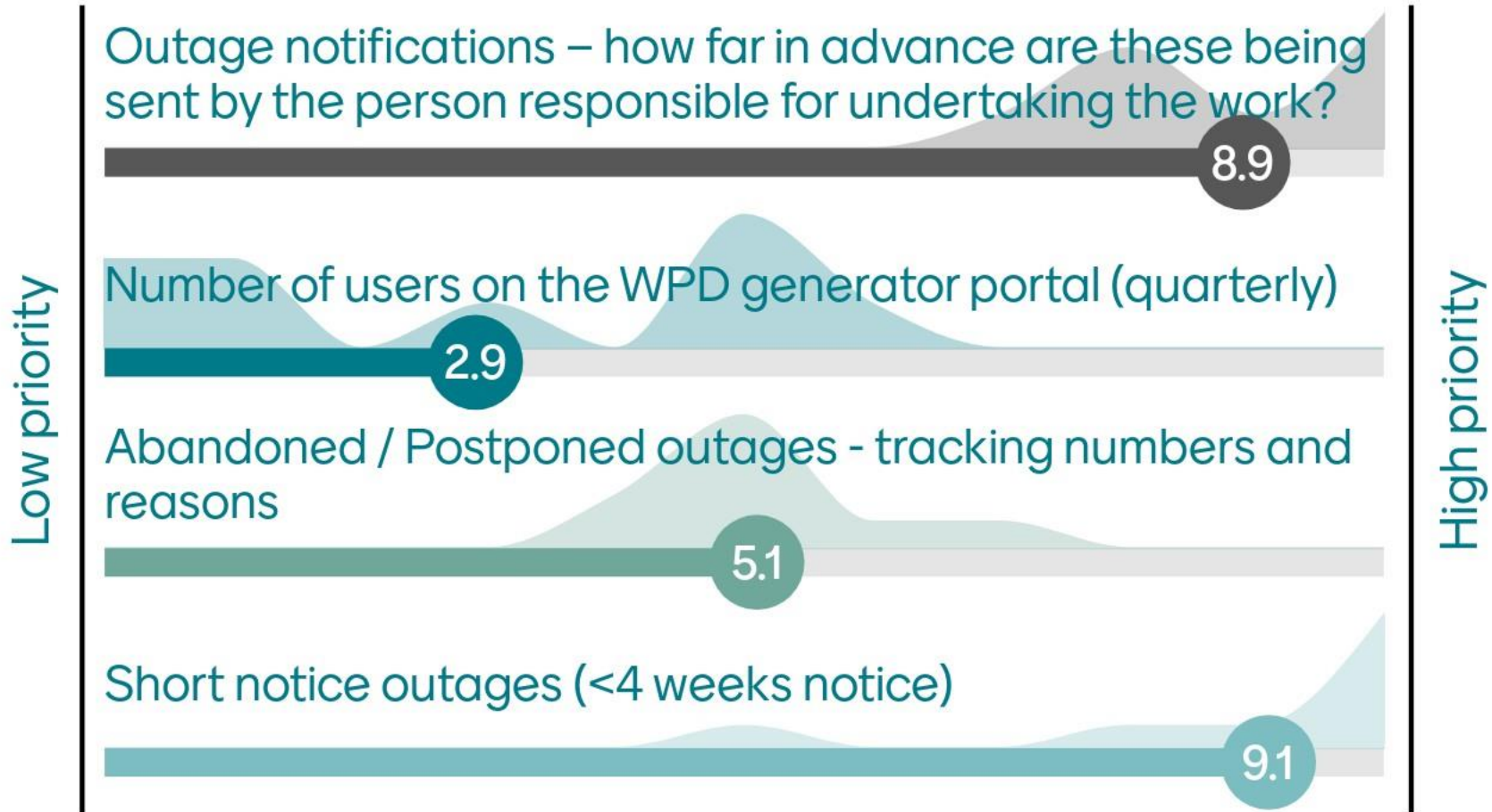
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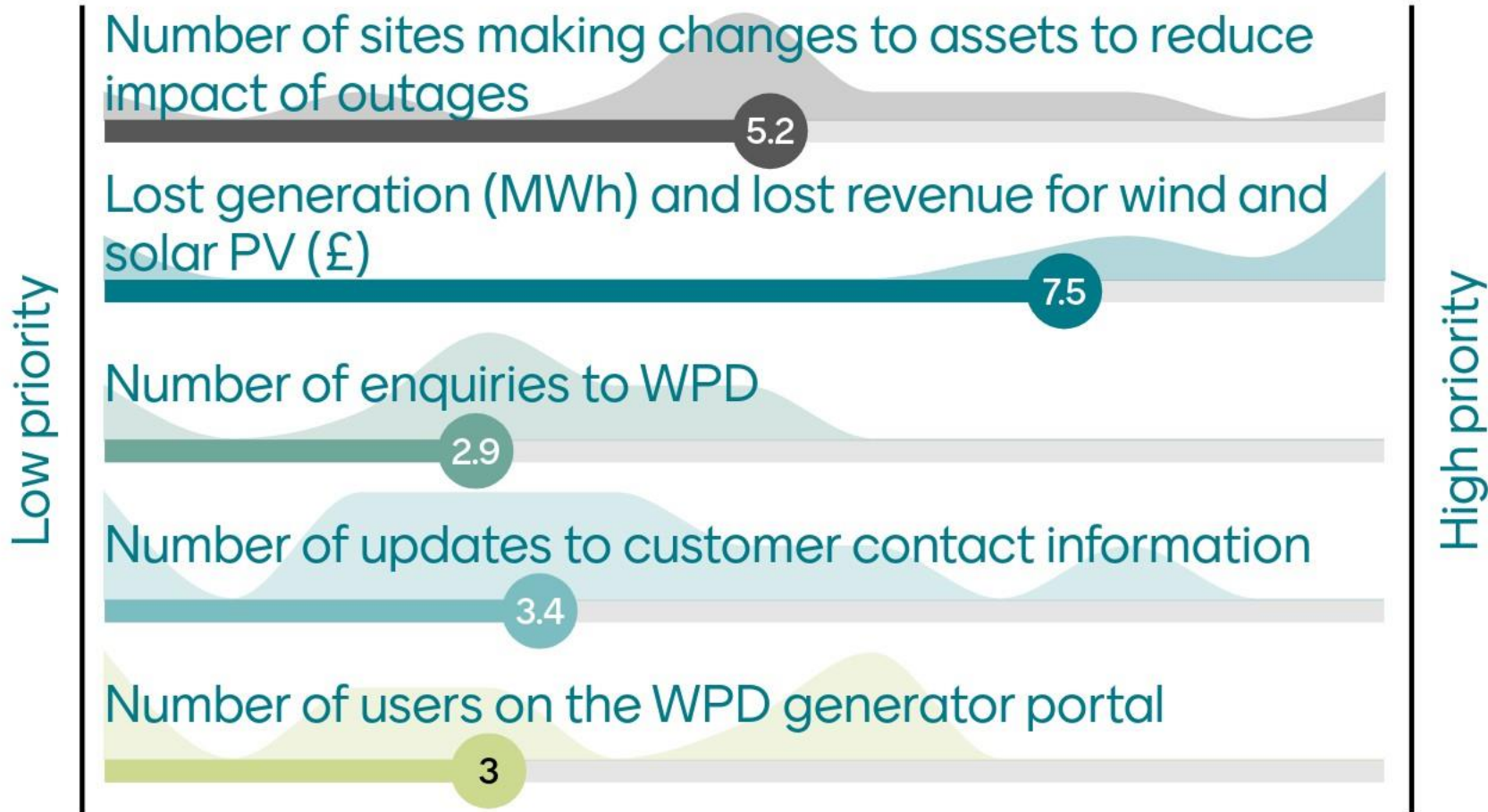
DG community Key Performance Indicators (KPIs) from WPD:

