

FPN Good Industry Practice All Fuel Sources – Consultation Note.

Upon considering all feedback received through the Data Accuracy call for input, NESO is considering expanding the application of Good Industry Practice relating to FPN accuracy (as outlined in Grid Code BC1.4.2(a) and BC2.5.1) across all fuel types. This initiative supports on our ongoing efforts to enhance the quality of data submitted by BM market participants, thereby improving operational security and balancing costs.

NESO welcomes contributions from all stakeholders in the balancing mechanism and wants to understand how to balance the need for high quality, low error data, with operational costs and challenges associated with actions to increase accuracy. Whilst a guidance note is used to formally document expected practices including outlining consequences for non-compliance, the process of improving data is intended to be collaborative and flexible enough to adapt to genuine operational reasons that standards cannot be met. The majority of BMUs are considered to submit high quality, low error data and performance improvements delivered by wind participants outlines the system value that can be achieved through this type of grid code clarification. The below questions are intended to guide a response to key issues, but all wider feedback is appreciated and will be considered as part of potential changes to the approach outlined.

Consultation Questions

The draft revised guidance note and supporting data has been uploaded alongside this consultation document for review, please consider the following questions and submit your responses by 17:00 hours on the 31st of July 2026. If you have any questions or require any further information, do not hesitate to contact us at marketreporting@neso.energy.

Question 1: Is a guidance note the most appropriate way to reduce balancing mechanism physical notification errors? Some previous feedback indicated a preference for a BSC change to a non-zero information imbalance charge which would commercialise error in place of outlining standards.

Question 2: Should the guidance note be aligned with Grid Code definitions for intermittent and non-intermittent resources or should each individual fuel type have its own accuracy standards outlined?

Question 3: Do you agree with the proposed introduction of new FPN accuracy Good Industry Practice Thresholds for non-intermittent BMUs ($\pm 1.0\%$ net error and 2.4% absolute error), derived from the 70th percentile of the observed performance in 2025 (Change 2)?

Question 4: With respect to the practices outlined in section 8, principles for good industry practice, should any additions be made, proposals be removed or proposals be further clarified?

Question 5: Should existing standards remain unchanged for wind BMUs?

Question 6: Should all intermittent resources be aligned to the accuracy standards previously defined for wind assets?

Question 7: Do you have any comments on the proposed updates to the calculation of monthly error statistics (Change 3)? In particular, NESO invites views on whether the proposed exclusion of settlement periods subject to Bid-Of-fer Acceptances appropriately isolates BMU performance under normal operating conditions and if the capacity-based denominator which was appropriate for wind is suitable for other resource types?

Question 8: Does a monitoring process which starts 1st October 2026 provide sufficient time to change practices to meet standards?

Question 9: Does the data, analysis and proposed draft wording provided across the guidance note, consultation document appendix and data-pack provided meet needs to fully consider a response to this guidance note or is there further data that NESO should provide?

Question 10: Are there any omissions, or other considerations that NESO should be aware of while considering appropriate revisions to the document on good industry practice in the preparation of physical notifications?

Please provide supporting evidence to your responses where possible, including any potential unintended consequences or implementation challenges. Please also mark your responses as confidential or non-confidential so that we can understand your preferences for sharing feedback we have received.

The consultation window will run from **17th June 2026 to 31st July 2026**. During this period, market participants are invited to provide feedback to the NESO Market Monitoring team. Subject to the volume and nature of responses received, NESO intends to publish a revised FPN Guidance Note by **1st September 2026**, incorporating industry feedback where appropriate. This would be followed by a monitoring period commencing from **1st October 2026**.

Appendix

The changes outlined below will introduce new good industry practice thresholds for non-intermittent BMUs and extend the current wind-based thresholds to include solar as an intermittent resource. Balancing Mechanism participants are invited to review these proposals and share any feedback or concerns with the NESO Market Monitoring Team. To support with understanding changes a full proposal including a marked-up version highlighting the changes is published alongside this consultation document, but major revisions are clearly described below with supporting analysis.

Change 1 – Implementing the current Good Industry Practice thresholds on solar BMUs to ensure consistent thresholds across all intermittent sources.

