Submission by ISEA to ESB Networks Consultation on standard module substations

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 solar in the next ten years to make a significant contribution towards 2030 energy targets and achieve a diverse and clean electricity network.

ISEA welcomes the opportunity to provide our views on the ESB Networks Consultation on standard module substations. As the trade association for the solar industry in Ireland, ISEA is responding on behalf of our membership of over 100 parties currently active in the Irish solar market.

With our focus on continuing to drive down the costs and development timelines for solar deployment in Ireland, we broadly welcome this initiative. Appended below are some suggestions intended on enabling the rollout of module substations quickly and efficiently.

Modular substations – strategic value

ISEA supports the proposals to introduce standard module substations, and (as we argue later) we would support their use in a wider set of circumstances than envisaged in the consultation paper. We believe that this is a step in the right direction for the quick and timely delivery of renewable energy infrastructure throughout the country. In the UK our members have seen the positive impact of modular substations on both project cost and delivery timeframes.

Once approved, the rollout of module substations should be done at scale and as promptly as possible.

Following the success of the first RESS auction, with close to 800MW of solar projects awarded contracts, with a delivery requirement for those projects by the end of 2022, the solar industry is working towards installation and energisation of those projects. With over 800MW solar sites and over 130MW of hybrid solar and either wind or battery sites in ECP2.1, there is likely to be a significant tranche of projects following in the near future.

Experience suggests that the majority of solar projects can be installed in 3-4 months, thus even allowing for procurement processes, our expectation is that timelines for project delivery will largely be dependent on grid lead in times.

Containerised and standardised substations should streamline the energisation process helping reduce installation times. The intent would be that it, in conjunction with other initiatives such as Lean Connections, will contribute to increased levels of renewable project delivery, allowing ESB

Networks to roll out connections at a rate consistent with achieving the 2030 renewable electricity and climate change targets.

We maintain this approach should be adopted by the DSO with urgency and would make three further recommendations in relation to its implementation:

- Module substation contestability;
- Design commonality; and
- Inclusion of 38kV network

Contestability

To maximise the efficient delivery of module substations, ISEA favours their being contestable. Competitive tension in the delivery of these units would facilitate competitive pricing, maximising value. This decision could magnify the positive impact a modular substation on a project's costs through such competition. It would send a signal to industry and policy makers that ESB Networks are really seeking to enable low carbon generation to connect at the most economically efficient cost possible. The outcome of these changes is likely to be lower pricing from projects eligible for the modular approach that are bidding into the Renewable Electricity Support Scheme (RESS) auctions which is ultimately ensuring better value for Irish consumers.

Design commonality

ISEA members are familiar with UK substation designs which are extremely similar to the one in the consultation paper, suggesting a wealth of experience in a neighbouring market on which we could draw to rollout these designs and a high degree of commonality across their design.

ISEA would encourage ESB Networks to publish a functional specification for the design of a standard module substation which should be achievable given the factors in the preceding paragraph. We would also encourage ESB Networks to ensure that said functional spec is written up so as to be supplier agnostic

i.e. it should permit a wide variety of potential vendors to compete for their provision, further introducing competitive tension into the delivery of Irish renewable projects.

Inclusion of 38kV network

An area of concern for ISEA, is the suggestion within the consultation document that the implementation of module substations will be on the 10kV and 20kV networks only. There is not a justification within the consultation document for limiting the use of a modular approach in this manner.

Solar projects have been delivered with module substations at 33kV across the UK and we have seen the positive impact this has had on both project cost and delivery timeframes. Based on input from our members who have engaged with UK stakeholders, we have been advised that the indoor switchgear for many of these substations is rated for 38-40kV suggesting module substations are suitable for use on the 38kV network.

We believe that the 38kV network should also be included and this amendment would result in faster and more cost-effective deployment of renewables across the entire distribution system.

By expanding the voltage at which modular substations could be utilised, ensuring a standard functional spec is in place suitable for delivery by a wide variety of providers, and permitting modular substations to be contestable, ISEA believes ESB Networks would facilitate more efficient, and cheaper delivery of renewable electricity projects.

Conclusion

ISEA is fully supportive of the proposal to introduce modular substations and of ESB Networks stated intent of looking to "develop standard options to facilitate faster and optimised connection options for renewable and customer connections to our network."

In implementing this proposal, we would seek to expand its application through the following:

- Ensuring that modular substations can be delivered contestably
- Publication of a detailed functional spec that is supplier agnostic
- Expansion of the use of modular substations beyond 20kV threshold into the 38kV network

Should you have any queries in relation to this consultation response, please get in touch with our team. We look forward to further engagement with ESB Networks and working together to achieve a decarbonised electricity system.

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