Review of Recommended Values for Scheduling and Dispatch Policy Parameters 2027

Long Notice Adjustment Factor & System Imbalance Flattening Factor (LNAF and SIFF)

12/06/2026

Contents

1. Licence Obligation

This Long Notice Adjustment Factor (LNAF) and System Imbalance Flattening Factor (SIFF) Parameters Proposal, for calendar year 2027, is being submitted by EirGrid and SONI, in their roles as the Transmission System Operators (TSOs) for Ireland and Northern Ireland, to the Commission for Regulation of Utilities (CRU) & the Utility Regulator for Northern Ireland (UR).

In accordance with SONI TSO licence condition 22A part 7 and EirGrid TSO licence condition 10A part 7, the TSOs are obliged to provide a report annually or as requested by the Authority/Commission as detailed in the condition below:

'The Licensee shall provide a report to the Authority/Commission on an annual basis, or whenever so required by the Authority/Commission, on the performance of its scheduling and dispatch process, resulting from the current values of the scheduling and dispatch policy parameters. The Licensee may propose changes to the values of those parameters, or their replacement with different parameters. After publication of the Licensee's report and following consultation with such persons as the Authority/Commission believes appropriate, the Authority/Commission may determine that the values of the policy parameters shall change, or that different policy parameters shall be used. Such a determination shall specify the date from which any such changes shall take effect and may specify transitional arrangements to be applied by the Licensee.'

To meet the obligations of the licence conditions, the TSOs are providing this report on the performance of the current scheduling and dispatch parameters known as the LNAF and the SIFF. In this report the TSOs also recommend the LNAF and SIFF values for the calendar year 2027.

2. Terms and Definitions

The LNAF, SSII and SIFF terms are defined in *Table 1* below. The LNAF and SIFF definitions are as outlined in the SONI and EirGrid Transmission Licences.

Term	Definition
LNAF	LNAF – A multiplier applied to the start-up costs of generation sets which varies depending on the length of notice provided in any instruction from the Licensee to synchronize such generation set, and which has greater values for greater lengths of notice.
SSII	System Shortfall Imbalance Index – Is the ratio of the total of any energy shortfall over a Trading Day (the sum of energy shortfalls in each Imbalance Settlement Period) divided by the total energy demand forecast for the Trading Day. SSII takes the form of a real number between 0 and 1. Zero indicates no shortfall. A value of 0.01 indicates a 1% energy shortfall for the Trading Day.
SIFF	SIFF – A multiplier applied to the start-up costs of generation sets which varies depending on the degree to which forecast generation including forecast imports and forecast exports on Interconnectors is short of forecast demand and which has greater values for greater shortages.

Table 1: Terms and definitions

3. Background of LNAF and SIFF Parameters

3.1. Intent of LNAF and SIFF Parameters

One of the Single Electricity Market (SEM) objectives is that the day-ahead and intraday markets should be the primary mechanisms by which the energy supply/demand balance is resolved. If the market finds a balanced energy position through the ex-ante markets, the need for TSO energy actions will be minimised.

In the SEM arrangement, the balancing market opens after the completion of the day-ahead market. This is to allow the TSOs to begin to schedule units to maintain a secure system based on the day-ahead market results. Consequently, the balancing market and intraday market are open at the same time. Subsequently, this requires the establishment of the following objectives:

- Insofar as it is possible, energy balancing actions should be deferred as much as possible until after the Balancing Market Gate Closure, and the ex-ante markets should be left to resolve the energy supply/demand balance.
- The TSOs should not take any action prior to the balancing market gate closure unless it is for reasons of system security, e.g. for reserves, for priority dispatch, or for other statutory requirements.
- Costs for both constraint (non-energy) actions and energy actions should be minimised.

