22/08/2025

ECP 2-5 Constraints Forecast

Proposed Assumptions - Draft

Constraints Analysis for Solar and Wind

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Agenda

- Proposed Improvements
- Background
- Study Scenarios
- Key Changes and proposals\Decision
- Assumptions
- Timeline and Engagement Plan

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Proposed Improvements

- Assumption in single document (Green dots)
  - Word Document containing embedded presentation
  - Track updates from draft, Industry engagement and results
- List in single Excel document (Aqua dots)
  - Information tab and revision control
  - Separate tabs for data: Battery, Wind, Solar, interconnector and Appendix A,B & C from Methodology
- Add version control to all documents with history of changes
- FAQ – live document
- Labelling of diagrams and columns etc
- Methodology

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Standard format for questions submitted

- Source:
  - Assumption document or Assumption Webinar
  - Input Data
  - Modelling
  - Result Webinar
  - Report Area x
- Reference
  - Section or page
- Category
  - Technology e.g. Wind, Solar
  - Demand
  - Generation
  - Network
  - Generic

Labelling of Data set submitted
- Explain source
- Filters used
- Explain labelling of Columns
- Formula

Labelling of questions submitted
- Improve response
- Reduce turnaround time

Example: **Assumption document_Section8_Table81_Wind Offshore**
Can you please provide an explanation as to why in Initial, 50% and ECP the figure remains the same?

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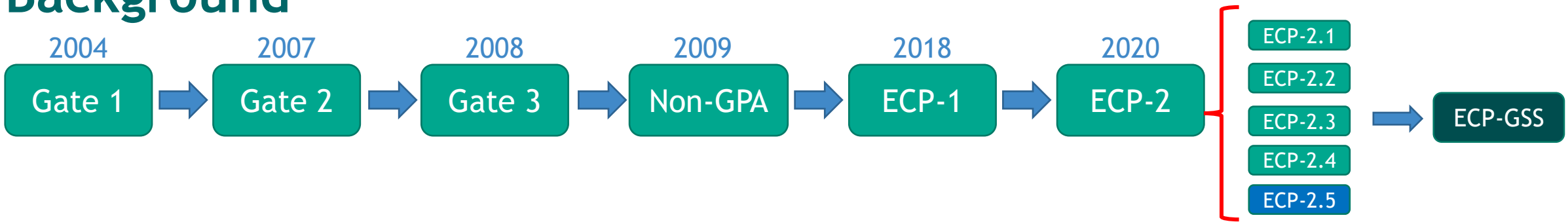
Background



- The Enduring Connection Policy (ECP) 2-5 is the fifth iteration of connection offers for Renewable Energy Sources (RES) planned under ECP 2 by the Commission for Regulation of Utilities (CRU).
- The ECP 2-5 Constraints Analysis is carried out by EirGrid (as mandated by CRU/20/060 decision on ECP 2) to forecast dispatch down levels for ECP 2-5 wind and solar projects.
- EirGrid plans to publish 12 regional constraints reports that will provide ECP 2-5 developers with information on forecasted dispatch down levels in each region.
- Timeframe for completion of this work is Q4 2025.

Generator Type	MEC (MW)
Solar	2731
Wind	902
Battery	900
Total	4533

Table 1: ECP 2.5 applied generation per category

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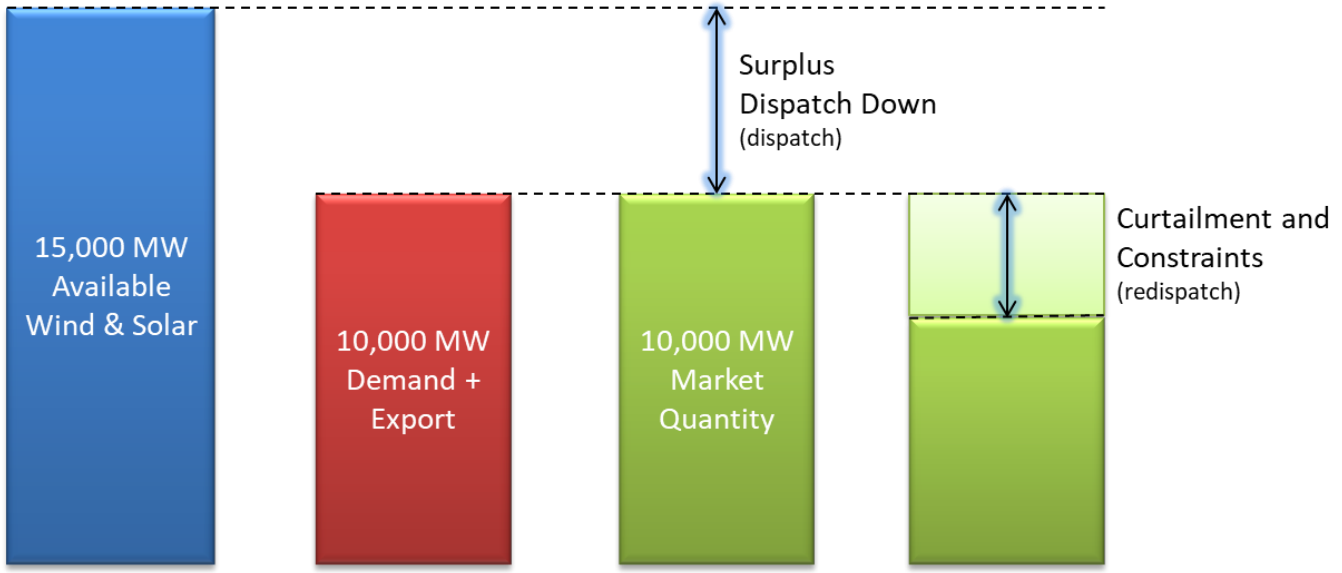
Total Dispatch Down – constraint forecast

