Single Electricity Market
(SEM)

Trading and Settlement Code

Scheduling and Dispatch Parameters 2020

Decision Paper

SEM-19-065

14th November 2019

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1. Introduction

Under the terms of the SEM Trading and Settlement Code (TSC) Part B, the Regulatory Authorities (RAs) shall determine certain parameters proposed by the Market Operator (MO) in relation to the Scheduling and Dispatch process.

In May 2019 the RAs requested the TSO to review the following parameters utilised in Scheduling and Dispatch:

1. Long Notice Adjustment Factor (LNAF)
2. System Imbalance Flattening Factor (SIFF)

On 31st August 2019, the RAs received reports from the TSO outlining their recommendations for the proposed values for the above parameters. The RAs then published a consultation on the 16th September (SEM-19-050), consulting on the TSO's recommendations. This paper presents the SEM Committee's decision in relation to these parameters considering stakeholder comments, and is structured as follows:

- Section 2 provides an overview of LNAF & SIFF.
- Section 3 outlines the TSO's proposal for 2020.
- Section 4 provides a summary of respondents' comments.
- Section 5 provides the SEM Committee's response to the feedback.
- Section 6 details the SEM Committee's decision.
- Section 7 outlines the next steps.

2. Background

The consultation paper (SEM-19-050) explained that LNAF and SIFF are a means of giving effect to the objectives of scheduling and dispatch from the market design decisions balancing the trade-off of "early" energy balancing actions against the cost of non-energy actions. LNAF is a multiplier applied to the start up costs of Generator Units, which increases with increasing length of notice provided in any instruction to synchronise. SIFF is another multiplier applied to the start-up costs which reduces with reducing forecast system imbalance.

The consultation paper further explained that under section 10A of EirGrid's Transmission System Operator (TSO) Licence, and section 22A of SONI's Transmission System Operator Licence, the System Operator (SO) is required to report to the RAs, proposing values for parameters to be applied in the Scheduling and Dispatch process.

3. TSO Proposal

The TSO's report presents high level analysis carried out to evaluate the need to apply LNAF and SIFF values, and the potential risks of applying them based on existing market data. One indication that there may be a need for a LNAF is whether there is sufficient liquidity in the Intraday markets from units offering to sell. The TSO analysed the traded volumes across the Day Ahead and Intraday Markets and concluded that there is more than sufficient volumes of offers-to-sell to meet the bids-to-buy, where the total sell volumes normally exceed the total bid volumes.

The TSO's report noted that sufficient liquidity may exist in the two markets if prices in the Intraday markets follow the shape and magnitude of the Day-ahead market price profile. The TSO's analysis found the prices in these markets to be relatively convergent.

The TSO notes that one of the risks of assigning a LNAF and SIFF value is the potential impact on constraint costs, or the costs of non-energy actions. A non-energy action can be defined as a balancing action taken by the TSO to move a unit away from its Ex Ante market position for system security reasons. An energy action can be defined as an action required to satisfy system demand that hasn't been met in the Ex Ante markets. The ratio of non-energy to energy action volumes is an important metric to determine the potential impact applying LNAF could have. This is because part of the intention is to apply the LNAF in situations where the energy imbalance is relatively high, while attempting not to increase the cost of non-energy actions. If there are situations where the energy action volumes are consistently

greater than the non-energy volumes, then there would be a clear case where the application of LNAFs should not overly impact the non-energy volumes. From the analysis carried out, there was a daily average ratio of 4.1 non-energy volumes to energy volumes, with a maximum daily ratio of 11.04 and a minimum of 0.9. Given this, the TSO's report noted that the application of an LNAF at any level of imbalance would very likely have the unintended consequence of increasing the cost of the larger relative volume of non-energy actions in the market. This could lead to an increase in the Dispatch Balancing costs for the System Operator.

The TSO notes that a main driver for implementing LNAF/SIFF is to avoid the propensity for early synchronisation of units by the System Operator. Based on operational data for dispatch instructions the TSO has carried out analysis on the synchronisation instructions issue time compared to the scheduled effective time. Out of a total of 5,873 synchronisation instructions (covering all dispatchable units from Oct 2018 to Aug 2019) 98% were issued within 1 hour of the notification time or last time to instruct. Many long notice synchronisation instructions (71%) were issued in the hour before the last time to instruct.