- Lost generation (MWh) and lost revenue for wind and solar PV (£) using existing model – quarterly reports per license area.
- Outage Notifications – How far in advance are these being sent by the person responsible for undertaking the work?
- How many enquiries are being sent to WPDs dedicated generator inbox from DG customers on a monthly basis? We could split this into sub-categories such as incorrect contact details / updating contact details, outage queries.
- Number of updates to customer contact information per site per year.
- Number of proactive calls made to update customer contact information per year.
- Number of users on the WPD generator portal (quarterly)
- Number of logins to the generator portal (quarterly)
- Number of outage notifications sent out via the generator portal
- Updates to contact details by users of the generator portal
- Abandoned / Postponed Outages – How many of WPDs planned outages are being cancelled / postponed after they have appeared on the Generation Portal / 4 Week Report? Including reason for outage.
- Short Notice Outages – How many outages are being planned / how many notifications are being sent to DG customers with less than 4 weeks' notice?
- Number of DG sites making changes to assets to reduce impact of outages (e.g. additional switch installed).
- How many new DG connections are being made by WPD every quarter? This could be split into wind / solar etc.
- What is the average length of time it is taking to connect new DG sites to WPDs network? What voltage levels are these connections being made at and where on the network?
- How many and what capacity (MW) of Accelerated Loss of Mains Protection alterations have been completed per round of funding? Include split between retrospective and new changes made to LoM settings.
- Estimate of remaining budget for further LoM changes for WPD.

