

Public

# BM Operational Metering Changes for Small-Scale Aggregated Assets

March 2026

# Agenda

Welcome and introductions

Why NESO Is Changing the BM Operational Metering Requirements

Overview of Operational Metering Requirements Review Process

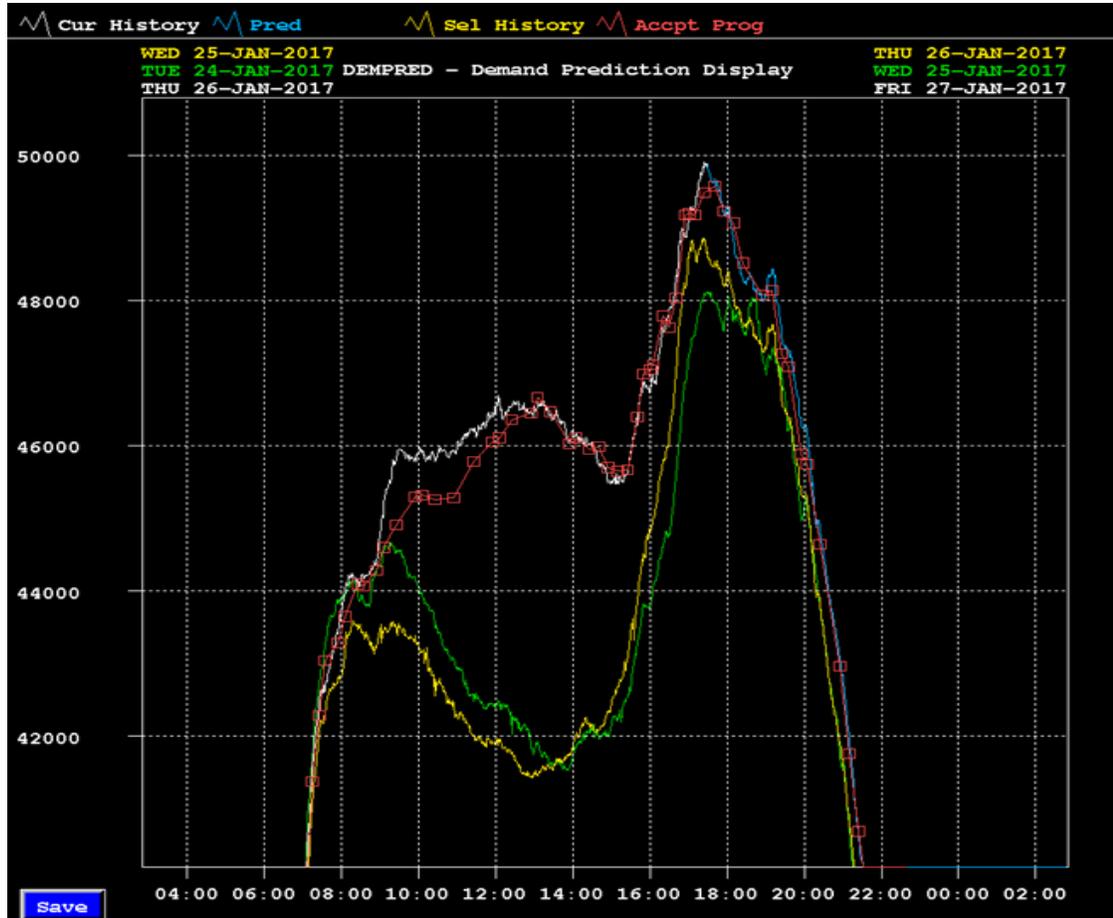
New BM Operational Metering Requirements

“Phase 2” Update

Q&A

Close & Next Steps

# Operational Metering Overview



- A signal sent from all BMUs/sub-assets showing real-time data such as:
  - Active Power
  - Reactive Power
  - Power Available
  - Energy Available
  - State of Charge
- Aggregating this metering data creates a real time view of total generation on the system. This;
  - Informs dispatch decisions and;
  - Helps ENCC identify BMU faults and dispatch issues before it impacts system frequency.
- Data also feeds into future demand prediction models and forecasts.

