

National Networks, Local Connections

November 2021

**ESB Networks
Irish Solar Energy Association (ISEA) Response**

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NATIONAL NETWORKS, LOCAL CONNECTIONS

ESB Networks

Irish Solar Energy Association (ISEA) Response

1.0 Executive Summary:

The Irish Solar Energy Association (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.

In our view, the allocation of resources via the National Networks, Local Connections (NNLC) programme should occur as soon as possible to allow Ireland to have the best possible chance of meeting its climate targets – as well as enabling the solar industry and other renewable technologies to participate more actively in the green transition.

Ultimately, ISEA would view NNLC as a success through the extent to which it enables the following outcomes:

- Facilitation of utility-scale projects connecting to the network more quickly and in a more cost-effective manner.
- Enabling customers to actively participate in the energy space; and
- Facilitating non-wires solutions for accommodating capacity, or put in another way, making better use of the available capacity on the distribution network.

Issues for Consultation

1. Microgrids:

- In terms of market flexibility, ISEA is of the view that microgrids & peer-to-peer solutions are crucial for encouraging citizen take-up of customer scale renewables such as microgeneration.
- To that end, we agree with ESB Networks' proposal to *"increase local consumption of local renewable generation."*

2. Renewable Non-Firm Access:

- A more flexible approach to connections is vital for bringing more renewables onto the Irish electricity system.
- ISEA welcomes ESB Networks' recognition of a need for a policy review based on an increased number of solar projects applying for connections as *"the solar peak does not tend to be aligned with Summer valley load."*
- We view the increased number of connection applications as a major consideration for why ISEA believes that renewable planning standards need to be overhauled.

3. Early Access/Piloting:

- In broad terms, ISEA's position on early access to the network and pilot connections is that they must be made available at the earliest possible opportunity to be of benefit to the solar industry and thus the end consumer.
- ISEA also encourages ESB Networks to step up the pace of delivery to build up renewable industry confidence in the programme. This is vitally important for Ireland's evolving energy sector in terms of unlocking renewable capacity and facilitating customers participating in the energy transition.

4. Data Exchange/Protection:

- ISEA is of the view that the National Networks, Local Connections Programme must ensure that adequate amounts of data are exchanged between the Transmission System Operator and the Distribution System Operator to be viable.

Next Steps

ISEA submits our response to ESB Networks. We would welcome the opportunity to discuss the analysis underpinning our response and contents of same.

2.0 Introduction:

The Irish Solar Energy Association (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 utility-scale solar and 1GW of customer-scale 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 163 parties currently active in the Irish solar market.

In our view, the implementation of active system management should occur as soon as possible to allow Ireland to have the best possible chance of meeting its climate targets – as well as enabling the solar industry and other renewable technologies to participate more actively in the green transition.

ISEA would view NNLC as a success through the extent to which it enables the following outcomes:

- Facilitation of utility-scale projects connecting to the network more quickly and in a more cost-effective manner.
- Enabling customers to actively participate in the energy space; and
- Facilitating non-wires solutions for accommodating capacity, or put in another way, making better use of the available capacity on the distribution network.

ISEA welcomes the approach of scenario planning and transparency adopted throughout the consultation process. The opportunity afforded to influence aspects of the programme is to be welcomed.

We will confess to struggling somewhat with developing a response as there was a significant volume of documents, many of which had overlapping content with differing levels of details, meaning that it was not always clear as to what was being proposed in what document. We encountered parties across the energy industry who found the volume of documents too daunting with which to engage. The various workshops helped clarify matters a bit, though we would suggest it might be worth considering:

- Publishing a stakeholder impact analysis of the different documents so participants could prioritise documents for a response; and/or
- Identifying a more defined set of questions for respondents to consider.

3.0 Issues for Consultation:

ISEA supports the option cited by ESB Networks in the Consultation Overview document to “drive towards a national rollout in 2024/2025.” In our view, this should be implemented as soon as possible to allow Ireland to have the best possible chance of meeting its climate targets – as well as enabling the solar industry and other renewable technologies to participate more actively in the green transition.

3.1 Microgrids:

An area of particular concern for ISEA & its members is the effect these new measures will have on microgrids within Ireland’s electricity infrastructure. This is important for the solar industry as it affects the costs of renewable electricity for the consumer through the provisioning of rooftop solar panels.