KPI feedback



KPI feedback



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Accelerated Loss of Mains Change Programme

Peter Aston, Primary System Design Manager, WPD

12th August 2020

Opening question:

How can the programme engage better with smaller customers to get better participation in this scheme?

When we get towards the end, there will be a chance to put answers in chat or Q+A.

Contents

- Quick reminder of the programme
- Update on COVID-19 impacts on the programme
- WPD progress to date
- New windows
- Fast track process
- Engagement with smaller customers
- Questions

Loss of mains protection

- Vector shift – has experienced mal-operation following 400kV faults
- ROCOF – historical setting of between 0.125Hz/s and 1Hz/s has led to frequent trips
- G59/3-3 published on 1 Feb 2018 to include new LOM settings:
 - Removed Vector Shift as Loss of Mains protection
 - Increased ROCOF settings to 1Hz/s, 500ms time delay
 - **Retrospective for existing sites. Implementation by 31 Aug 2022.**

Accelerated Loss of Mains Change Programme

- NGESO has identified a system need to accelerate this change before 31 Aug 2022:
 - System stability, emphasised by 9th Aug 2019 low frequency event
 - Cost of operating the system and holding reserve for LOM trips (predicted to cost £600m between 2018 and 2024)
 - Important now with reduced system demands (15-20% lower during lockdown)
- Applications from Oct 2019 – Aug 2021 (approx.)
- Payment is £1500 / £500 per settings change / disabling or £4000 for a relay change
- Applies to relays and inverters

Process

- Applications through the ENA Portal – went live 2nd Oct 2019
- DNO verifies application and approves for a window
- NGESO assesses and accepts applications against budget
- Generator undertakes works and provides evidence to DNO
- DNO pays generators for works completed
- DNO invoices NGESO for payments to generators plus admin costs
- Further information available at:

<http://www.energynetworks.org/electricity/engineering/accelerated-loss-of-mains-change-programme.html>

Dedicated WPD email: ALOMCP@westernpower.co.uk

Criteria

For participation, sites must meet the following criteria:

- Operate in long term parallel with the distribution network
- Connected prior to 1st Feb 2018
- Currently has the following LOM protection:
 - Vector Shift
 - ROCOF with settings less than 1Hz/s (i.e. not compliant with G59/3-3)
 - ROCOF where the settings have already been modified to meet G59/3-3
- Have not previously received payment
- Have not needed to previously change settings (e.g. ≥ 5 MW sites with ROCOF)

Witnessing and sample site visits

- Relay changes and disabling of settings are required to be witnessed, unless works are undertaken by a recognised contractor.
- Recognised contractors list published - <https://www.westernpower.co.uk/our-network/loss-of-mains>
- A % of sites where changes were not witnessed will be subject to a sample site visit (maybe up to 600 sites for WPD).
- Sample site visits (for selected sites) are required for payment to be released.

