

Technical addendum to SONI Market Message re: Security of Supply

In relation to the Market Message issued by SONI¹ on 23 September 2025 and SEMO² on 24 September 2025, this document outlines some of the key assumptions used in the modelling.

The starting point of the model is the All-Island Resource Adequacy Assessment (AIRAA) 2026-2035 model. This model is consistent with the European Resource Adequacy Assessment (ERAA)³. For the purposes of the analysis undertaken for the Market Message, SONI adapted this base model with some considerations:

- Assumptions in relation to planned outages in Northern Ireland have been used⁴. These are outlined in the table below.

Type of Unit	Start Date	End Date	Unavailable MW
Thermal generation	27 Jun 2025 00:00	18 Oct 2025 00:00	408
Thermal generation	24 Oct 2025 00:00	28 Oct 2025 00:00	94
BESS	01 Nov 2025 00:00	03 Nov 2025 01:00	50
BESS	01 Nov 2025 00:00	04 Nov 2025 00:00	50
Thermal generation	01 Nov 2025 08:00	15 Nov 2025 00:00	58
Thermal generation	09 Dec 2025 12:00	12 Dec 2025 22:00	408

- Forced outage assumptions are stochastic and based on historic availability data.
- Reserves are not included in the model and therefore the model looks at risk to demand only rather than avoiding alert state.
- A minimum number of sets constraint in Northern Ireland has been applied in accordance with well-established constraints published on the SEMO website⁵. This assumption takes account of the ongoing minimum two-set trial.
- A single Weather Scenario has been selected from the available Weather Scenarios – the chosen scenario was deemed to be representative of **average** climate conditions.
- Flows from Ireland to Northern Ireland are assumed to be limited to 200 MW when operating within the 2 minimum set rule limits.
- Run hour limited units in Northern Ireland are assigned high variable operation and maintenance (VO&M) costs such that they are only dispatched to satisfy the minimum sets constraint and generally dispatched last in merit.

¹ <https://cms.soni.ltd.uk/sites/default/files/publications/SONI-Market-Message-V0.pdf>

² <https://www.sem-o.com/market-messages/security-supply-soni-market-message>

³ <https://www.entsoe.eu/eraa/>

⁴ Based on a SONI assumption acting as a Prudent Operator

⁵ For example: https://www.sem-o.com/sites/semo/files/2025-09/Wk39_2025_Weekly_Operational_Constraints_Update.pdf