Power System Requirements:

- ISEA welcomes ESB Networks forward-thinking on incorporating projected new builds with solar panels installed into the NNLC design process. However, Part L of the criteria for the Building Regulations 2010 has been amended as of October 2021.
- By virtue of the added complexity involved in installing solar panels as a result of these changes to Part L, we fear that ESB Networks’ microgeneration projections for the total number of feeders in line with Climate Action Plan 2021 may be inaccurate.
- It is accepted by ISEA that these regulations are not devised by ESB Networks – but simultaneously ISEA would encourage ESB Networks to revise their projections to take account of the changes to Part L.

Phased Flexibility – Market Development:

- In terms of market flexibility, ISEA is of the view that microgrids & peer-to-peer solutions are crucial for enabling consumers to access renewables.
- ISEA commends the efforts of the ESB Networks’ in researching examples of best practice in other jurisdictions during the design process for the NNLC. We agree with ESB Networks view that the flexible products used by distribution network operators in the UK are at a level of maturity that means they should serve as a model for the implementation of such products within the Irish system.
- In terms of product characteristics, ISEA supports the proposed fifteen-minute settlement period as in our view this increases the chances of incentive signals reaching relevant stakeholders.

3.2 Renewable Non-Firm Access:

As more renewables are installed onto the system, ensuring non-firm access for renewables becomes increasingly important. ISEA welcomes ESB Networks action on this issue via the National Networks, Local Connections programme, but in doing so we urge ESB Networks to consider a more flexible approach to connections and to support an overhaul of the planning permission standards to accommodate these changes. As currently constituted, Irish planning permission standards inhibit the renewable industry's efforts to make use of available capacity in the most efficient manner.

Power System Requirements:

- As stated, a more flexible approach to connections is vital for bringing more renewables onto the Irish electricity system.
- To that end, we agree with ESB Networks' proposals to both *"connect renewable generators more quickly and in a more cost-effective manner"* and *"increase local consumption of local renewable generation."*
- ISEA welcomes ESB Networks' recognition of a need for a policy review based on an increased number of solar projects applying for connections as *"the solar peak does not tend to be aligned with Summer valley load."*
- It should however be noted that *"high wind and high sun tend not coincide and therefore solar and wind will not frequently be coincidentally exporting at their full MEC"* and *"the solar peak does not tend to be aligned with summer valley load (which represents the worst case for generation"* are a large part of the reason why ISEA believes that renewable planning standards need to be overhauled.
- The current planning standards require developers & the network operator to construct infrastructure that with a tweak of the standards could prove unnecessary and allow us to bring more renewables online with less network build.

3.3 Early Access/Piloting:

In broad terms, ISEA's position on early access to the network and pilot connections is that they must be made available at the earliest possible opportunity to be of benefit to the solar industry and thus the end consumer. In the event this is not delivered according to the specified timeline, there is a reasonable probability that the success of the entire National Networks, Local Connections programme will be diminished significantly. Equally, while we welcome the shift towards piloting and release the industry has some concerns as past experience suggests there can be quite a gap between pilots and practice. We encourage ESB Networks to leverage early wins and step up the pace of delivery to build up stakeholders' confidence in the programme. This is vitally important for Ireland's evolving energy sector in terms of unlocking renewable capacity and facilitating customers participating in the energy transition.

Piloting Roadmap:

- ISEA welcomes ESB Networks' plan to go live in 2023 with *"a pilot of scale, contracting a range of flexibility services from all kinds of customers, across an area of the network under a bulk supply point (BSP)."*
- In our view, transmission constraints are one of the criteria which should be included as part of the Pilot of Scale (Residential & Commercial) Local/DSO market. An area of active industrial and residential demand that experiences significant constraints would be a valuable area to consider in at-scale pilots.

- ISEA also welcomes the ESB Networks' intention to commit *"resources and investment to sustainable, longer-term technologies in our control room that will deliver adaptability and agility in future years."* This is particularly important for unlocking more capacity on the network and enabling utility-scale renewable generation by making more efficient use of network infrastructure.