COVID-19 restrictions

- Due to system risk, this programme has been deemed High Priority
- It has continued to operate throughout lockdown
- Completion dates up to end of Sept 20 were extended by 3 months
- DNO witnessing and sample site visits have been completed via video conferencing with the contractor on site
- Payments will be processed as normal
- Please ensure new applications have a suitably long lead time

Progress

- ~1400 applications received (out of a total of about 7,250 sites)
- ~690 sites completed works (evidence received)
- ~525 sites paid, just over £2m
- 70 sites have had a virtual sample site visit
- Completion dates currently spanning all of 2020 and into Q1 2021
- **Plenty of funding left – please apply!**
- **Note that from 1st Sept 2022, all generators need to comply with the new settings. Enforcement actions may be placed on generators.**

New windows

- Window 4 closed 11th August 2020
- Steering Group has given approval for Window 5 (Aug-Nov 2020) and Window 6 (Nov 20 – Feb 21)
- Possible that applications will be extended to Windows 7 and 8, up to Aug 2021

Fast track

- Launched on 29th June 2020
- Intended to make quicker progress with changing existing LOM settings, to reduce risk and cost
- An additional £5000 payment per site
- Runs in 'schemes', with each scheme having specific criteria
- Aimed at customers who can make the required changes within 4 weeks from application
- Available to customers who haven't yet applied, as well as some customers who have applied but haven't yet made the changes
- Specific criteria for the current scheme:
 - Site capacity: $\geq 500\text{kW}$ up to $< 5,000\text{kW}$
 - Existing Protection: ROCOF, up to and including 0.2Hz/s
- <https://www.ena-eng.org/ALoMCP/>

LoM Accelerated Loss of Mains Change Programme

Home

Guest Assistance Contact Us

ACTIONS

Log In

Register

Welcome to the ENA's Accelerated Loss of Mains Change Programme (ALoMCP)

Fast Track Scheme 1: Critical RoCoF [ALoMCP - Coronavirus Pandemic Response](#) (Updated 17th June 2020)

The Energy Networks Association (ENA) represents the interests of all energy network companies in the UK. For more information about the ENA, please visit the [corporate website](#).

For more detail on the Accelerated Loss of Mains Change Programme, please click [here](#). For a FAQ on technical issues, please click [here](#). The proforma for submitting evidence of the changes made can be downloaded [here](#).

Registered users can login [here](#). Unregistered users should register [here](#).

The first user at a generator company is self-registered but subsequent users at

Fast Track Scheme 1: Critical RoCoF

The ALoMC Programme has identified that there are additional savings to overall system balancing costs in making changes to RoCoF loss of mains (LoM) protection more quickly than originally envisaged.

Sites meeting the criteria below will be fast tracked through the application process and are eligible for the additional payment shown. Full details of the Fast Tracking Scheme can be found in the Payment Process Specification which is published on the ENA's website [here](#).

Item	Description
Scheme becomes active on	29 June 2020
Cap	The Fast Track is open to 100 sites initially and the programme will review whether to extend this based upon market response and the ability of the supply chain to sustain it.
Criteria	<ul style="list-style-type: none">• Site Registered Capacity: minimum 500 kW but less than 5MW• Type of LoM protection: RoCoF• Pre-change RoCoF settings: Up to and including 0.2Hz/s• Lead time: Less than or equal to 4 weeks
Fast-tracking payment	£5000 (plus VAT) per site

Close

Engagement with smaller generators

Breakdown by Cap.	10kW up to <500kW	500kW up to <1000kW	1000kW up to <5000kW	5000kW+	Total
% of sites applied	11.23%	50.30%	57.61%	46.45%	19.17%
% of capacity applied	23.98%	49.13%	70.45%	29.57%	37.17%

- Table above shows engagement from smaller customers is low (very low for <10kW)
- We want to improve engagement with smaller generators
- Any thoughts from the group?

How can the programme engage better with smaller customers to get better participation in the scheme?

Ask rooftop O&M providers to notify customers.

Any way to cover the upfront cost would help

Would it be too complicated to generate an email to contact all of the generators and make sure they're aware of the ALoMCP? Using the contact details on the generator portal.

Notification with / on the electricity bill.

Assistance with the application process, cover that for them for a fee?

