

PUBLIC CONSULTATION ON PROVISION IN HV AND MV CAPACITY FOR EXPECTED FUTURE GROWTH IN MICROGENERATION CONNECTIONS PUBLIC RELATIONS SCOPE OF WORK

Document Number: DOC-110121-FZY

Irish Solar Energy Association response

INTRODUCTION

The Irish Solar Energy Association (ISEA) is delighted to have the opportunity to respond to ESB Networks' consultation on the provision of capacity for future growth in microgeneration. This is a timely consultation with the recent publication of the Government's consultation on the Microgeneration Support Scheme (MSS). The vast majority of microgeneration installations and connections are forecast to be solar PV units, for example the Ricardo analysis supporting the MSS consultation posits a range of 91.6%-96.9% of installations from solar PV.

ISEA was established in 2013 to advance a policy and regulatory landscape promoting solar as a leading renewable energy technology that will decarbonise Ireland's electricity system and contribute to a successful and strong clean economy. As the leading voice for the Irish solar industry, ISEA works closely with stakeholders to advance the solar agenda on behalf of our members. ISEA is committed to delivering 5 gigawatts (GW) of solar in the next ten years to make a significant contribution towards 2030 energy targets and achieve a diverse and clean electricity network. As the trade association for the solar industry in Ireland, ISEA is responding on behalf of our membership of 108 parties currently active in the Irish solar market.

ISEA has constituted a working group of experts in the microgeneration space including installers, component manufacturers, legal and policy experts, local energy bodies and energy suppliers. We are happy to engage with ESB Networks to constructively engage around their enabling framework for microgeneration.

Ultimately however, the instrument proposed is far too blunt. ISEA strongly favours a more holistic approach to transformer capability taking into account not only potential micro generation developments but also electrification of heat and transport. Flexible demand signals should also emerge before transformer capacity is simply allocated to potential new connections.

If the overall goal is maximising low carbon generation at all voltage levels, a crude reservation of 30% capacity runs the risk of unduly sterilising capacity that could be deployed for renewables. In the remainder of this response, we highlight our significant concerns with this approach and propose alternative measures.

CONSULTATION QUESTION

The introduction of non-firm access for distribution connected generation (leaving aside the treatment of non-firm volumes and compensation for same) was a pragmatic approach in terms of demonstrating a measure of flexibility towards accommodating renewables on the grid. The connection of large volumes of microgeneration does require consideration, however this approach appears regressive and overly broad by simply reserving capacity. We would strongly favour a more strategic holistic approach towards facilitation access to the network.

Such an approach would be in keeping with the sentiments expressed in the introduction to the consultation paper:

“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.”

A blanket 30% number does not seem to really show active network management and consideration of customer consumption. As noted above, micro generation is expected to be predominantly rooftop solar which has a variable but predictable output profile. This simple fact could be built into an active network management plan. ESBN own planning standards allow for short term overload conditions. This headroom is particularly of potential benefit for solar and could be considered a resource for easing some of that strain at high output periods, rather than setting aside swathes of capacity.

The proposed policy does not appear to consider the most efficient means of connecting these projects. ISEA would have grave concerns about the effect of such a proposal upon ECP2.1 projects; some of which have applied for capacity for a second time after receiving ECP-1 or non GPA offers which triggered new transformers. These projects were blocked from benefiting from the new “Non Firm Access” policy and may now be unviable again if they receive ECP2.1 offers which may include transformer upgrades they hoped to avoid due to the 30% provision.

ISEA fully expects a high volume of microgeneration assets in the future, but there is balance to be achieved in how we plan for it. There is clarity on the intended locations and capacities for those assets in the ECP process, and we have less certainty on the locations and volumes of future microgeneration. A policy that is informed by an element of forecasting, and consideration of these matters would allow for the DSO to take a strategic approach to determining capacity availability.

Forcing renewable developers to invest in additional equipment such as transformers may directly result in higher bid prices for RESS, for example in our submission on the recent Generator Standard Charges consultation we provided an example in which such a scenario added €10/MWh to a RESS bid price. We are focused on trying to drive down costs and that outcome does not seem good for the consumer or in line with Government policy.