Focus of Pilots:

- ISEA believes initial pilots should be focused on connecting flexible generators. These projects do not require any new market systems and can be delivered with much less complexity while potentially delivering major benefits to future connections and planning standards.
- ISEA understands that there are a very small number (2-3) of RESS-1 projects which have triggered reinforcements/upgrades.
- ESB Networks should work directly and immediately with these projects to determine if a pilot project could help facilitate a faster connection without waiting for upgrades. In particular, an expansion of the non-firm access policy could facilitate faster less expensive connections.
- The fallout from the first 2 ECP batches has shown that the network planning standards are particularly onerous for DSO-connected solar. Transformer capacity is a constant issue and projects which have triggered new transformers have generally not proceeded to offer stage or not accepted issued offers.
- We welcome the comments in the 2030 Power System Requirements paper on network planning for solar. We must stop planning connections based on full output from wind and solar at the same time as minimum demand.
- Initial pilot connections for RESS-1 solar should be targeted which can gather data on how wind and solar interact when connected to the same transformers. We urgently need reform of planning standards and for solar and expansion of the non-firm access policy.
- The initial NFA promised very much but has yet to unlock any capacity which is now at our DSO stations.
- Equally, there is a lack of clarity in terms of the remuneration a generator will receive for participating in early access pilots: *"The funding arrangements for this pilot are yet to be determined (and this will be subject to a regulatory decision). We welcome views on the most appropriate approach to the funding model for this pilot."*

Pilot 3 - Flexibility – Multiyear Plan:

- We are supportive of Pilot 3: *"[A] pilot of scale which will involve multiple services and customer types, at a given network location."* As mentioned previously, we urge ESB Networks to complete the relevant pilots and release the technology quickly.
- It is our considered view that an earlier deployment will allow the renewable industry adequate time to make corrections whereas a stalled deployment as a result of pre-release design corrections will only impede the onboarding of renewables onto the grid as well as the growth of the renewable energy industry in Ireland as a whole.
- On a more positive note, ISEA welcomes the proposed timeline for the Flexibility Milestone Plan. It must be stressed however that industry support is likely to be dependent on the successful delivery of the Flexibility Milestone Plan according to the proposed timeline.

RESS-1 Early Access:

- ISEA is concerned about the RESS-1 Early Access Pilot. We welcome any effort by ESB Networks to introduce early access for RESS-1 projects, but to be effective it must be implemented at scale and no later than 2023 for most participants – and as early as possible within that year.
- Considering the dates relative to RESS Commercial Operation Date & Long Stops some participants may need to be connected as early as 2022 to move forward as a benefit.

3.4 Data Exchange/Protection:

Aside from the issues with microgrids, non-firm access, and early access, ISEA is of the view that the National Networks, Local Connections Programme must ensure that adequate amounts of data are exchanged between the Transmission System Operator and the Distribution System Operator to be viable. However, this must simultaneously be balanced with adequate ‘privacy by design’ data protection mechanisms in order to ensure societal buy-in of these changes.

Visibility – Multiyear Plan:

- ISEA has identified a potential data protection issue in the requirement for customer data to be shared with ESB to make active system management via the National Networks, Local Connections programme viable.
- It has been stated in the consultation that in line with the relevant data protection that ESB is not permitted to share data with the design team for the NNLC programme. In our view, this places obvious constraints on how comprehensive the NNLC solution can be, though we recognise that is beyond the control of the NNLC design team.
- ESB has also committed to *“TSO/ DSO data exchange, to support secure, whole of system approaches in line with the future TSO / DSO operating model that is currently in development.”*
- ISEA welcomes this as it is a crucial step in decarbonising Ireland’s electricity system, but as the ESB does not currently operate such a model it is crucial that adequate resources are assigned to these processes to ensure delivery of the programme and its associated benefits.
- ISEA acknowledges the issues created by ESB currently lacking access to smart meter data due to GDPR constraints. We look forward to the conclusion of ESB’s Networks consultation with the ESB Data Protection Officer on this issue and hope a solution can be found quickly.

4.0 Conclusion:

ISEA welcomes the introduction of active system management but would prefer more decisive action in certain areas of the National Networks, Local Connections programme. As noted above, there are several issues that ISEA members view as important in the context of implementing these changes to the network:

1. Microgrids:

- ISEA supports the proposed fifteen-minute settlement period as in our view this increases the chances of incentive signals reaching relevant stakeholders.
- It should be stressed that going forward the Irish renewable industry needs a predictable & stable framework around which projects can be planned and managed.

2. Renewable Non-Firm Access:

- Renewable planning standards need to be overhauled.