

Commission for Regulation of Utilities,
The Exchange,
Belgard Square North,
Dublin 24,
D24 PXW0

16 October 2020

Emailed to: Sheena Byrne – shbyrne@cru.ie

**RE: Trading and Settlement Code Scheduling and Dispatch Parameters for 2021
(SEM/20/066)**

Dear Sheena,

The Irish Wind Energy Association (IWEA) and RenewableNI would like to thank the SEM Committee for the opportunity to respond to this consultation on the Trading and Settlement Code Scheduling and Dispatch Parameters for 2021, specifically in relation to the Long Notice Adjustment Factor (LNAF) and System Imbalance Flattening Factor (SIFF).

IWEA is the largest representative body for the Irish wind industry, working to promote wind energy as an essential, economical, and environmentally friendly part of our low-carbon energy future. RenewableNI is a collaboration between IWEA and RenewableUK and is the voice of the renewable electricity industry in Northern Ireland. Together we represent a large majority of the renewable industry supply chain on the island.

As set out in our response to last year's consultation and re-iterated again this year, IWEA and RenewableNI believe that applying the LNAF and SIFF would help send the correct signal to the market regarding the need for additional system flexibility and network investment to meet our decarbonisation goals. We propose that further analysis is required on the impact of early unit commitment actions on renewable generation and carbon emissions. We also request that the Regulatory Authorities reconsider their minded to position and request the TSOs to set out a programme of work to explore how and when the LNAF and SIFF will be applied in the scheduling and dispatch process.

We would like to make the following points in support of this position:

- While the Regulatory Authorities highlight potential issues regarding early actions in relation to bidding behaviour and incentives on market participants, there is a much more

fundamental issue at question and that is the reason why TSO actions and early unit commitment decisions are required in the first place.

- As the TSOs' information paper points out, the majority of actions taken by the TSOs are for non-energy reasons. This is down to the fact that the system is highly constrained due to network limitations and operational constraints (e.g. inertia, reserves, voltage and generator technical parameters).
- It is clear that there is a need for more system flexibility and network investment to alleviate the current system constraints. The LNAF and SIFF are factors put into the market to reduce the likelihood of early commitment decisions and incentivise the use of short notice flexible providers. While applying the LNAF and SIFF may increase the cost of non-energy actions, and therefore lead to an increase in dispatch balancing costs (DBC) for the TSOs, these costs would create a much needed investment signal in system flexibility and network development i.e. the costs would reflect the value of alleviating system constraints.
- The TSOs are incentivised to minimise their DBC. Leaving the LNAF and SIFF at zero encourages the TSOs to schedule the system to reduce their DBC, rather than allow these costs to create investment signals in flexibility and network development. Minimisation of DBC is the right objective but this should be achieved by targeting measures, such as additional flexibility and network investment, that allow the market to function without the need for early TSO non-energy actions.
- More analysis and transparency are needed on the impacts of non-energy actions on renewable generation. For example, on a high wind day the TSOs may take an early action to bring on a thermal unit to meet system stability (inertia) requirements. This unit must be brought on to at least its minimum generation (Min Gen) level even though it is not needed explicitly for its energy. This reduces the allowable 'space' on the system for wind generation, which would have been scheduled through the market, meaning a portion of it must be curtailed. There is evidence of units being constrained above their Min Gen to meet negative reserve requirements, or because the unit cannot reach its Min Gen and still provide other system services, such as reserves. This is not an efficient outcome for consumers as zero marginal cost wind generation, that would otherwise have been available, is dispatched down. 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, DSUs, storage and synchronous condensers. These providers could deliver the necessary system services and meet short notice energy requirements, with minimal energy market impact, while removing the need to constrain on inflexible plant.