There are currently nine solar units participating in the Balancing Mechanism. Analysis of the median monthly performance of each BMU throughout 2025 (as illustrated in Figure 1) reveals that six out of the nine units meet the established Good Industry Practice absolute error threshold for wind BMUs. The remaining three units are close to meeting these thresholds, indicating potential for gradual improvement. Solar generation exhibits a comparable set of operational challenges to wind. BMUs amongst both resources rely on weather data for forecasting to and are subject to cut-out in extreme conditions. Given these shared characteristics, we propose expanding the scope of our approach to encompass all intermittent resources, including solar. This ensures that the principles of Good Industry Practice, which have driven positive outcomes to date, are applied consistently to additional fuel sources.

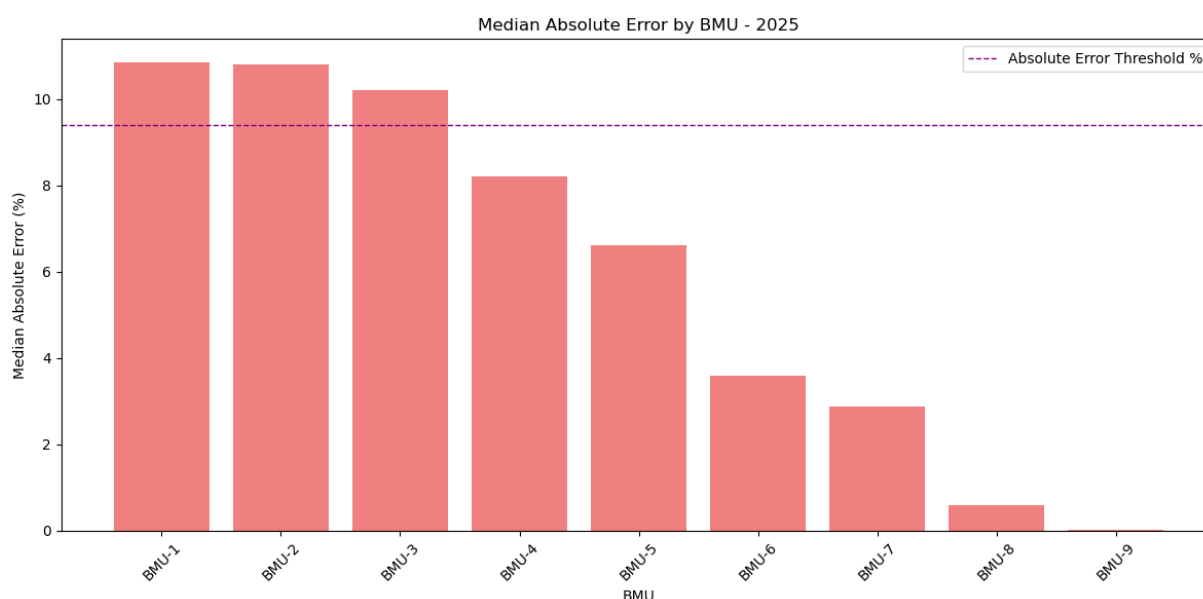


Figure 1: Illustration of median absolute error by solar BMU in 2025

Change 2 – introduction of new thresholds for non-intermittent BMUs

Based upon the information below, NESO propose to set a monthly threshold at the 70th percentile to specifically address the inaccuracy observed in units with significantly large errors resulting in thresholds of $\pm 1.0\%$ for the net (directional) error and 2.4% for the absolute error to be used in the first stage of establishing if a unit is meeting good industry practice.

Non-intermittent	
Net error (%)	Absolute error (%)
$\pm 1.0\%$	2.4%

BM market participants might object that why the standard of setting good industry practice is being changed from what was decided for wind market participants in the previous version of the guidance note – top 10% after taking worst monthly performance of each BMU. The following argument is an attempt at justifying our change in approach.

Intermittent units deal with significant variability in their output, largely due to uncontrollable nature of their assets. On the other hand, non-intermittent BMUs are expected to demonstrate a closer alignment between expected and metered outputs, unless encountered an anomalous situation. However, we have also observed significant errors in many of these units, due to factors such as inaccurate reporting of metering data, lack of metering data, power consumption/production without dynamic parameters, and profiling expected output with MEL instead of PN. We believe it is essential to focus on improving the data submitted by these BMUs to the ENCC to ensure efficient system operation.