If the market finds a balanced energy position through the ex-ante markets, the need for TSO energy actions will be minimised. However, if the market is not balanced, there is a risk that the proposed approach could result in "early" actions (i.e. TSOs, based on Commercial Offer Data [1], may have to call the long notice units and will need to do this before the gate closure) that could dilute the signals to market participants to be balanced or could appear to impact the intraday market. Therefore, it is necessary to meet the objectives outlined above while minimising costs and deferring energy balancing actions as late as possible before the gate closes. The solution to this is to include two process factors – LNAF and SIFF. These design parameters deter the TSOs' optimisation tool from scheduling early commitment actions in the scheduling process, by making such actions artificially more expensive to the optimisations and instead allowing more time for the ex-ante markets to resolve the energy supply/demand balance.

3.2. Function of LNAF and SIFF in the Scheduling Tool

The LNAF and SIFF apply a weighting to the start cost of the offline generators to deter the TSOs' scheduling tool from taking early commitment actions in the scheduling process's optimisation. These parameters force the optimisation to favour short-notice units over long-notice units as short-notice units will appear to the scheduling processes to cost less than long-notice units. These parameters lead to the TSOs not to commit long-notice units early over short-notice units. Therefore, given the choice of several resources with the same cost, by applying the LNAF and SIFF, the shorter notice resources will be favoured in the scheduling processing tool.

These units with long notice requirements will have an additional incentive to trade in the intraday market rather than wait to be scheduled by the TSOs. The LNAF and SIFF could also incentivise units to reduce their notice times where this is technically and economically feasible.

The process and calculation methods by which the LNAF and SIFF are incorporated into the scheduling tool is outlined in Appendix A below.

[1] Means commercial offer data in respect of a Generator Unit submitted under Chapter D and as described in Appendix I: "Offer Data" of the Trading and Settlement Code Part B.

3.3. Changes to the Power System since the Last Consultation

The following changes have been made to the power system since the last consultation.

- Five OCGTs have commissioned since start of 2024 (Three in RoI and Two in NI) and three more are expected to be commissioned by the end of 2026.
- The two remaining Temporary Emergency Generators identified in the previous consultation have since been commissioned.
- In January 2026, Shannonbridge Synchronous Condenser (RG2) went live.
- The Moneypoint units (MP1, MP2 & MP3) have been procured by EirGrid on a temporary basis under the direction of the CRU. These units are activated only under strict conditions, specifically when it is anticipated that the system would otherwise enter an Alert or Emergency State.
- Following the go-live of the Scheduling and Dispatch Programme (SDP 02) battery ESPS units are scheduled and dispatched using submitted Physical Notifications (PNs) across both positive and negative MW ranges.

Solar generation has seen significant growth compared to last year, both in large-scale utility projects and embedded solar systems. The TSOs have observed a new all-island peak in large-scale solar generation of 1,329.87 MW, representing a 53% increase from 2025. These changes have been considered in the context of this year's consultation.

4. LNAF and SIFF Parameter Review

The TSOs have carried out a review of the scheduling processes based on the intent of the LNAF and SIFF parameters. This review focused on the parameters in the context of current security of supply concerns, the policy changes shifting to a minimum of 7 large online sets and the outcomes of the Scheduling and Dispatch audit. The TSOs continue to see no justification or supporting evidence for introducing any changes currently and as such we believe it is prudent to keep these parameters at zero and review again at a future date.

Table 1 below outlines a summary of the findings of this review and the justifications for keeping the LNAF and SIFF parameters at zero, as per last year's recommendation.