# BM Consumer Energy Resources Brings Value for Consumers

- More competition** → Reduced Balancing Costs
- More innovation** → New commercial models for providers
- More resilience** → Diversified, distributed flexibility across GB

- Increases GB's ability to harness renewable generation and contributes to CP30 ambitions.
- Gives consumers greater control and choice, allowing them to monetise their flexibility.
- Supports Government ambition for a smarter, more digital, decentralised system.

# BM Requirements vs CER Capabilities

## BM Operational Metering Requirements

- **Accuracy:** 1%
- **Refresh Rate:** 1 second
- **Latency:** 5 Seconds

VS

## Typical CER metering capabilities

- **Accuracy:** 10%
- **Refresh Rate:** 10 seconds (best case)
- **Latency:** 5 Seconds (best case)

## Typical asset types with BM compatible meters

- Power Stations
- Large Batteries
- Hydro
- Wind

## Assets not manufactured with BM compatible meters

- Electric Vehicles
- Domestic Batteries
- Heat Pumps
- Non-domestic behind the meter assets.

# Independent Review & Derogation

## Independent Review

In parallel with the derogation, we instructed DNV to conduct an independent review into the impacts of relaxing BM operational metering standards for small-scale aggregated assets.

### The review explored several key topics:

1. Identified impacted asset types
2. Current BM requirements vs asset capabilities
3. Operational Metering's impact on Security and Quality of Supply Standard (SQSS)
4. NESO internal systems
5. Manufacturers, aggregators and supplier interviews and feedback
6. Benchmarking against European equivalent requirements
7. Future options and recommendations

## 300MW Derogation

- Each provider can register up to 50MW of flexible volume into the BM (to ensure no single provider can use all 300MW).
- Sub-assets must provide a meter reading every 60 seconds to the aggregator's platform (previously 1 second).
- Sub-asset meters must have an accuracy of 2.5% (previously 1%).

# Independent Review Outcomes

## Phase 1 (March 2026)

- Accuracy requirement change
- Meter read frequency requirement change
- Latency requirement amended
- New rule for combining large and small assets in a single BMU
- Data retention policy changes
- Change to Single Markets Platform registration process

## Phase 2 (2026-2028)

- Explore synthetic metering
- Explore report on change metering
- Standardisation where possible
- Develop CER impact modelling & forecasting capabilities

# Phase 1 (March 2026)

## Asset level changes

Only assets connected at  $\leq 415$  V can use these relaxed requirements:

### Accuracy Requirement Changes:

- No extra requirement, as per applicable British Regulation (previously 1%).

### Meter Read Frequency Requirement Changes:

- Every  $\leq 30$  seconds (previously every 1 second).

### Latency Requirement Changes:

- 5 seconds end to end latency from the asset to NESO's platform (no change).
- "Compensation formula" allowed in the short term for assets that cannot meet 5 second requirement.
  - Note: Reduced latency may lead to higher refresh rate requirement.

## BMU level changes

### Accuracy Requirement:

- BMU Level: 1% (improved portfolio accuracy through law of large numbers).

### Meter Read Frequency Requirement:

- BMU Level: every 1 second (no change).

### Latency Requirement:

- N/A.

BMUs combining assets with relaxed operational metering requirements and assets without relaxed operational metering requirements in the same unit should **submit two active power signals to NESO as follows:**

1. BMU-level active power signal **aggregating assets connected at  $\leq 415$  V**. (1% accuracy and 1s refresh rate).
2. BMU-level active power signal **aggregating assets connected at  $> 415$  V**. (1% accuracy and 1s refresh rate).