Following the outcomes of the TSO's analysis, the TSO's recommend that the LNAF and SIFF should remain at zero. The TSO report notes that for subsequent years if there are any changes to the metrics for determining whether the LNAF and SIFF are needed due to decreased relative liquidity in the intraday markets or decreased risk of increasing non-energy costs, then a more detailed analysis of suitable values for LNAF and SIFF can be carried out.

4. Respondents' Comments.

There was a total of three respondents to this consultation[1]. One respondent noted that they are supportive of the TSO's proposal to maintain a zero value for LNAF and SIFF.

Another respondent, having reviewed the analysis carried out by the TSO, and in the context of new market arrangements that have only been in place for one year, support the TSO's recommendation to keep LNAF and SIFF at zero for 2020. The respondent notes that applying a positive value for LNAF and SIFF would cause:

- a potential increase in Dispatch Balancing Costs;
- additional complexity to the scheduling process that could lead to longer solve times, and;
- a reduction in the availability of spare short notice units.

[1] Energia, SSE Airtricity, Irish Wind Energy Association

One respondent disagrees with the TSO's proposal to apply a zero value to the LNAF and SIFF. The respondent suggests that applying the LNAF and SIFF would help correct the signal to the market regarding the need for additional system flexibility and network investment to meet decarbonisation goals. The respondent notes that from the TSO's report, the majority of actions taken by the TSO are for non-energy reasons. This, they note, is due to the fact that the system is highly constrained due to network limitations and operational constraints.

The respondent notes that while applying the LNAF and SIFF may increase the cost of non-energy actions, and therefore lead to an increase in Dispatch Balancing Costs for the TSOs, these costs would act as an investment signal for system flexibility and network development. The respondent states that "*the costs of early unit commitment decisions should be increased, and investment signals sent that facilitate additional service provision from low carbon service providers, such as renewables, Demand Side Units, storage and synchronous condensers*".

The respondent also notes that whilst the TSO raise concerns regarding the complexity of applying the LNAF and SIFF in their scheduling considerations – these are operational considerations that can be overcome, and that potential complexity is not a valid reason not to do something. With reference to the analysis undertaken by the TSO, the respondent noted that the TSO should undertake additional analysis, including analysis on the carbon emission impacts of non-energy actions, and a scenario analysis where zero-carbon service providers meet system service constraints instead of fossil fuel generation.

5. SEM Committee Response

The SEM Committee acknowledge the comments that were raised from respondents in relation to the potential increase in Dispatch Balancing Costs if a LNAF and SIFF are applied, and the impact it may have on the complexity to the scheduling process that could lead to longer solve times and cause a reduction in the availability of spare short notice units.

The SEM Committee also note the respondents' comments pertaining to applying the LNAF and SIFF - as this would help send the correct signal to the market regarding the need for additional system flexibility and network investment to meet our decarbonisation goals.

The SEM Committee are minded that retention of the existing values seems prudent given the recent implementation of the revised SEM arrangements. The SEM Committee, however, are eager to ensure that early actions are not unduly distorting the incentives on individual participants or creating commercial advantages to inflexible plant; for example, by nullifying the need for such plant to be bid competitively into the ex-ante markets. The SEM Committee are of the view that a future decision, supported by a longer sample of outturn data, and any

other additional TSO analysis as required by the RAs, will allow a clearer view on what the LNAF and SIFF values should be applied.

6. SEM Committee Decision

A summary of the decision made by the SEM Committee in relation to the LNAF and SIFF are displayed in Table 1.

Parameter	Current SEM Value	TSO Proposal for 2020	SEM Committee Decision
LNAF	0	0	0
SIFF	0	0	0

Table 1: LNAF and SIFF Values for 2020

7. Next Steps

These parameters will apply from 1st January until 31 December 2020. A consultation will be carried out in August 2020 to determine the values to apply from January 2021. The Trading and Settlement Code provides for the RAs amending the values of parameters where necessary outside the normal parameter-setting process. While this would only arise in exceptional circumstances, the SEM Committee has obligations to balance regulatory certainty with ensuring that no unnecessary consumer harm arises. On this basis, the RAs will keep all parameters under observation and may propose changes in the interim if necessary via consultation.