

## Accelerated Loss of Mains Protection Change Programme

### Frequently Asked Questions

**Note: this Programme does not apply to domestic and similar generation that has been connected under EREC G83. It only applies to generation connected before 01 February 2018<sup>1</sup> under EREC G59.**

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#### Engagement

**1. Will DNO customer service departments be briefed on this and be available to provide sensible guidance?**

Yes – dedicated communications material and briefing is being rolled out by and within each DNO/IDNO.

**2. What help will be available, especially for owners with very small generation equipment connected at LV?**

All generation connected under G59 of any size<sup>2</sup> can apply to the Programme for payment. Currently it is planned for the Programme be open for applications until May 2022.

**3. Is this a GB wide exercise?**

Yes – it applies to the whole of Great Britain, but it does not apply to Northern Ireland. There is a similar programme in place in Northern Ireland but its detailed requirements and implementation is different recognizing the need for the approach to be harmonized across the island of Ireland.

**4. Do you verify contractors on the list published on the ENA's website?**

No – it is simply an advertising route for contractors to bring their existence to the attention of generation owners. It is for generation owners to decide how to comply with the new requirements, including contracting for any assistance they might need.

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<sup>1</sup> Or prior to 01 July 2018 if the site only has type tested inverters and no separate LoM relays

<sup>2</sup> Formally only Small Power Stations – ie of less than 50MW in England and Wales, less than 30MW in the south of Scotland and less than 10MW in the north of Scotland.

## Assessment

### 5. Is there a way for owners of large numbers of multiple sites (eg water utilities) to bulk upload their data into the portal?

No.

### 6. Can the ENA publish a list of the most common loss of mains (LoM) relay types and what action is required for each relay type? Can this be put into an app?

There are no current plans to do this.

### 7. Can owners make the changes immediately (eg to reap the benefit of more stable LoM setting of historic sensitive settings)? Will they be paid to do this?

Yes – simply enter your data in the portal and tick the box that asks if the changes have already been made. Your application will be processed in the same way as all other applications and assuming it is successful you will be asked by the DNO/IDNO to submit the evidence necessary for payment.

### 8. If the application is not successful, what happens?

In the early stages of the programme the application will be rolled-over into the subsequent application window. As the programme comes to an end there could be some applications that are or remain unsuccessful. In these cases there will be no payment, but the legal obligation to make the changes remains.

## Protection Change

### 9. How do generation owners know what protection equipment is fitted to their generation equipment?

It will generally be obvious from any commissioning information and/or protection setting sheets for the generation equipment. It is a legal requirement that the generator owner maintains this information. However to the extent that owners need help in interpreting this information, it might be appropriate to engage an appropriate consultant/contractor to review the information, make any required changes and submit the application for compensation to the portal at the same time. This will minimise owners' costs in undertaking the changes where they need expert help to do this. Note also that some generating devices, ie particularly power electronic converters and inverters, will also have protection built in – these protection elements are also in scope – see FAQ 12 below.

### 10. If the protection is a multifunction relay which cannot be reset and/or where the LoM element cannot be separately disabled, will it be necessary to install new frequency and protection functionality?

Yes, it is essential that the four protection functions of under and over frequency and voltage are retained. If necessary it will be essential to install new relays to ensure this. However it is unlikely that any existing multi-function protection relay cannot be configured appropriately.

**11. Is it acceptable to break any seals that might be applied to interface protection settings in order to reset them?**

Yes. DNO/IDNOs have different policies on this and the implications and remedies will be picked up bilaterally between the generator owner and the DNO. The generation owner will need to bring each case to the attention of the DNO/IDNO.

**12. What is needed to be done where LoM is implemented within the controller of a converter or inverter rather than in a discrete LoM relay?**

The LoM resetting exercise applies to any discrete LoM protection element that is separately settable, whether located with the converter or inverter or elsewhere in the generation owner's installation.

Where LoM is implemented in the control algorithms of converter or inverters as rate of change of frequency (RoCoF) and/or vector shift, whether type tested or not, the settings must be changed to those required in the revised G59 – ie 1Hz/s 500ms delay and vector shift disabled. If the inverter does not use RoCoF or vector shift in its algorithms then there are no requirements to make any alterations to such converter or inverters.

In many cases it might be that it is not obvious on site whether the converter or inverter uses RoCoF and/or vector shift. In these cases it will be necessary to seek advice from the manufacturer.

There is more information on converter or inverters in the technical FAQ available [here](#).

**13. Do these changes mean that the generation needs to be compliant with the new ER G99?**

No – there is no linkage between the introduction of the EU Network Codes for new generation that comes into force on 27 April 2019 and this resetting exercise, which only applies to generation equipment installed before February 2018<sup>3</sup>.

**14. Many older relays will be set to historic versions of G59 rather than the latest version and the relays might not be compatible with the most recent version. What is required for owners of these older relays?**

It is a general principle that D Code (and therefore G59) requirements are not retrospective, unless specifically made so (DGC11.2 in the D Code). It is only the LoM settings, not the other interface (ie voltage and frequency) that have been made retrospective, so the existing under and over voltage settings and under frequency settings should remain as in G59. However there is merit in changing the over-frequency setting to a single stage 52.0 Hz if the existing relay is capable of that setting – but no compulsion to achieve this if that would mean changing the relay.

