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Operational Metering Working Group

November 2025

Agenda

Phase 1 Overview

- Phase 1 Changes
- Phase 1 Implementation
- NESO's approach to adverse impacts
- Post event data
- Report on change

Phase 2 Overview

- Synthetic Metering Innovation Project
- Report on change capability development
- Exploring ramp rate control at the portfolio level

Discussion & Next Steps

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Phase 1 – Changes

- Removing sub-asset accuracy requirement
- Relaxing sub-asset refresh rate requirement to 30 seconds
- Allowing ‘report on change’ metering
- Additional technical details to be added into guidance note.

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Phase 1 – Implementation

- Phase 1 will be implemented early 2026

- To implement these changes, NESO will amend the following documents:
  - Bilateral Contract Agreements
  - Operational metering policy document
  - Registration guide for Balancing Mechanism Units

- NESO will also issue a detailed guidance note on the new requirements to help providers navigate the changes

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Phase 1 – NESO's approach to any adverse impacts caused by relaxed operational metering standards

- In the Bilateral Connection Agreement, NESO will add a condition on ramp rate control at the portfolio level to manage any adverse impacts on system operations and security from relaxed operational metering standards
    - We will monitor the performance of relaxed metering and its impact on system operations and security
    - If any unintended consequences arise, we may request portfolio-level ramping to reduce future operational risks

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Phase 1 – Post Event Data

To perform post-event analysis of system incidents, NESO will request post-event data on an ad-hoc basis from providers

- To facilitate this, NESO is requesting all providers to retain all operational metering data at ≤30 s intervals for each sub-asset for a minimum of one month
- Providers may need to submit this data to NESO within a week of receiving a request

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Phase 1 – Consumer Energy Resource specific BMUs

- We expect portfolios to consist exclusively of low voltage connected consumer energy resources (CERs). This will be the expectation until the enduring solution is in place

- Low voltage connected CERs are assets with:
  - Registered capacity: <1 MW **and**
  - Connection point voltage of 415 V or below

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Phase 1 – Allowing Report on Change for sub-assets

- We want providers who are capable of report on change currently to send us this information when Phase 1 goes live so we can use this for our Report on Change discovery work in phase 2

- Report on Change metering systems only send updates when the monitored value changes beyond predefined thresholds (to be defined by NESO in phase 2, it is currently 0.125% of Registered Capacity)
    - The threshold power value would be set at the sub-asset level.
    - The refresh rate when reporting is any change in value is currently above 0.125% of Registered Capacity.

Note: We will discuss this with you in follow up sessions during phase 2

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Phase 2 - Overview

- DNV's recommendation is that Option 2a (30 seconds refresh rate) is not the enduring solution. An enduring solution must be identified and be implemented to avoid excessive reserve and response costs. Therefore, we will pursue enduring solutions through:
- Synthetic Metering Options
  - An innovation project will be launched to investigate the feasibility and relative performance of synthetic meter feeds being created by NESO and aggregators
- Report on change
  - NESO will collaborate with industry to define report on change metering and will seek to understand if it is a suitable solution for all technology types entering the BM
  - NESO will provide a defined threshold for report for change
- Ramp Rate Limits Framework
  - We will conduct a discovery to develop a ramp rate framework suitable for all technology types

Phase 2 – Synthetic Metering

- 3a and 3b mitigate errors using an additional adjusted metering feed (developed by NESO (3a) or by aggregators (3b)) which anticipates the behaviour of CER portfolios within the coming 30 seconds

- NESO wants to assess the feasibility of using existing data and historical trends to improve meter accuracy, reducing reliance on higher read rates and ensuring suitability for control room timeframes through an innovation project

- 3a or 3b could be the best medium-long term solution because it is technology agnostic, presents no restrictions on market entry or (LV connected) CER unit performance, and limits impact on situational awareness to instances where BMUs behave unexpectedly. However, we need to understand if it can work in an operational environment

Synthetic Metering Innovation Project

NESO has applied for Innovation funding and will be looking for industry and consulting partners to help scope the project and develop solutions

Register your interest **here**

Timeline

We are here

27th October 2025
Application submitted for innovation funding

3rd November 2025
1st NESO innovation stage gate has been successful

Q4 2025 (TBC)
Tender for consulting partner

NESO Innovation funding pitch to secure funding

Q1 2026 (TBC)
Project commences

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Phase 2 - Report on Change

- In phase 2, NESO plans to carry out a discovery and want to work with providers to identify appropriate thresholds across technology types, helping determine the viability of this approach as an enduring solution

- We recognise that there are technical, financial, and regulatory considerations, and NESO intends to explore these through the discovery phase to better understand feasibility across all technology types

- We recognise that this option is most suitable for EVs currently, but we want to understand whether other technology types are still evolving. If so, we would encourage building this capability before scaling in this area

Phase 2 – Ramp rate control at the portfolio level

- We will develop system monitoring standards which will enable portfolio level ramp rate control during system incidents

- We will conduct a discovery to develop a ramp rate framework suitable for all technology types so that **if other options are proven to be unfeasible solutions**, ramp rate limits at the portfolio level will be the enduring solution when option 2a (refresh rate at 30s) starts to become unviable