Area of Analysis		Summary of Findings resulting in the Recommended Values
1	Security of Supply: Lack of Generator Unit Choice	There is currently a risk to security of supply. At present when the wind and solar generation is low, there are limited unit options to choose from, whether they are longer notice or shorter notice units. The TSOs' optimisation tool does not often have the flexibility to choose between either taking an early action by committing a long-notice unit or favouring balancing supply with short-notice units. Therefore, there is limited opportunity of taking early actions and so a reduced concern about TSOs taking early actions. A move to non-zero LNAF and SIFF parameters in the scheduling tool would, at times, result in the optimisation tending to schedule more shorter notice units to provide energy and reserve. If the notification times pass for the longer notice units, these long-notice units would become unavailable for commitment in the scheduling tool. During transition periods from high wind to low wind, non-zero LNAF and SIFF would somewhat increase the risk to securing the system as the few available offline long-notice units would be run less, be in cooler heat states and thus less reliable to start when required. There has been a sustained increase in large-scale and embedded solar generation over the last few years. As with wind before it, solar is displacing conventional units resulting in longer notice units being off more often and for longer periods. Solar is pushing thermal units to be in cooler heat states than before. In this context, the application of non-zero LNAF and SIFF may potentially add to the challenge of securing the system while integrating further intermittent generation. If particular abnormal events occur (i.e. tripping of a large unit), non-zero LNAF and SIFF would increase the reliance on the fewer short-notice units that are not already committed and increase risk of not meeting the demand requirements during the start-up periods of the long-notice units that are in cooler heat states, when they are called to replace the original tripped unit. This may lead to a potential system alert. Since go-live of Scheduling and Dispatch Program 02 batteries (ESPS) are now fully integrated into the real-time market and dispatch process. Initial observations indicate increased battery participation in the SEM. This is anticipated to further reduce the likelihood of the TSO optimisation tool scheduling early commitment actions during the scheduling process reducing the need of non-zero LNAF and SIFF.

Area of Analysis		Summary of Findings resulting in the Recommended Values
		The demand for electricity in Ireland has increased significantly over the past year, driven primarily by the continuous growth of data centre demand and broader electrification trends. This accelerated load growth continues to increase pressure on the system, particularly during the winter months when our system margins are tightest, and the system often relies on interconnector capacity to meet peak demand. Non-market generation has been procured by EirGrid on a temporary basis under the direction of the CRU. These Temporary Emergency Generation (TEG) units are activated under strict conditions when the system would have otherwise entered Alert or Emergency state. The treatment of TEG in system and market operations has been designed with objectives that include minimizing, as far as possible, the need to dispatch these units. This objective is being respected through alternative procedures to the use of non-zero LNAF and SIFF in the scheduling process. Moreover, the temporary retention of the Moneypoint Units (MP1, MP2, MP3) is essential for maintaining security of supply while new capacity is delivered through the Capacity Remuneration Mechanism. These units will be dispatched only when required to maintain system stability and reliability and will not participate in ex-ante markets. As a result, they will not influence normal price formation or dispatch and are expected to further discourage the use of non-zero LNAF and SIFF.
2	Security of Supply: Generation Reliability	Some Security of Supply Transmission Constraint Groups (TCGs) have been retained in the scheduling tool to manage the tight generation margins and improve the availability of conventional generation during periods of peak demand. This is currently being applied for Northern Ireland. Security of Supply constraints are being applied to ensure that all the generating units required to meet a stability TCG are not located at one location. This is to ensure that other units remain synchronized and available at a later stage to support the power system during periods of tight margins. These interventions are more significant and direct than the intent of LNAF and SIFF. Therefore, the application of non-zero LNAF and SIFF would not be an alternative.
3	Security of Supply: Interconnector Uncertainty after Day-Ahead	Since the 31st of December 2020, the day-ahead market does not include any GB-SEM interconnection capacity. As a result, the TSOs do not receive day ahead interconnector schedules for Moyle, EWIC and Greenlink. There is a risk that the intraday markets do not schedule an import to SEM at times of low generation margins. To mitigate this risk, the TSOs set the flows on the interconnectors to zero in the day ahead scheduling. This, at times, may result in scheduling the commitment of an additional long-notice unit. Such a procedure has greater significance than what was envisaged during the design of the LNAF and SIFF parameters and overshows any application of non-zero LNAF and SIFF.