Total Dispatch Down
- Sum of Surplus, Curtailment & Constraint

Type of Dispatch Down	Definition
Surplus	Dispatch down applied for energy balancing when generation exceeds demand + interconnector export.
Curtailment	Dispatch Down applied to ensure operational limits are met.
Constraint	Dispatch Down applied to manage network constraints.



- Surplus & Constraint are shared by only non-priority renewable generators (grandfathered)
- Curtailment is pro-rata across SEM renewable generation

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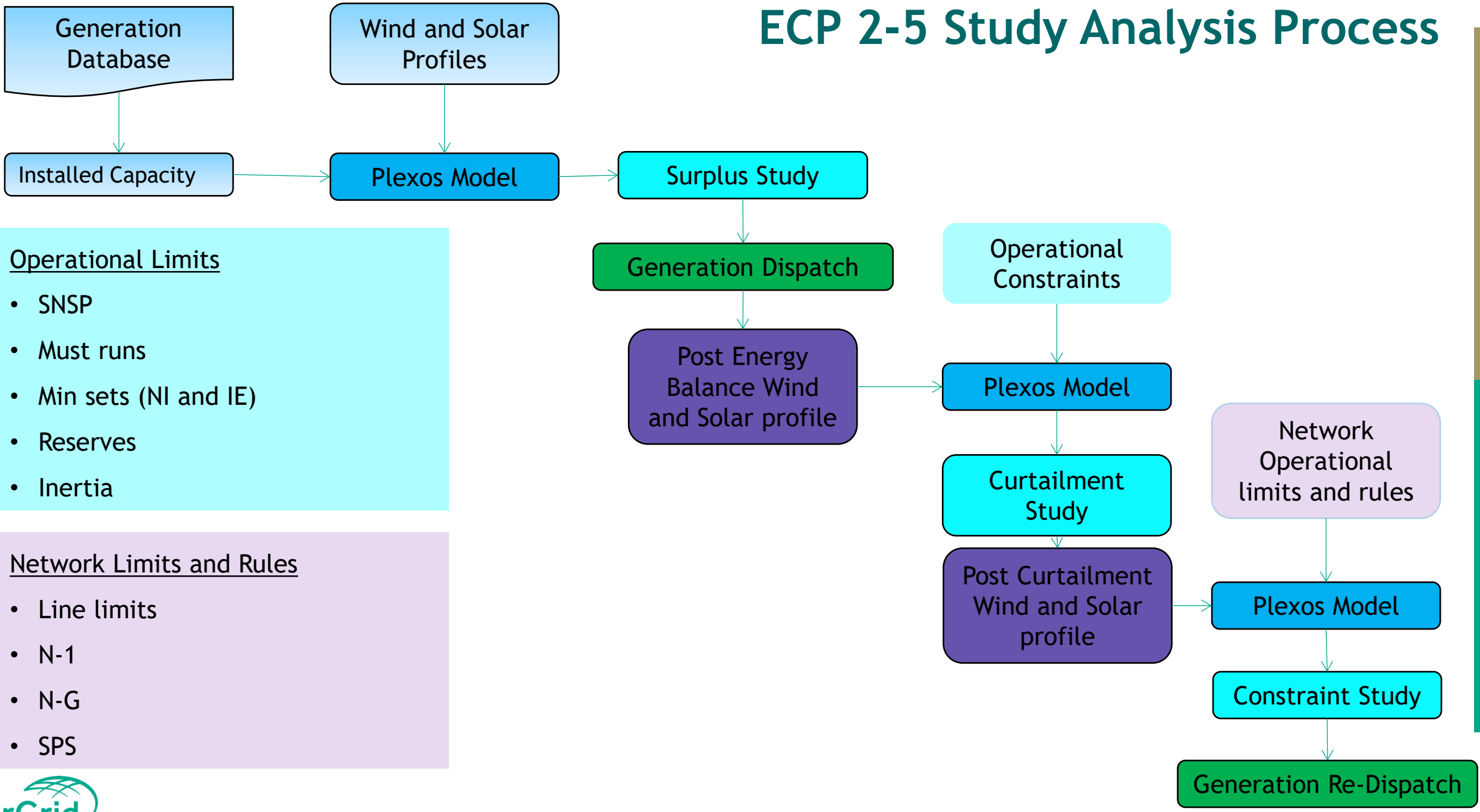
ECP 2-5 Study Analysis Process