The distribution of errors amongst non-intermittent sources tend to be different from that of wind BMUs, displayed in the plots below. For non-intermittent BMUs, the distribution of median absolute errors for all BMUs is mostly flat, until the 70th percentile, after which the errors start to creep up and significant high values are observed in the tail (Figure 3). This means that most error is contributed by the outliers rather than held incrementally across all units, as was the case with the distribution of errors for wind BMUs (Figure 2).

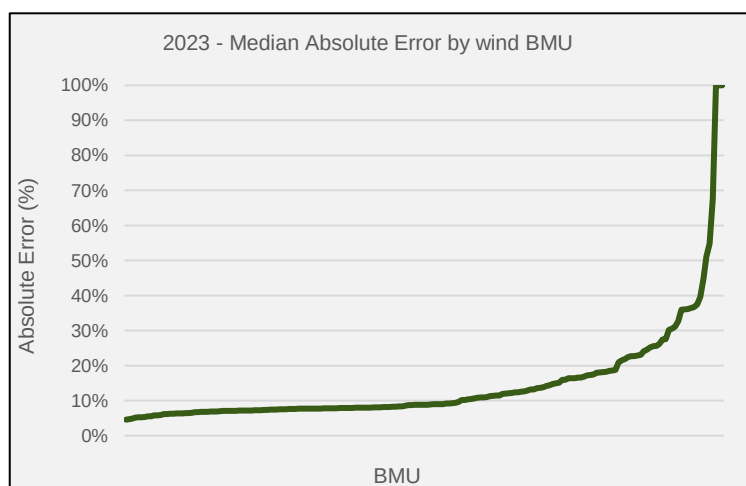


Figure 2: Median Monthly Absolute Error by Wind BMU - 2023

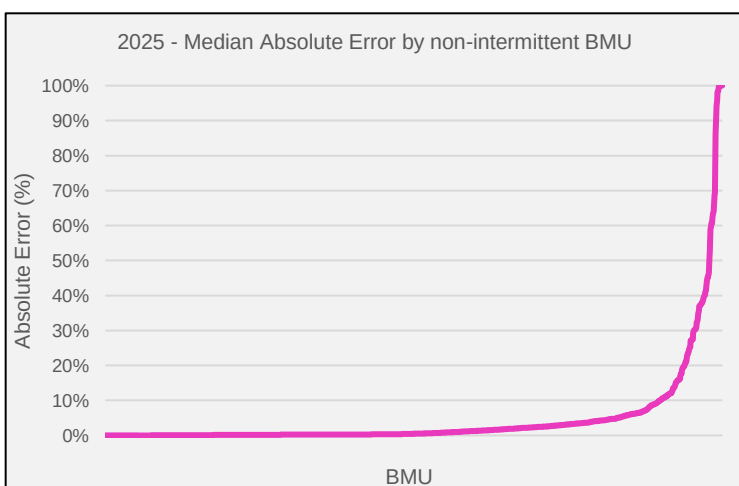


Figure 3: Median Monthly Absolute Error by Non-Intermittent BMU - 2025

This conclusion is further reinforced by a comparison of the distribution of 2025 error data between intermittent and non-intermittent BMUs (Table 1). For intermittent BMUs, absolute error levels are approximately 6% for the lowest-performing decile, increasing to around 9% at the median, with a further escalation observed towards the 90th percentile. In contrast, the distribution of FPN inaccuracy for non-intermittent BMUs is notably more concentrated in the tail end of distribution, with median absolute errors approximately 0.5%. Beyond the 70th percentile, absolute error levels rise progressively to around 2.36%, before increasing sharply to approximately 9.9% at the 90th percentile. This pattern indicates that a disproportionate share of total error is driven by a relatively small number of high-error outliers.