Maybe go through suppliers to installers who would install the 10 kW units



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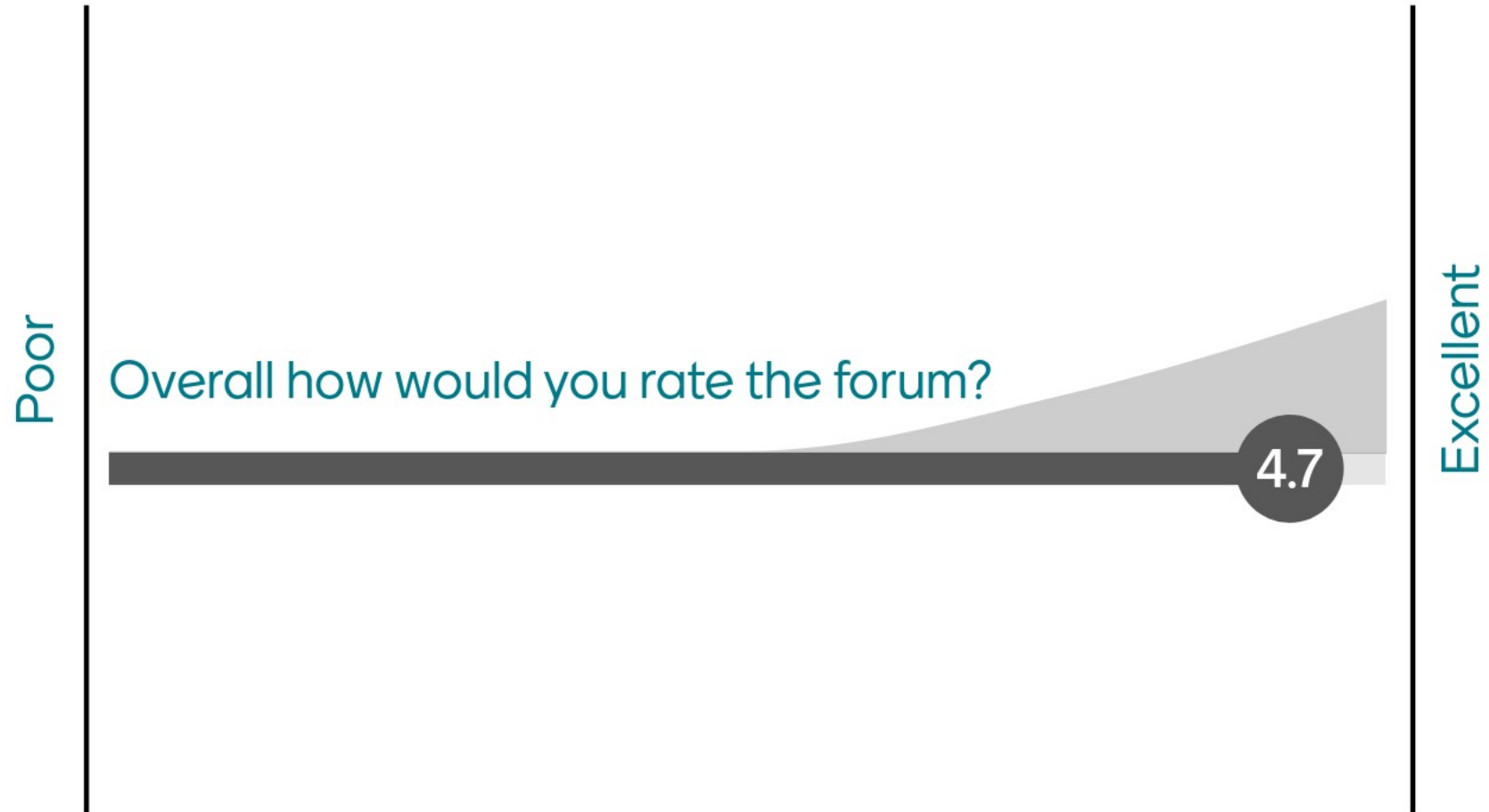
Do you feel this forum meets the stated objectives and has been effective in raising concerns/implementing changes?



0%
Disagree

0%
Neither agree or disagree

Feedback



What topics would you like to see further information on from WPD at future sessions?

We are seeing HV cable thefts in solar plants, do you experience the same?

Something on process of upgrading to firm grid

Yes, there have been many thefts/break-ins lately. On one of our sites, the individuals simply cut and looked at the cable (if it contained any copper). They damaged disconnecting units and LV cables.

Active grid management (e.g for wind capacity)

Loss of mains, feedback on progress and inverter manufacturer responses