Area of Analysis		Summary of Findings resulting in the Recommended Values
4	Minimum 7 Units Online Policy Change	To manage dynamic stability, at least 7 conventional units must be on-load, at any one time, on the island. An operational constraint imposed in the scheduling process ensures seven units are on load. This constraint has become more pronounced with the exit of Moneypoint units from the Market. In the event of renewable generation decreasing suddenly, an eighth conventional unit may need to be instructed to synchronise. If the LNAF and SIFF parameters are set to non-zero, the optimization may delay scheduling the commitment of an eighth conventional unit and therefore there is an increased risk that the offline units would have longer notification times (as they will be colder) and would be slower and less reliable to balance demand. The risk posed by moving to non-zero LNAF and SIFF is increased by the change in operational policy reducing to a minimum of 7 large sets online. This could lower system inertia. Therefore, the TSOs would be reluctant to recommend non-zero LNAF or SIFF parameters.
5	Scheduling & Dispatch Audit	The outcomes of each of the SEM scheduling and dispatch process audits have not noted a concern in relation to the TSOs taking early actions and have not made recommendations related to a change from non-zero values of LNAF and SIFF.

Table 2: LNAF and SIFF key considerations.

The TSOs have also reviewed the notice times of units at present compared to 2018 following the go live of ISEM and the introduction of the LNAF and SIFF parameters.

Although there has been no significant reduction in individual unit notice times, since 2025, a number of 'short notice time' units have been commissioned, and there are further plans for the commissioning of new OCGT units by end of 2026 (as per Section 3.3). The introduction of these short notice time units will reduce the standard notice time when viewed across the full portfolio of units. This trajectory of new units with shorter notice time will reduce the criticality of bringing in the LNAF and SIFF parameters, as the early action time is reduced with the reduction in notice times of units.

5. Parameter Recommendations

Based on the points outlined in Table 2 above, the proposed values for the parameters used in the calculation of the LNAF and SIFF for the calendar year 2027 remain unchanged to those of 2026 and are set out in *Table 3* .

Scheduling and Dispatch Policy Parameter	Recommended Value for 2027 (same as 2026)
LNAF	0
SIFF	0

Table 3: Recommended LNAF and SIFF values for the calendar year 2027.

6. Appendix A

If the LNAF and SIFF parameters are non-zero and enabled within the scheduling tool, the values are determined and effected in the scheduling tool as outlined in the steps and example below.

Non-Zero LNAFF and SIFF Scenario Examples

LNAF (Long Notice Adjustment Factor) and SIFF (System Imbalance Flattening Factor) may be assigned non-zero values where overall supply adequacy improves and a greater number of units provide critical system services, such as inertia and voltage support. However, these factors are set to zero because non-zero values would penalise long-notice units during periods of generation adequacy concern. Until these conditions are met, the TSOs consider it imperative to maintain LNAF and SIFF at zero to avoid increasing system risk during periods of tight margins and intermittent renewable generation.

Additionally, with commissioning of more short-notice units like OCGTs and the growing role of batteries in dispatch, the system now has greater flexibility to respond quickly to changes in demand and renewable output. This reduces the need for early commitment of long-notice units, which is precisely what LNAF and SIFF were designed to discourage.

Step 1: Set Values for LNAF

The values for LNAF are set per Notification Time (NT) interval in hours as shown in *Table 3* and illustrated in *Figure 1* below. This data is entered into the TSOs scheduling tool.

NT (hours)	LNAF
0.00	0.000
0.25	0.000
0.50	0.000
0.75	0.000
1.00	0.000
1.25	0.002
1.50	0.004
1.75	0.006
2.00	0.008
⋮	⋮
24.00	0.184

Table 4: LNAF values.

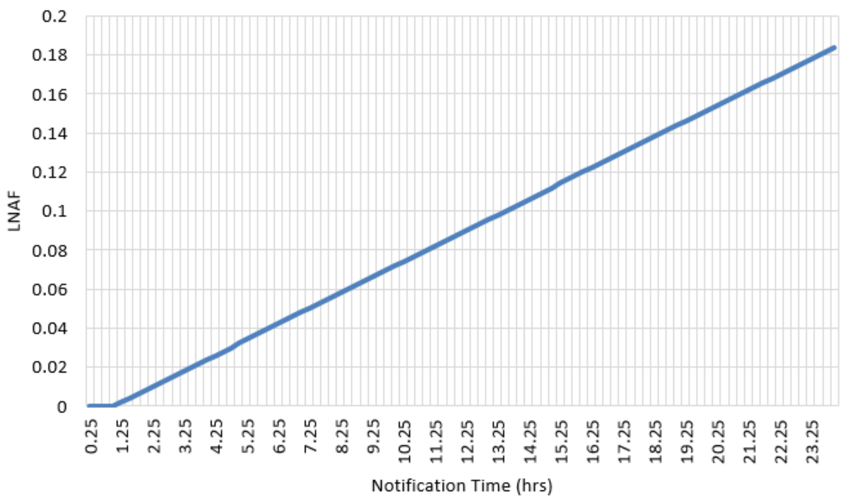

Figure 1: Graph for illustration purposes.