Percentiles	Intermittent		Non-intermittent	
	Net error (%)	Absolute error (%)	Net error (%)	Absolute error (%)
10 th	0.74%	6.65%	±0.02%	0.04%
20 th	0.94%	7.44%	±0.04%	0.13%
30 th	1.10%	7.85%	±0.07%	0.21%
40 th	1.385	8.65%	±0.11%	0.26%
50 th	1.70%	9.07%	±0.23%	0.47%
60 th	2.07%	9.77%	±0.50%	1.27%
70 th	2.67%	10.19%	±1.04%	2.36%
80 th	3.565%	10.95%	±2.10%	4.12%
90 th	5.42%	12.48%	±5.73%	9.90%
NESO view of Good Industry Practice Threshold	±3.0%*	9.4%*	±1.0%	2.4%

*Previously established view on good industry practice to be continued for intermittent BMUs

Table 1: Net and absolute error statistics – intermittent vs non-intermittent sources - 2025

Percentile	Aggregated	Battery	Biomass	CCGT, Gas & CHP	Demand	Diesel	Interconnector	NPSHYD	Nuclear	OGCT	Pumped Storage
10 th	0.47	0.98	0.33	0.25	0.33	0.08	0.02	0.23	0.17	0.00	0.16
20 th	1.30	1.82	0.39	0.75	1.16	0.15	0.08	0.29	0.17	0.00	0.48
30 th	1.90	2.33	0.77	1.22	2.84	0.23	0.12	0.83	0.42	0.01	0.58
40 th	2.70	3.16	1.61	1.56	3.38	0.55	0.17	1.33	0.49	0.01	0.68
50 th	3.32	3.63	2.31	2.05	5.50	0.94	0.21	1.46	0.58	0.10	0.76
60 th	4.30	4.86	3.99	2.28	6.47	1.01	0.25	1.62	0.62	0.79	0.79
70 th	5.91	6.38	5.01	2.59	9.89	1.05	0.27	2.38	0.96	1.61	0.87
80 th	11.13	8.82	5.46	4.25	15.67	1.14	0.34	3.53	1.26	2.05	0.95
90 th	31.52	13.63	8.80	8.16	39.89	1.22	1.17	5.68	7.48	3.34	1.28

Table 2: Monthly Median Absolute Error For Non-Intermittent Sources, By Fuel Type and Percentile

It is crucial to understand the aim of the efforts with our FPN accuracy initiative. We believe in achieving the balance between benefits of increased accuracy vs practical improvements achievable by BM participants. Setting threshold for non-intermittent sources on the basis of our old methodology results in figures of **0.1% on the net error and 0.9% on the absolute error**. Tighter thresholds such as these might marginally enhance the performance of already efficient units – ones below the 70th percentile, with less than 1% error – but such gains are negligible compared to the substantial improvements needed for largely underperforming units. By adopting according to the new methodology, we allow for targeted interventions on units with the most significant errors, whereby improvements that are practical and achievable, deliver results that improve the overall efficiency of the system. This old methodology was practical for wind market participants whereby

most errors were held incrementally across the distribution, whereas, for non-intermittent sources, most error is contributed by the outliers, henceforth using the performance of the best performers as a benchmark risks setting thresholds that may not be met regularly.

Change 3 – methodology in how we calculate the statistical performance of each BMU each month

The previous approach to calculate error statistics relied on assumptions that were mostly valid for wind market participants. Missing or zero envelopes and capacities caused very small denominators, producing % errors in the tens or hundreds of thousands. These artefacts dominated rankings, distorted monthly and annual summaries, and masked genuine PN accuracy behaviour. This section describes the updated FPN accuracy methodology applied across all fuel types. The changes address structural weaknesses in the legacy wind-only approach, which produced misleading and inflated percentage errors when applied to batteries, interconnectors, load response, aggregated BMUs, and other non-thermal technologies. In addition to these changes, and in response to feedback received from wind market participants, we propose to exclude settlement periods where units are subject to bid/offer acceptances from error calculations; this is intended to capture true inaccuracy of BM participants under normal operating conditions i.e. not subject to instructions from the ENCC.

Below is the summary of the changes made to error calculation procedure; details are provided in the appendix of the draft guidance note on the FPN accuracy of BMUs

- Expectation construction is now fuel-agnostic and includes response volume:
 - Expected output (per SP) = PN + ABSVD response volume
 - ABSVD is often zero for BMUs that do not provide response services
- Expectation is bounded within [MIL, MEL] when envelopes exist
 - MEL is applied as an upper bound when available
 - MIL is applied as a lower bound when available
- Denominator selection is directional, metered-aware, and robust
 - Direction follows metered output when metered output $\neq 0$
 - Direction falls back to expected output when metered output = 0
 - A multi-layer fallback hierarchy prevents tiny or missing denominators
 - Explicit minimum calibrated magnitude guardrails prevent artefact % errors, while preserving genuine PN accuracy signals