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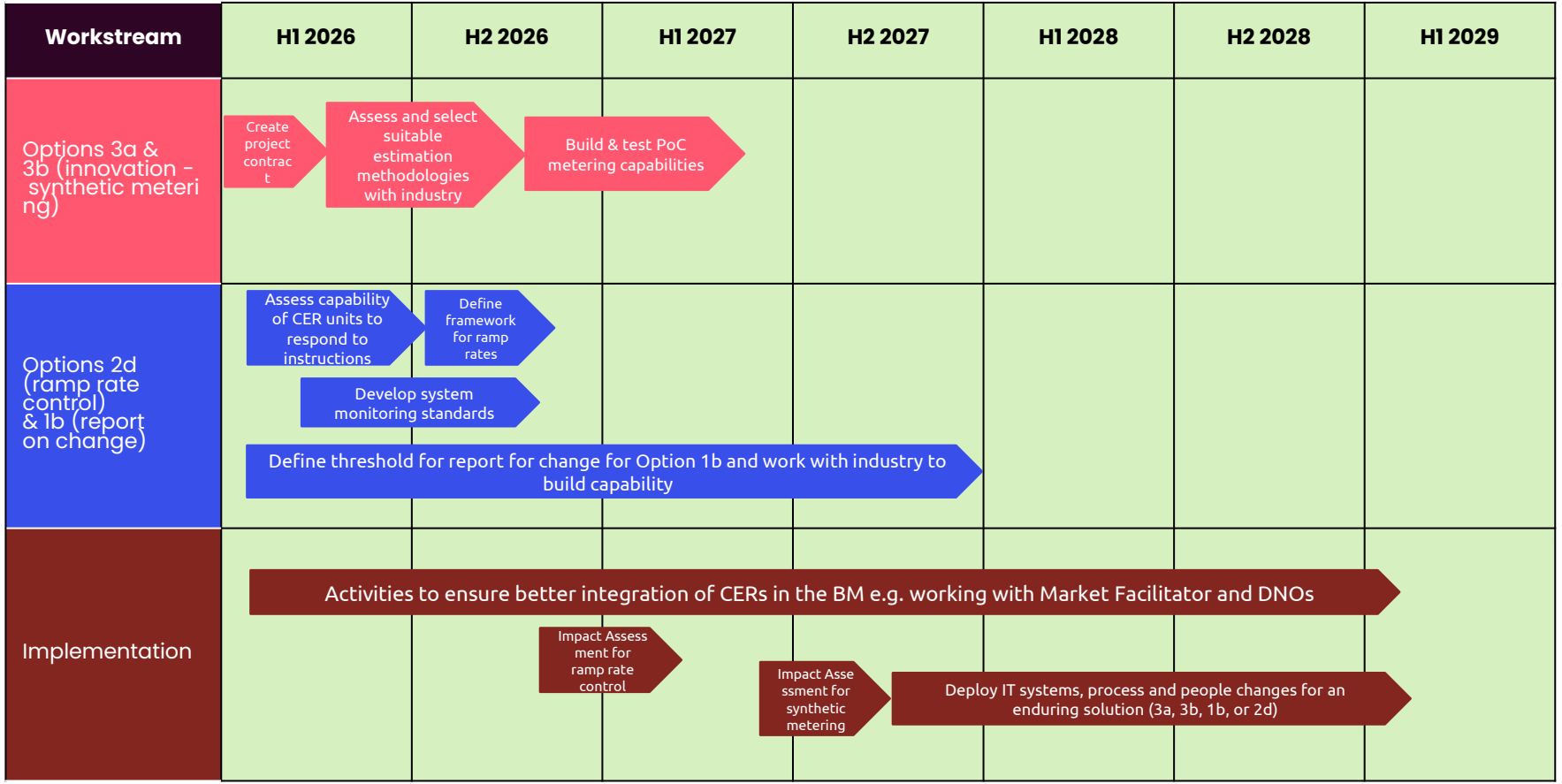
Phase 2 – Timeline

This is a high-level indicative plan.



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Slido Poll

Slido Code: #powerresponsive

- How much volume do you intend to register in the BM over the next couple of years? What is the volume we expect for each technology type?

- Ramp rate at the BMU level
  - What ramp rates do you intend to apply to your aggregated BM units?
  - How do these differ across the technologies you plan to aggregate?

- Looking ahead to GC0166 go-live, what do you see as the key enablers or challenges for ensuring storage assets can comply and participate effectively?

- We recognise that the randomised delay does not apply for EV chargers when participating in DSR service. What can we expect in terms of aggregated EV PN submission / ramp rates, in the absence of randomised delay?

- Report on change
  - How would you like to see Report on Change capabilities to evolve?
  - What capabilities exist today and where does future development lie?

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Next Steps

Phase 1
We will hold a webinar in the new year to confirm the Phase 1 go live date and provide detailed participation guidance.

Phase 2
Register your interest to participate in the synthetic metering innovation project using the link **here** and in the meeting chat.

We will send out a questionnaire to get individual responses for some of the discussion points.

We would appreciate your involvement in the phase 2 discovery projects and will contact you in due course.

Contact: power.responsive@neso.energy

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