



NETWORKS



SEM COMMITTEE CONSULTATIONS SEM-21-026 & SEM-21-027

ESB Networks Response

9th July 2021

1. Introduction

The energy industry is undergoing significant transformation to meet the needs of climate mitigation and adaptation, as set out in international and national policies and legislation. In 2019, the Irish government adopted its Climate Action Plan, setting out a clear strategy to achieve 2030 climate and energy targets. Building on the sustained commitment made to decarbonising electricity generation in Ireland over the past two decades, the Plan sets a target of 70% renewable electricity by 2030, and the decarbonisation of the heat and transport sectors through the electrification of heat and transport.

ESB Networks is fully committed to the delivery of the Climate Action Plan and Ireland's energy targets. Facilitating the connection and operation of increasing levels of renewable energy at the distribution level will be a key part of achieving these aims within the legal framework laid out by the Clean Energy Package.

2. Role of ESB Networks

In this consultation response, references to 'ESB Networks' comprise both ESB Networks DAC in its capacity as Distribution System Operator (DSO), and the ring-fenced ESB Networks business unit of ESB which has been designated for the purposes of the Transmission Asset Owner (TAO) and Distribution Asset Owner (DAO) Licences granted to ESB.

ESB Networks works to meet the needs of all Irish electricity customers, providing universal affordable access to the electricity system, and delivering and managing the performance of a system of almost 155,000 km of overhead networks; 23,000 km of underground cables; 640 high voltage substations; significant amounts of connected generation, including 4.75 GW of renewable generation connected to the Distribution and Transmission systems; 2.3 million demand customers; and now several thousand "active customers" – domestic premises with microgeneration, a rapidly increasing number.

As the TAO, ESB Networks is committed to playing our part in contributing to the achievement of Ireland's decarbonisation policy objectives and that the needs of all our customers and industry are met. In partnership with EirGrid, the licensed Transmission System Operator (TSO), ESB Networks designs, develops, constructs and maintains the transmission grid in an effective and efficient way.

3. Context of Response

The proposed decisions apply to distribution connected generators which are subject to transmission driven constraint or curtailment. As such, it will be important that the proposed decisions can be reflected in the DSO's operational management systems and future market management systems.

ESB Networks is committed to actively supporting all Irish homes, communities and businesses in their choices at this time of fundamental change in the energy sector. Over the past 90 years, Irish electricity customers have invested in a distribution system that reaches every home and business in the country. Over the past two decades we have adapted this system to connect and integrate increasingly high levels of renewable generation. This same infrastructure which has supported Irish economic and social development can and should support decarbonizing the wider energy system.

The Clean Energy Package lays out a range of explicit requirements for the DSO and the regulatory authorities with respect to how the distribution system is managed and to account for the activities and capabilities of active consumers, distributed renewables and energy communities.

As the volumes of distributed renewables and low carbon technology drive demand increase, new strategies are required to effectively leverage and coordinate distributed resources.

The regulatory framework and collaboration between the DSO, TSO and industry will be at the heart of making this possible.

As part of the commitment to supporting these changes ESB Networks, supported by CRU, is investing in the necessary network visibility and operational systems to support active management of the network. We have secured regulatory funding to transform the role of the DSO in introducing flexible management of the distribution network.

To maximize the benefits of these investments made on behalf of the consumer and to reduce the level of constraint and re-dispatch faced by renewable generators, DSO considerations and active involvement in the management of network constraints will be necessary in the design and implementation of enduring solutions in market and operational system interfaces.

4. ESB Networks' observations on the consultations

4.1 SEM-021-026

Definitions of dispatch and re-dispatch

ESB Networks notes the proposed definitions as per SEM-C interpretation. These proposals have been developed based on analysis of transmission network constraints. As such, we understand that they are intended to apply to these (transmission network) constraints only.

We agree that in due course it will be important to consider the impacts of DSO flexibility services and constraint. While distribution system services is outside of the remit of SEM, it will be important that distribution system arrangements are compatible with SEM arrangements, to facilitate distribution connected customers participating in all organised markets.

Re-dispatch

As set out above, we understand that the proposals are based on analysis of transmission network constraints and TSO actions, and intended to apply to transmission network constraints and TSO actions only.

A number of different treatments are proposed for different market participants (priority dispatch, non-priority dispatch, non-firm access rights). For the DSO to reflect these proposals in how we meet our obligations as per Article 182 (4) and (5) of 2017/1485, it will be necessary that each participants' status is registered with the DSO.

The RAs acknowledged the role of the TSO in managing the risk of curtailment and constraints on the transmission system. When in due course arrangements for distribution-driven redispatch are under consideration, the role of the DSO and analysis of distribution system conditions will be equally important. ESB Networks and the CRU have commenced engagement on this, in the context of ESB Networks' Active System Management project. We look forward to continued engagement with CRU and stakeholders over the coming months.

Compensation for re-dispatch

ESB Networks note the proposals are based on analysis of transmission network constraints and cost analysis. Therefore we understand the principles are intended to apply in this (transmission) context only. In due course, it will be important that specific distribution system analysis is considered when developing equivalent proposals for distribution system redispatch.

Instructions sets

ESB Networks is committed to maximizing access to and utilization of the distribution network. We are progressing investment in network forecasting and operational tools as part of the Active System Management project, to enable more dynamic capacity management (including through instruction sets).

ESB Networks will engage further with the TSO and industry on this, to ensure it delivers benefits to the distribution connected customers and the TSO, and that the proposed architecture and processes are well understood by stakeholders prior to implementation.

These solutions could facilitate day ahead (or other closer to real time) allocation of network capacity based on projected demand and generation patterns. It will be important that appropriate principles of access are established as part of implementing these.

The application of instruction sets is consistent with the System Operator Guideline 2017/1485, which states that a DSO may apply limits to reserve providing units on the distribution system for technical reasons. Therefore, in practice, a providing unit does not have a right to deliver reserves where limits have been applied nor is it entitled to compensation for same for these circumstances.

Should CRU / SEMC consider this a form of redispatch pursuant to 2019/943, then it will be critical that the CRU and UR respectively consider whether it is appropriate to treat DSUs like generators. In this case, it may be that DSUs should be given the option to pay for the reinforcement required to secure capacity to deliver their service. It would also be necessary to establish an appropriate funding mechanism to compensate this redispatch. We note that there is no mechanism or provision for this in the current DSO revenue model.

4.2 SEM-021-027

Treatment of re-dispatch constraints

As set out above, we understand that the proposals are based on analysis of transmission network constraints and TSO actions, and intended to apply to transmission network constraints and TSO actions only. However, in future distribution system constraints and DSO actions will also arise. These may be quite different in nature, reflecting differences between transmission and distribution system planning and operations. Care will be needed in the application of constraints across different levels of the network, respecting the distinct roles, responsibilities and capabilities of the TSO and DSO, and ensuring overall system security and safety.

Implementation

The proposed decisions apply to distribution connected generators which are subject to transmission driven constraint or curtailment. As such, it will be important that the proposed decisions can be reflected in the DSO's operational management systems and future market management systems.

5. Conclusion

To support increased renewable generation and the uptake of low carbon technologies on the distribution system, we welcome early and regular engagement with the RA's and the TSOs on solutions for the management of dispatch and re-dispatch. This will evolve and grow as the role of the DSO and the nature of challenges on the distribution system evolves.