# Operational Metering Architecture

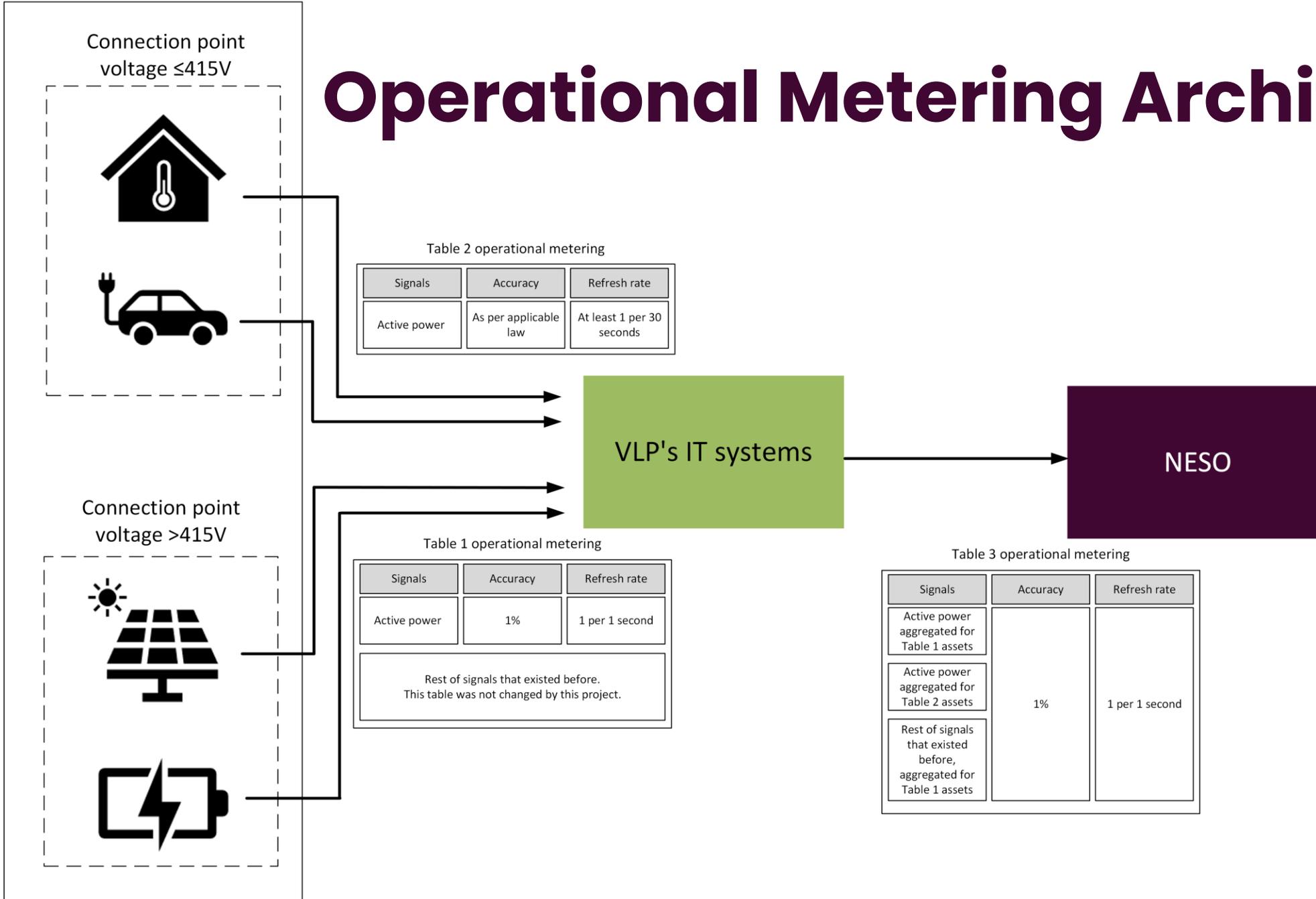


Table 2 operational metering

Signals	Accuracy	Refresh rate
Active power	As per applicable law	At least 1 per 30 seconds

VLP's IT systems

NESO

Table 1 operational metering

Signals	Accuracy	Refresh rate
Active power	1%	1 per 1 second
Rest of signals that existed before. This table was not changed by this project.		

Table 3 operational metering

Signals	Accuracy	Refresh rate
Active power aggregated for Table 1 assets	1%	1 per 1 second
Active power aggregated for Table 2 assets		
Rest of signals that existed before, aggregated for Table 1 assets		

# Phase 1 (March 2026)

Randomness in the time when meter readings are taken, i.e., seconds field, is critical to the phase 1 solution. It is fundamental to reducing risks associated with relaxed metering, e.g., meter error, and in achieving the 1% accuracy on the BMU level.

