

# Weekly Operational Constraints Update

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Applicable from 25 January to 31 January 2021  
(Week 04)

22 January 2021

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## **Disclaimer**

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## Explanatory Notes

- The purpose of this Weekly Operational Constraints Update is to provide information on any forecasted significant network congestion or other issues that could potentially restrict dispatchable generation in a particular area or to flag if dispatchable generation is required in a particular area. These constraints are in addition to those presented in the monthly Operational Constraints Update document which should be read in conjunction with this document.
- In the analysis, a suite of N-1 contingencies are applied to the base case powerflow, and the resulting flows and voltages are compared against the Operational Security Standards. The N-1 contingencies include the tripping of each item of transmission plant and each generator transformer. Groups of generators / demand / wind etc. can be scaled up or down to determine a secure region of operation (known as transfer analysis or transaction analysis).
- The cases incorporate the latest generation and transmission outage information at the time of the study. This information is published on the EirGrid and SONI websites.
- Typically, from a dispatchable generation perspective the worst thermal constraints occur at peak system demand, and therefore only peak system demand scenarios are studied using transfer analysis. If required, other studies are performed, such as system demand valley where high voltages may be an issue.
- The wind levels in the various scenarios assume a flat profile across Ireland or Northern Ireland. We do not test Ireland wind levels above 2000 MW as, typically above these levels, constraints on dispatchable generation are not as binding due to the availability of the wind generation.
- The binding constraints on the flow on the North-South Tie Line from a thermal and voltage perspective tend to be due to thermal constraints on the Ireland side, save for specific Northern Ireland outages. This is why the Inter-Area Flow (North-South Tie Line Flow) Constraints Forecast below is only studied against Ireland wind generation.
- There may be other reasons, apart from voltage and thermal limits that lead to constraints, such as frequency, transient stability and adverse weather conditions. These are usually observed and dealt with close to real-time.
- Moyle Interconnector is limited to 80 MW export due to constraints on the Scotland side. National Grid Electricity Transmission plc performs daily studies to ascertain if this can be increased. Please note that the figures below in relation to interconnectors pertain to the Ireland/Northern Ireland side only.
- Should any of the study assumptions materially change during the week, due to a forced outage for example, we will endeavour to perform new studies and publish results on the next working day.

## Study Assumptions

### Generator and Transmission Outages

Generator and transmission plant outages as per published here:

[All-Island Generator Outages](#) – Under REMIT Publications

[Ireland Transmission Outages](#)

[Northern Ireland Transmission Outages](#)

### Demand

All studies are performed at Weekday Peak System Demand unless otherwise stated

Jurisdiction	Weekday Peak System Demand (MW)	Weekend Peak System Demand (MW)
Ireland	5300	4800
Northern Ireland	1600	1400

### Initial Interconnector and Tie Line Flows

	Flow (MW)
EWIC	At zero wind 250 MW Import (GB to IE) At 2000 MW wind 200 MW Export (IE to GB)
Moyle	N/A
North–South Tie Line Flow	0 MW Northern Ireland to Ireland / Ireland to Northern Ireland

## Constraints

The forecast constraints below are at Weekday Peak System Demand.

### South Generation Constraints Forecast (TCG Type: MW; Limit Type B) as per Operational Constraints Update

Ireland Wind Generation (MW)	Minimum South Generation (MW)	Maximum South Generation (MW)
0	200	1200
1000	210	1200
2000	210	1200

### Cork Generation Constraints Forecast (TCG Type: MW; Limit Type B) as per Operational Constraints Update

Ireland Wind Generation (MW)	Minimum Cork Generation (MW)	Maximum Cork Generation (MW)
0	140	800
1000	100	800
2000	100	800

### Inter-Area Flow (North-South Tie Line Flow) Constraints Forecast

Ireland Wind Generation (MW)	Maximum Northern Ireland to Ireland flow (MW)	Maximum Ireland to Northern Ireland flow (MW)
0	450	370
1000	450	400
2000	450	400

## Interconnectors

Ireland Wind Generation (MW)	Maximum EWIC Import (MW)*	Maximum EWIC Export (MW)*	Maximum Moyle Import (MW)*	Maximum Moyle Export (MW)*
0	500	530	442	400
1000	500	530	442	400
2000	500	530	442	400

\* Values pertain to the Ireland/Northern Ireland side of the interconnectors only

## Coolkeeragh C30 Running

Northern Ireland Wind Generation (MW)	Northern Ireland Demand (MW) above which C30 must be running with GT8 off	Northern Ireland Demand (MW) above which C30 must be running with GT8 operating as a synchronous compensator	Northern Ireland Demand (MW) above which C30 must be running with GT8 operating as a generator
0	1550	1608	Not required
450	Not required	Not required	Not required
900	Not required	Not required	Not required

## Other Constraints/Notes/Risks

Should market participants identify operational risks related to COVID-19 they should inform the TSO as soon as possible via their normal point of contact. Should this instigate a significant change to scheduling and dispatch the TSOs will update this weekly constraints document to reflect this in a revised publication as soon as possible.

Jurisdiction	Constraint/Note	Reason
Ireland / Northern Ireland	Winter transmission ratings are in place.	Seasonal.
Ireland / Northern Ireland	EirGrid and SONI will, subject to system conditions, provide additional notice of intended unit synchronisation and desynchronisation decisions to facility operators in order to accommodate their amended operational practices.	COVID-19 has resulted in restrictions in working arrangements at some generation facilities.
Ireland / Northern Ireland	Update to System Wide Transmission Constraint Group:  Operational Limit for Rate of Change of Frequency (S_RoCoF)  Limit Type: X:<= Limit: 1 Hz/s	Continued trialling of an increased system limit for the Rate of Change of Frequency (RoCoF).  System conditions permitting, the RoCoF limit will be 1.0 Hz/s.
Northern Ireland	Coolkeeragh Unit C30 is 'must run'	System Security.
Ireland	Dublin Bay DB1 is 'must run'	Generator Constraint
Ireland / Northern Ireland	BREXIT - Impact on Scheduling  Day-Ahead Markets running from 31 December 2020 will not include any SEM-GB interconnection capacity so the resulting interconnector schedules will initially be set to zero.	BREXIT

	<p>To facilitate on-going scheduling by the TSOs, we may create 'dummy', non-zero interconnector schedules for Moyle and EWIC in our first day-ahead Long Term Schedule (LTS) that is normally published by 16:00 each day. This first day-ahead LTS run should be considered more indicative than it would normally be given that firm interconnector schedules for the first part of the next day (from 23:00 D-1 to 11:00 D) will not be available until post IDA1 (after 18:10).</p> <p>The LTS that is published each evening post IDA1 will reflect the firm interconnector schedules.</p>	
<p><b>Ireland / Northern Ireland</b></p>	<p>Update to System Wide Transmission Constraint Group:</p> <p>Operational Limit for Non-Synchronous Generation (S_SNSP_TOT)</p> <p>Limit <math>X \leq 70\%</math></p>	<p>70% SNSP Trial to commence Monday 18<sup>th</sup> January and expected to run until end of March</p>
<p><b>Ireland</b></p>	<p>Negative Ramping Reserve</p> <p>Ireland <math>\geq 0</math> MW</p> <p>Note: Northern Ireland =50 MW which remains unchanged</p>	<p>Change in value following completion of negative ramping reserve trial.</p> <p>Defined as the MW output of a conventional generator above its minimum load which can be delivered at or above 5 MW/min</p>