Operational Limits

- SNSP
- Must runs
- Min sets (NI and IE)
- Reserves
- Inertia

Network Limits and Rules

- Line limits
- N-1
- N-G
- SPS

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ECP 2.5 Study Scenarios

Core studies
Offshore sensitivity

GENERATION

Initial | 50% | ECP (22.4 GW) | ECP + 3.1 GW offshore (25.5 GW) | ECP + 5 GW offshore (27.4 GW)

NETWORK

2028 (GF)

2030(GF)

Future Grid* (GF)

CORE ECP 2-5 STUDIES

Study | Study | Study

Study | Study | Study

OFFSHORE STUDY

Study

Study | Study*

INTERCONNECTION

EWIC, Moyle, Greenlink

EWIC, Moyle, Greenlink, Celtic

EWIC, Moyle, Greenlink, Celtic, Liric, 2nd France, Mares, 2nd NS

Number of studies:

- 6 core
- 3 offshore sensitivity
- 3 Industry suggestions

* SOEF 1.1 based network + additional reinforcements from NDP
Maintenance sensitivity scenario are not shown here

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Key Changes and proposals\Decision

- Study Year
  - Core – 2028, 2030
  - Future Grid (align with NDP, SOEF 1.1)
- Interconnection included
  - Celtic include from 2028
  - 2nd NS include in Future Grid
  - Mares, not included last year, include in Future Grid
  - LirIC and 2nd France included last year, include in Future Grid
- RE-Hubs – TBC
- Constraints allocation – Grandfathering
- Industry feedback
  - Interconnector (IC) flow model
    - Recent flow on IC's to be considered for modelling
    - Fixed flow in Curtailment and Constraint study
  - Not to have Solar and wind separated for constraints allocation
    - We explored this option, but not included in this iteration
    - This will need significant calculation modifications and QA's steps to be implemented
  - Inclusion of midyear start date at of projects for that specific year
    - We explored this option, but not included in this iteration
    - The effect is marginal for most cases and could also skew the impact

Assumptions in ECP 2.5 compared to ECP 2.4

Assumption	ECP 2.4	ECP 2.5
Article 12 and 13	Interim implementation has been updated to pro-rata constraints on RES. Need to consult further…	Grandfathering of Surplus and Constraints
Demand	NRAA 2024-2033, shape based on 2022 data	AIRAA 2025-2034
Conventional Generation	NRAA 2024-2033 and capacity auction	AIRAA 2025-2034
RES generation (Ireland)	Updated with ECP 2.4 list	Updated with ECP 2.5 list
Onshore Wind Profile	Profiles from 2020. Each node using a representative profile from that area	Same as ECP 2.4 (will be reviewed)
Offshore Wind and solar Profile	Synthesised 2020 offshore profile (procured from an external vendor).	Same as ECP 2.4 (will be reviewed)
Interconnector	2027 - EWIC, Greenlink, Moyle (Export 400MW). 2029 - EWIC, Greenlink, Moyle (Export 450MW), Celtic, North-South 2. Future Grid - EWIC, Greenlink, Moyle (Export 450MW), LirIC, Celtic, North-South 2, 2nd France*.	EWIC, Moyle, Greenlink, Celtic in for 2029, 2nd North South – 2032 LirIC, 2nd France, Mares
Batteries	Based on current offers and applications. Used for maintaining reserve (POR, SOR, TOR1 & TOR2). 2 cycle per day limit. Portion of the long duration storage to provide energy arbitrage	Same as ECP 2.4 (will be reviewed)
Operational Constraints	Operational roadmap policy	Operational roadmap policy
Outage assumptions (Transmission)	Consistent with ECP 2.3 and ECP 2.2	Same as ECP 2.4 (will be reviewed)
Reinforcement Assumptions	2027 and 2029: Network Delivery Portfolio Future Grid: SOEF 1.1 Roadmap	NDP and SOEF Roadmap 1.1
Northern Ireland Assumptions	Update with NI generation data and network data	Update with NI data

Timeline

Engagement Plan

- Industry stakeholder engagement meeting – 22.08.2025 and 19.09.2025
- Submit study scenario for consideration 05.09.2025
- Webinar – 12.12.2025
- Publication of Results – 19.12.2025
- Area wise webinar – 12.01.2026
- Closing date to submit queries – 19.01.2026
- Closing date to respond to queries – 30.01.2026 (with the odd exception)

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Thank You
Questions?