To achieve this, providers are required to ensure that:

- The timestamps at which the assets using relaxed metering in a BMU send meter readings, i.e., the measurement reading time, must have fully randomised seconds field.
- Fully randomised means **not** assigned based on postcode or geographical area or any other characteristic.

Asset ID	Meter reading #1	Meter reading #2	Meter reading #3
1	HH:00:00	HH:00:30	HH:01:00
2	HH:00:13	HH:00:43	HH:01:13
3	HH:00:28	HH:00:58	HH:01:28
4	HH:00:07	HH:00:37	HH:01:07
5	HH:00:21	HH:00:51	HH:01:21

Must be fully random for the assets in the BMU.

# Phase 1 (March 2026)

## **New contract terms:**

### **Data Retention Requirement:**

The BM provider must record and store the operational metering data for the assets for a minimum of 31 days and, if requested, shall provide such data to NESO within 5 working days of receiving the request.

### **Ramp rate limits** (*requirement would only apply to BMUs aggregating assets connected at $\leq 415$ V*)

Pursuant to its statutory primary duties NESO may, where reasonably required to preserve the security and integrity of the National Electricity Transmission System, impose ramp rate limitations on BMUs comprising aggregated assets, including for the purpose of minimising metering error and managing frequency.

### **Additional Balancing Services:**

When registering for additional Balancing Services, participants must comply with all the necessary technical requirements for that service. Relaxed BM operational metering requirements cannot be used in any other NESO service.

# Phase 1 (March 2026)

**New Single Markets Platform (SMP) requirement applies to all participants registering a new BMU:**

## During asset registration

Is the connection point voltage  $\leq 0.415$  kV (415 V)?

Yes

No

Meter Refresh rate drop-down choice menu with the following options. User must select **one** of the options below.

- *'1s Refresh Rate'* for 1s meter refresh rate.
- *'>1s and  $\leq 30$ s Refresh Rate'* for the up to 30s meter refresh rate.
- *'>30s and  $\leq 60$ s Refresh Rate'* for up to 60s meter refresh rate.

Connection point voltage drop-down menu should be greyed out. And the value assigned to a new value " **$\leq 0.415$  kV**".

Meter Refresh rate is greyed out and auto-populated to be '1s Refresh Rate'

Connection point voltage drop-down menu remains selectable.

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# Q&A

# Phase 2 (2026–2028)

## Upcoming projects:

1. Explore the use of “synthetic metering”.
2. Explore the use of report on change metering.

## Areas for further review and development

- Refine CER modelling to be included in reserve and response dimensioning.
- Integrate flexible demand & embedded generation into forecasting processes.
- Continually review CER impacts on frequency and consider ramp rate limits if necessary.
- Work with Market Facilitator, DNOs & Government to standardise flex products & requirements.
- Develop meter testing and compliance practices in line with innovation.

# Synthetic Metering (2026–2028)

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

<b>27<sup>th</sup> October 2025</b>	<b>3<sup>rd</sup> November 2025</b>	<b>March 2026</b>	<b>Q2 2026</b>
<ul style="list-style-type: none"><li>• Application submitted for innovation funding.</li></ul>	<ul style="list-style-type: none"><li>• 1<sup>st</sup> NESO innovation project stage gate has been successful.</li></ul>	<ul style="list-style-type: none"><li>• Tender for consulting partner.</li><li>• NESO Innovation funding pitch to secure funding.</li></ul>	<ul style="list-style-type: none"><li>• Stakeholder update.</li></ul>

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# Q&A

# Key Information

## Phase 1 Information

To request the new agreement, contact your account manager or email:  
[commercial.operation@neso.energy](mailto:commercial.operation@neso.energy).

- [New Requirements Guidance](#)
- [BM Registration Guidance](#)
- [Metering Project Briefing Note](#)
- [Derogation Guidance](#)

## Project Queries

- Find all project documents on the [Power Responsive](#) webpage.
- Send project specific queries to: [power.responsive@neso.energy](mailto:power.responsive@neso.energy)

# Thank you