- The TSOs do not track the carbon emission impacts from non-energy actions taken to constrain on fossil fuel generation. IWEA and RenewableNI believe the TSOs should be monitoring and reporting on the emissions produced as a result of the scheduling and dispatch process, particularly differences in the unconstrained and constrained market runs. We suggest that incentives should be put on the TSOs to reduce the emissions impacts of actions taken in the scheduling and dispatch process and to look for low-carbon solutions to alleviate operational constraints.
- If we are to achieve Ireland's 70% RES-E target¹, and Northern Ireland's minimum of 70% RES-E target², in the most cost-efficient manner, the power system will need to accommodate non-synchronous renewable penetration levels of over 90% at any one time. This will likely mean that, at these times, all system services requirements, and any other operational constraints, will need to be met by non-energy zero carbon service providers, such as wind, solar, DSUs, storage and synchronous condensers, as there will be no room on the system for fossil fuel generators. Applying the LNAF and SIFF will help to deliver the investment signal needed for these technologies.
- The grid will also need to be developed to deliver the increases in renewable volumes required to achieve 70% RES-E. There is currently a lack of transmission capacity in areas of the country where large numbers of renewable projects are planning to connect. Many connected renewable generators are already seeing constraint levels over 5%, particularly in the west, north-west and south-west due to network limitations. There is a high risk these constraint levels will reach into double figures, for both existing and future projects, if the grid isn't reinforced in time for the future renewable pipeline. This will impact the commercial viability of projects looking to enter RESS auctions and will likely lead to higher costs for the consumers as projects will have to account for this constraint uncertainty in their RESS bids. Considering the historic timelines for the development of large-scale transmission reinforcement (10-15 years for some projects) and the need for investment certainty for new build flexible providers, it is important that the correct investment signals are provided now so that the necessary network development and system flexibility is in place for 2030. Applying the LNAF and SIFF will help deliver this investment signal.
- The TSOs have raised concerns regarding the increased utilisation of short notice units and their subsequent decreased availability for energy and reserves if the LNAF and SIFF were to be applied. As we have highlighted, in a 70% RES-E and >90% SNSP world, reliance on short notice flexibility must be the way the system will operate if we are to achieve our

¹ https://www.dccae.gov.ie/en-ie/climate-action/publications/Documents/16/Climate_Action_Plan_2019.pdf

² <https://www.newsletter.co.uk/news/environment/my-vision-renewable-energy-sector-northern-ireland-2984852>

decarbonisation goals. If anything, the concerns the TSOs have raised are a sign that additional short notice flexibility is needed. IWEA and Renewable NI would encourage the RAs and TSOs to facilitate measures that allow the additional development of low carbon technologies such as wind, solar, DSUs, storage and synchronous condensers that can provide this flexibility.

- The TSOs also appear to raise concerns regarding the complexity of applying the LNAF and SIFF in their scheduling considerations. While this may require some additional analysis and thought, IWEA and Renewable NI believe that these are operational considerations that can be overcome, and that potential complexity is not a valid reason not to do something. As such, we propose that this is something that is looked at in the TSOs' programme of work to implement the LNAF and SIFF.

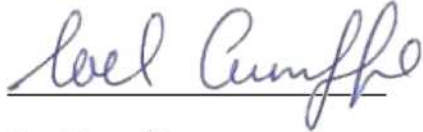
IWEA and Renewable NI Recommendations:

IWEA believes that applying the LNAF and SIFF would help send the correct signal to the market regarding the need for additional system flexibility and network investment to meet our decarbonisation goals. We propose the following recommendations for the consideration of the SEM Committee:

1. Request the TSOs to set out a programme of work to explore how and when the LNAF and SIFF will be applied in the scheduling and dispatch process.
2. Request the TSOs to carry out and publish ongoing analysis on the carbon emissions impacts of non-energy actions.
3. Request the TSOs to carry out and publish ongoing analysis on the impacts of early unit commitment decisions on renewable generation and on system costs. Such analysis could include metrics such as renewable curtailment, fossil fuel production costs, emissions impacts.
4. Incentives should be placed on the TSOs to reduce the emissions impacts of actions taken in the scheduling and dispatch process and to look for low-carbon solutions to alleviate operational constraints.
5. Request the TSOs to conduct analysis on scenarios with zero-carbon service providers, (e.g. wind, solar, DSUs, storage, synchronous condensers) meeting system service constraints instead of fossil fuel generation.
6. Request the TSOs to update their LNAF and SIFF modelling analysis with current contracted DSU volumes, DS3 volume capped providers and other battery storage providers that have been procured through the CRM T-4 capacity auction. Such modelling should also include a scenario where all system services and short notice energy requirements are met by low-carbon providers (e.g. wind, solar, DSUs, storage).

In conclusion we thank the SEM Committee for the opportunity to make this submission and we look forward to engaging with you in future. Please feel free to contact us should you have any questions in relation to this response.

Best Regards,



Noel Cunniffe

Head of Policy

IWEA

On behalf of IWEA and RenewableNI