In addition, a blanket removal of capacity means that potentially less of those projects can be accommodated, or that projects cannot connect or re-power where there is spare capacity, which is an unnecessary trade off, and again may frustrate Government policy.

The potential timing of this provision is also unfortunate. Implementing this measure just as ECP2.1 begins could have severe knock on effects for operation of the auction and the volume of projects coming through. This intervention would have a certain impact on consented projects while it is attempting to deal with an issue of uncertain scale. ESB Network’s proposed mechanism is potentially excessive. The Ricardo analysis suggests a range of 220MW-3.2GW (approximately) by 2030 of microgeneration; that is a substantial range. ISEA strongly favours a more planned approach in concert with a range of other measures, as described in the next section.

PREFERRED APPROACH

ISEA would strongly contend that the below parcel of measures either jointly or individually would be a more effective measure than the proposed 30% threshold.

1. A strategic approach towards future locations of microgeneration involving a detailed study on potential growth areas on the network would be ISEA's preferred approach towards considering whether and how to accommodate future microgeneration. Items that it might be worth considering would include analysis of the National Planning Framework for future locations of housing, overlaying the grid scale connection queue, the approved PR5 projects and refining the microgeneration forecast. Many of the significant agricultural stakeholders have reviewed plans for future micro and mini generation, and could be a useful source of data on planned sites in the farming community.
2. Similarly, a key determinant of capacity in any location is the demand. ISEA would strongly support ESB Networks undertaking detailed study of expected patterns in LV demand, as in many cases much of the increase would expect to be self-consumed rather than exported. Examples include growth in electrification of heat and home battery systems, especially where paired with microgeneration. In addition, a more detailed understanding of the growth pattern around developments such as the electrification of transport should inform planning for microgeneration.
3. The development of smart networks and active management procedures would facilitate better management of these forms of distributed load in conjunction with the growing renewables portfolio. ISEA would encourage ESB Networks to expedite workstreams in this area.
4. PR5 discussed the development of smart flexible demand signals, which would also help shape demand patterns and profiles, reducing any perceived requirement for such measures as a reservation of a fixed proportion of capacity on a transformer. A signal to consumers to vary output and hence demand during a system event is more amenable to greening the system than making a crude intervention into ECP2.1 with potentially far-reaching consequences for projects and the decarbonisation of the electricity supply.
5. Another factor influencing the available capacity is the remaining lifetime of the stock of existing transformer assets and when they will be replaced.

ISEA would urge ESB Networks to consider implementation of the above measures in lieu of the proposed capacity provision. In addition to the above, ISEA has a number of queries on which we would be grateful for more clarity.

REQUESTED CLARIFICATIONS

6kW-11kW connections

From the perspective of maximising connection efficiency for microgeneration, ISEA strongly supports the retention of the "inform and fit" approach. We would welcome confirmation from ESB Networks of their intent to retain this policy.

Technical studies and ECP-2 framework

Even the lower range of the Ricardo estimate (220MW) dwarfs the existing volume of microgeneration connections. For ESB Networks to manage that volume of activity, it will need to target its resources effectively, and ensure adequate resourcing in place to undertake required studies. Has sufficient allocation been made for management of that process?

Settlement and metering

A key component to managing the flows on the distribution network and underpinning any potential export compensation is metering. Does ESB Networks intend for those to be measured via the National Smart Metering Programme (NSMP)? For those microgeneration units connecting prior to having a smart meter fitted, can the DSO confirm how those volumes will be accounted for and if the export volumes are treated as “firm” i.e. accepted onto the network without constraint?

CONCLUSION

ISEA welcomes ESB Networks general approach towards garnering more feedback and would welcome an opportunity to more formally engage around the proposal and our suggested changes. Fundamentally we would have serious concerns about adopting such an approach without first looking into the mechanisms that we have suggested to more actively manage the LV load. The instrument proposed is a blunt one, whose impact is likely to be substantial, and which is highly likely to not be required through a more active, smart and planned management approach being taken by the DSO.

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