




NETWORKS

A decorative graphic consisting of two overlapping, wavy, ribbon-like shapes. The top ribbon is dark blue and the bottom ribbon is a lighter blue with a yellow-to-green gradient at its ends.

ESB Networks Response to Stakeholder Feedback Received from the Public Consultation on Provision in HV and MV Capacity for Expected Future Growth in Microgeneration Connections

Smarter HV and MV Customer Connections Project

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1. Introduction

A key focus of the *Smarter HV and MV Customer Connections* innovation project was to facilitate the connection of increasing amounts of Distributed Energy Resources (DER), including utility scale distributed generation, energy storage and microgeneration. Additionally, enabling the electrification of heat and transport, accounting for advancements in technology with a move towards a more active network management system and changing customer consumption were further key drivers.

As part of this innovation project, ESB Networks carried out a review of the Distribution System Security and Planning Standards and held a Public Consultation in December 2019 on their proposals ([Public Consultation on the Smarter HV and MV Customer Connections Project – New Approaches to Distribution Planning and Security of Supply Standards](#)). Following a review and consideration of consultation responses, further works and analysis was carried out by ESB Networks and the following three documents were submitted to the regulator, the Commission for the Regulation of Utilities (CRU), in March 2020 and approved by CRU in September 2020.

- [The Distribution System Security and Planning Standards](#)
- [Non-Wires Alternatives to Network Development Guide](#)
- [Non-Firm Access for Distribution Connected Distributed Generators Guide](#)

Section 2.4 of the approved Non-Firm Access Guide outlines that *“as an interim measure for the initial offering of non-firm access ... a provision of 30% of uncommitted HV transformer capacity is allocated to the expected future growth in microgeneration connections, in a HV station where a non-firm access connection is considered”*. While this measure was approved by CRU in September 2020 to apply for Enduring Connection Policy 2.1 (ECP-2.1)¹ network studies, a commitment was made by ESB Networks to review this interim measure and to seek the views of stakeholders and interested parties, through a public consultation later in 2020. This [Public Consultation on the Provision in HV and MV Capacity for Expected Future Growth in Microgeneration Connections](#) was held in December 2020.

This document sets out ESB Networks’ position on the provision in HV and MV capacity for expected future growth in microgeneration connections following the public consultation and stakeholder engagement for ECP-2.2 onwards.

2. Microgeneration Definition

[Microgeneration](#) is defined by CRU and ESB Networks as a source of electrical energy and all associated equipment, designed to operate in parallel with the ESB Networks low voltage (LV) system, and rated up to and including:

- 6 kW, when the network connection is single phase
- 11 kW, when the network connection is three phase

¹ Enduring Connections Policy 2.1 (ECP-2.1) part of [Enduring Connections Policy Stage 2 \(ECP-2\)](#)

3. Public Consultation and Feedback Received

ESB Networks launched a [Public Consultation on the Provision in HV and MV Capacity for Expected Future Growth in Microgeneration Connections](#) in December 2020 to seek stakeholder views on the capacity provision. This consultation closed in January 2021.

Two responses were received to the consultation and were examined by ESB Networks. Additionally, bilateral stakeholder engagement meetings were held in June, July, and August 2021 with respondents and other interested parties to discuss the responses and obtain a better understanding of the concerns raised. The consultation and stakeholder engagement provided valuable feedback to allow ESB Networks to better understand the concerns raised and provide clarifications around the implementation of the capacity provision for future growth in microgeneration.

4. ESB Networks' Decision on the Provision in HV and MV Capacity for Expected Future Growth in Microgeneration Connections

The recommendation, following the public consultation is to retain a 30% provision in HV and MV transformer capacity for expected future growth in microgeneration connections, to be applied in the situation where a **non-firm distributed generation connection** is under consideration at a HV substation, as set out in Section 2.4 of the Non-Firm Access for Distribution Connected Distributed Generators Guide document.

Note: For the avoidance of doubt, small generators with Maximum Export Capacities (MECs) exceeding the microgeneration limits above, e.g. those up to 50kW, termed 'minigeneration' are not considered in this capacity provision, as these generator applications require a technical study.

This decision is based on several key factors:

1. The installation of domestic microgeneration is strongly supported under the [Climate Action Plan 2019](#) and the introduction of a support scheme for export from domestic microgeneration installations is planned for 2021 (as stated, *'The Government strongly supports enabling people to sell excess electricity they have produced back to the grid'*). Any support scheme or feed-in-tariff for microgeneration that will allow people to sell the excess electricity that they produce back to the grid is likely to have a significant impact on the uptake and rollout of microgeneration in Ireland. This is supported by similar trends in the UK. However, a scheme or feed-in-tariff is not currently in place and its impact on microgeneration is not yet evident.
2. [Planning and Development \(Solar Panels for Public Buildings, Schools, Homes and Other Premises\) \(Amendment\) Bill 2021](#) is currently passing through the various stages in the Seanad. Under the bill, homes would be able to install larger arrays of solar panels without planning permission. Public buildings and schools would also have their planning exemption for solar panels increased.
3. Flexibility will have a role to play in enabling the connection of more renewable energy in the near future. The ESB Networks' *National Network, Local Connections Programme* (formerly known as the Active System

Management Project) has been approved by the CRU in Price Review 5 (PR5) and is now well established. It is intended to use flexibility and active system management to increase the pace, and amount, of renewable energy we can use and store on the Irish electricity system. In 2021, ESB Networks is delivering the associated suite of high-level designs, delivery plans, and commencing delivery. The standard signals, monitoring and control requirements for technologies connecting to the system and the market framework for flexibility are in development. However, this is a transformational multi-year project, and these are not operational at this time.

The absence of a scheme or feed-in-tariff and the proposed changes to the planning laws for rooftop solar have increased the uncertainty surrounding the uptake of microgeneration and overall penetration in Ireland. As a result, it is considered prudent to retain the 30% capacity provision as an interim measure for future growth in microgeneration where a non-firm access connection is being considered until we have a better understanding on the growth in microgeneration.

Microgeneration forms a key part of the aims of the [Climate Action Plan 2019](#). Without such a capacity provision, should high growth in microgeneration connections occur, the transformer capacity of the connecting HV substation could be exceeded. This could result in the station requiring to be uprated with higher capacity transformers, or a new HV substation built, which takes time to plan and develop. Also, cases, transformer uprating may not be technically feasible if the station is already accommodating its maximum capacity. Without having such a provision, this could potentially create a barrier to citizen participation in the future energy system. This interim measure provides certainty in terms of capacity for both larger distributed generators and microgeneration customers.

5. Conclusion

ESB Networks will retain a 30% provision in HV and MV transformer capacity for expected future growth in microgeneration connections for ECP-2.2 onwards, to be applied in the situation where a **non-firm distributed generation connection** is under consideration at a HV substation, as set out in Section 2.4 of the Non-Firm Access for Distribution Connected Distributed Generators Guide document.

This is an enduring position. ESB Networks has discussed this position with the CRU and it is noted with no objection. However, ESB Networks will continue to monitor developments and review this position in 18 months.