Each unit has an LNAF corresponding to the notifications time associated with each heat state as shown in *Table 4: Example of Unit A's LNAFs* below.

Unit A Heat State	NT (hours)	LNAF
Hot	4.00	0.024
Warm	6.00	0.040
Cold	8.00	0.056

Table 5: Example of Unit A's LNAFs

Step 2: Determination of SIFF

Once the Day Ahead Market results have been provided to the TSOs (13:30 day-ahead), if a shortfall exists, the SSII is calculated as the ratio of the total of any energy shortfall over the trading day (the sum of energy shortfalls in each period) divided by the total energy forecast for the trading day.

The SIFF corresponding to the calculated SSII, as shown in *Table 5* and illustrated in *Figure 2* below, is entered into the TSOs' scheduling tool.

SSII	SIFF
0.000	0
0.005	0.3
0.010	0.4
0.015	0.6
0.020	0.8
0.025	0.9
0.030	1.1
0.035	1.3
0.040	1.35
⋮	⋮
1.000	2

Table 6: SSII and SIFF mapped values.

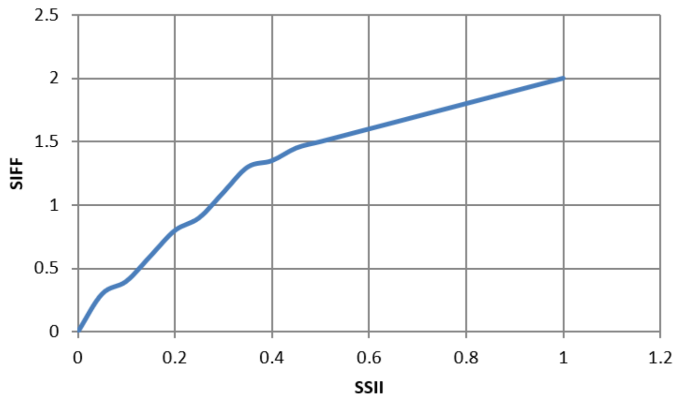

Figure 2: Graph for illustrative purposes.

Step 3: Determination of Start-Up Cost used in the Scheduling Tool

Following the determination of the LNAF and SIFF, the start-up costs for each heat state of each unit for application in any unit commitment run will be determined using the following formula:

Start Up Costs in Scheduling Run = Submitted Start Up Cost * [1 + (LNAF * SIFF)]

Example Calculation

The worked example in Table 7 below uses the LNAF and SIFF parameters outlined in Step 1 and 2 above and demonstrates how the LNAF and SIFF affects the scheduling process.

Display			
Calculated SSII	0.04		
Corresponding SIFF	1.35		
Heat State	Cold	Warm	Hot
Unit A Submitted Heat State Start Up Costs	12852	10710	8568
Technical Offer Data (TOD) Start Up Times	8	6	4
LNAF corresponding to TOD Start Up Times	0.056	0.040	0.024
SIFF	1.35	1.35	1.35
Calculated Start Up Cost for Unit A for each Heat State:	13823	11288	8845

Table 7: Calculated start-up cost for Unit A with LNAF and SIFF at non-zero.

The calculated start-up cost for Unit A for each heat state in Table 7 above is included in the scheduling tool optimisation. In the scenario where there is a system energy shortfall, the higher start-up cost for

Unit A when it is offline in a cold state deters the TSOs optimisation tool from taking early commitment actions in the scheduling process and instead allowing more time for the ex-ante markets to resolve the energy supply/demand balance.