

# Operational Metering Working Group

## Summary

Session 11

10<sup>th</sup> March 2025

### Agenda

1. Summary of metering capability survey responses
2. Update on modelling approach
3. Review of modelling assumptions
4. Initial modelling results for discussion
5. Next steps
6. Q&A

### Introduction

Mili Gupta – Head of Systems, Support and Insight, welcomed attendees to the meeting and introduced the agenda, thanking members for their continued support and emphasising the importance of their input into the project.

### Survey Feedback

DNV provided an update on the survey sent in February, thanking participants for their feedback.

They discussed the key findings:

1. **Distribution of meter updates** – 80% of respondents confirmed that meter updates are evenly distributed across time as uniform (20% don't know).
2. **Latency** – respondents agreed that 5 second latency was possible for at least most, if not all their assets. All agreed 10 seconds was achievable.
3. **Asset ramp rates** – most respondents could not answer heat pump questions, and none could answer Solar and Micro BESS.

DNV is still looking for additional information on solar and micro-BESS assets.

### Modelling Approach

DNV explained the modelling approach for the project, focusing on the impact of CER on the wholesale market and BM in 2035. Until now, analysis had focused on the operational metering characteristics of individual portfolios. However, to properly assess the potential

impact on NESO from CER Operational Metering, it is necessary to consider how combinations of different technologies might behave and interact in a future decarbonised power system. This is necessary to:

1. Understand the operational impacts in control room (situational awareness, demand predictor), which depend on a much larger number of factors than a single portfolio.
2. Understand the impact (if any) of CER meter feeds on required actions to ensure compliance with SQSS e.g. Response and Reserve levels. Sizing of response and reserve levels requires annual data on the magnitude and likelihood of any impacts.

DNV then discussed the following points:

- **Scenario selection:** The 2024 NESO Future Energy Scenarios “Holistic transition” scenario was chosen for high CER numbers, with other scenarios for correlation.
- **Problem statements informing the modelling:**
  - Hourly swings of CERs will depend on both the system price, and availability of CERs
  - The largest swings of CER will cause frequency deviations, necessitating new dimensioning for frequency response.
  - Considering the need for the Balancing Mechanism, what is the impact of CER OM data that are activated (per hour and per technology) on the ENCC?
  - CERs participating in the wholesale market and registered in the BM will submit OM data even though they are not activated, what’s the impact on the ENCC due to relaxed OM requirements?
  - Operational scenarios will need to be modelled to simulate situational awareness instances.
  - If current OM requirements are maintained, less CERs will be in the BM, how will this impact BM pricing?
- **The different modelling options considered.**

## Assumptions and Initial Results

DNV reviewed key assumptions for the modelling, including the percentage of CERs sending operational metering and ramp times:

- **EV Ramp Times:** Members suggested changing the EV ramp time from ten seconds to thirty seconds. EVs ramp up can take up to 30 seconds and ramping down typically takes less than 10 seconds.
- **Heat Pumps:** Different ramp up and down speeds were noted.

**Initial Results:** DNV presented initial results, showing load profiles and ramp rates for different assets:

- **EV and V2G:** Significant variation in load profiles and ramp rates.

- **Heat Pumps and Micro BESS:** Different seasonal behaviours and ramp rates.

## Detailed Analysis

DNV discussed the load and ramp duration curves, highlighting the frequency of worst-case scenarios:

- **Load and Ramp Duration Curves:** Analysis of the number of hours in the year with high load and ramp speeds.
- **Ramp Rate at Hour Boundary:** Detailed analysis of ramp rates at hour boundaries for different assets.
- **Error Calculation:** Explanation of the error calculation process, showing the impact of metering delays.
- **Specific Day Analysis:** Analysis of forecasted asset behaviour and errors on a specific day (7th December 2035).

## Next Steps

- Next WG meeting near the end of April.
- Provider survey to understand implementation challenges of future recommendation(s) will be circulated around 1<sup>st</sup> May.

## Questions & Feedback

- **Counterfactual Analysis:** Members emphasized the importance of quantifying the impact of metering requirements on BM participation.
- **Metering Update Frequency:** Suggestion to analyse the existing metering update frequency for dispatchable generation in the BM.
- **Operational Metering Focus:** Questioning of the focus on hour boundaries, suggesting real-time BM calls are more relevant.
- **On Change Metering:** Members reiterated the need for on change metering to be considered within future recommendations.

## Meeting Close