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<sup>3</sup> Or prior to 01 July 2018 if the site only has type tested inverters and no separate LoM relays.

**15. It was mentioned that frequency relays should be reset to 52 Hz if they were originally set at 50.5Hz (for G59/1). Please can you confirm if that requirement is to be mandatory?**

It is desirable but not mandatory, depending on the capability of the relay. However generation owners should confirm that the frequency settings are compliant with the version of G59 that was in force when the generation was commissioned.

If a new relay is being fitted then the opportunity should be taken to implement the settings in the current version of G59 (ie single stage overfrequency; two stage underfrequency).

**16. Is there any safety risk in disabling LoM?**

In general no. The analysis undertaken shows there is actually less risk where VS is replaced by RoCoF. The analysis also shows that for non-synchronous generation (except DFIGs) RoCoF and VS are both ineffectual and the voltage and frequency protection required by G59 will detect island conditions more reliably than either RoCoF or VS.

Owners of synchronous generation do need to consider the risks of out of phase switching – but as above, this is less of a risk anyway when RoCoF at the new setting is used compared to VS protection.

**17. Will the setting changes etc be witnessed by the DNO? Will there be a charge for witnessing?**

DNOs will notify those owners where witnessing is needed. Generally this will be for a relay change or LoM disablement. There will be no charge for successful witnessing completed in a single visit.

**18. What information needs to be submitted as evidence and how will this be done?**

There is a specific pro-forma to prompt generators for the necessary evidence, and this can be submitted electronically to the DNO. The DNO will discuss individual cases with generation owners.

**Payment**

**19. How will the process be secure against fraudulent activities, particular rogue contractors offering a high priced service to generator owners?**

The ENA has published a list of contractors etc who claim to have the relevant qualifications and experience. This will enable generation owners to review competitive offerings for their needs, but ultimately this is a commercial agreement between the generator owner and whatever services that owner feels are needed to help the owner discharge his legal obligations. DNO/IDNOs will publish and offer advice to help owners understand all the implications of the changes and what it should mean for owners.

**20. Is there any relation with other commercial payments like ROCs?**

No.

**21. There could be some cost incurred for application, money spend on finding the right setting. Will that be covered?**

The payments are tailored to covering the reasonable costs of undertaking the works for a typical/average installation. They are not tailored to any specific application. It is for

generator owners to assess how to complete the compliance changes as efficiently as possible.

## 22. Will I be compensated for income lost during the setting change?

No. It is assumed that setting changes etc would be done during normal down time.

### Fast Track

## 23. What is the Fast Track Process?

Fast Track schemes offer an opportunity for distributed generation sites that meet specific criteria and can commit to making LoM protection changes quickly. They will be fast tracked through the application process and receive an additional payment. The payment will be set for each scheme.

## 24. How is it the Fast Track Process different to the other application windows?

The Fast Track Process will run in 'schemes'. Each scheme having its own criteria, cap, and additional payment.

The process will involve:

- Strict criteria that sites must meet to proceed
- Running the assessment for the sites that meet the fast track criteria weekly, rather than in a quarterly window.
- Offering an additional payment for sites.
- A limited budget to effectively manage the cost and quantity of sites.
- Successful applicants will be required to provide their Distribution Network Operator (DNO)/Independent Distribution Network Operator (IDNO) with at least five working days' notice of the site works. This is so witnessing of the site works can be scheduled if required by the DNO / IDNO.

## 25. Who is eligible to apply to the Fast Track schemes?

- From 29 June 2020, we will fast track applications in the first scheme for sites that meet the criteria published on the ALoMCP portal: <https://www.ena-eng.org/ALoMCP/>
- There may be subsequent schemes introduced in the future with different criteria.

## 26. What if I don't meet the criteria of a Fast Track Scheme?

You should submit your application as usual via the Programme's portal. However, your application will be processed in the current Window, ie through the standard quarterly assessment schedule.

## 27. Can I complete the work before submitting the application and still have the application fast- tracked?

Yes, if it meets the criteria of a scheme.

### **28. I have already applied. Can my existing application be fast-tracked?**

If the application meets the criteria of a fast track scheme, you can get in touch with your DNO/IDNO to request that it is fast tracked. Please make sure that you either modify the lead time quoted in your application, or advise the DNO/IDNO with a new lead time.

### **29. I have had an application approved already. Can this application be fast-tracked?**

If the application meets the criteria of a fast track scheme, you can get in touch with the DNO/IDNO to request that it is re-assessed. This will only be considered if it also brings the implementation date forward by at least two weeks.

### **30. Where can I find out more information? / Who do I need to speak to if I have more questions?**

We're committed to making this process as simple as possible for you to complete the work in the allotted 4-week window. If you have any questions, please contact your DNO / IDNO contact for the programme:

[https://www.ena-eng.org/ALoMCP/assets/other/ALoMCP\\_Emails.pdf](https://www.ena-eng.org/ALoMCP/assets/other/ALoMCP_Emails.pdf)

If you are unsure who your DNO/IDNO is, please check here before getting in touch.

### **31. Why is it only open to a limited number of sites?**

The Fast Track Process is open to a limited number of sites initially and the programme will review whether to extend this based on market response and the ability of the generators and contractors to complete the work.