

SEM Committee

30th November 2022

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RE: SEM-22-076 Best New Entrant Consultation

Energy Storage Ireland (ESI) is an industry representative association comprised of members who are active in the development of energy storage in Ireland and Northern Ireland. Our aims are to promote the benefits of energy storage in meeting our future decarbonisation goals and to work with policy makers in facilitating the development of energy storage on the island of Ireland. We have over 50 members representing many areas of the energy storage supply chain.

Energy storage will play a significant role in facilitating higher levels of renewable generation on the power system and in helping achieve national renewable electricity targets. Storage systems can act in the energy, capacity and system services markets to deliver a wide range of benefits such as wholesale energy price reductions, reduced CO2 emissions and flexible system support services to help manage the grid with higher levels of renewables.

We would like to thank the SEM Committee for the opportunity to provide feedback on the Best New Entrant Net Cost of New Entry (BNE-Net CONE) Consultation Paper.

Summary

We have some significant concerns with the assumptions used in the analysis regarding battery storage, which we address in the following sections, but more generally we question the intention behind this consultation as it is very unclear what the SEM Committee is trying to deliver.

The Regulatory Authorities, TSOs and relevant Governments in Ireland and Northern Ireland all publicly state there is a need for multi-hour energy storage to be deployed as soon as possible to help support security of supply, drive down energy prices for consumers and reduce our carbon emissions.

EirGrid and SONI's own SOEF roadmap estimates around 1.5 GW of 2-6 hour storage will be needed in 2030 and the recent Baringa Game Changer report shows the clear benefits that

multi-hour storage can bring to the system in terms of emissions reductions, capacity adequacy and consumer savings.¹

However, the proposals in this consultation, if we understand them correctly, around reductions to BNE Net CONE, combined with proposed changes to de-rating factors in a separate SEMC consultation, **will not deliver new multi-hour storage capacity.**

We must avoid locking in unnecessary fossil fuel investments that will become stranded assets in future and we must shift towards new providers of low carbon capacity. The necessary storage deployments will not materialise without supporting policy frameworks and investment signals and there is a real risk that developers and investors will look to other countries instead of Ireland and Northern Ireland.

The CRM is the only current means for energy storage projects to secure a long-term revenue support. Energy storage presents a very different cost profile to fossil fuel plant and to incentivise its development through the capacity market requires a separate low carbon technology price cap and/or a form of low emissions payment benefit/scalar. Is the intention of the SEM Committee to provide a specific investment signal for energy storage?

We would urge the SEM Committee against rushing to any decision without considering the types of capacity that the system will need in the coming years and how these will integrate with an 80% RES-E system by 2030. Storage is a zero-emissions capacity provider but receives no bonus or additional incentive for this. Storage can provide a range of system services to the grid and, unlike a gas generator, does not need to be running in order to provide these so it is a much more flexible and dynamic asset that can integrate more effectively with renewable generation and support higher levels of SNSP. It also helps reduce renewable oversupply/constraints through its use as flexible demand and can shift this clean energy towards other times when wind and solar generation are low. This important service is also not currently rewarded through the capacity mechanism. Storage is also quick to deploy with a large pipeline of projects already through the permitting process, with no emissions restrictions/licensing requirements, and is capable of delivering much faster than equivalent OCGT capacity.

BESS Assumptions

- **BESS Duration** – We question why a storage duration of 2 hours is analysed when current CRM requirements for new capacity providers, that are eligible to receive a connection offer, mandate a de-rating factor of at least 0.5. This is equivalent to at least 3 hours duration based on the latest de-rating factors. It would seem to be more appropriate to analyse the durations that the RAs/TSOs have signalled they require.

¹ <https://www.energystorageireland.com/wp-content/uploads/2022/05/GameChanger-ESI-Report-May2022-Web-1.pdf>

- **BESS Revenues/DS3** - ESI is concerned with regards to the impact that a significant reduction in CONE figures will have on BESS. On the price assumptions with regards to tariffs, the CEPA/Ramboll analysis overestimates the revenue received for BESS as the methodology stacks both DS3 and wholesale in an infeasible way. The 'infra-marginal' rent is calculated based on 1-full cycle per day, while the DS3 service revenues are stacked with 80% capability as per Table 7.3 of the CEPA/Ramboll analysis. Should the BESS unit carry out 1-full cycle, this implies that the unit is going to be fully discharged for a number of hours, meaning that it has no service capability in this time, making the 80% DS3 service revenue capability unrealistic.

Further, should any of the three proposed options be implemented from the recent [DS3 System Services Tariffs Consultation](#), this would further negatively affect BESS and reduce investor confidence, as well as jeopardise future investment in further low carbon technology services. The expenditure cap for DS3 of €235 million was designed for 2020 system needs, based on analysis carried out in 2014. There would have been no reasonable expectation from industry in 2017 that we would be in the current situation with no certainty on the timelines for the future arrangements and still working within the constraints of the current expenditure cap. Investment assumptions were based on the new arrangements being in place by 2023, with access to new products and services, as well as energy markets in the case of storage, supported by increased expenditure on system services needed to deliver 2030 goals. These uncertainties with regards to DS3 future arrangements should also be taken into account when calculating the appropriate discount off the 2021/22 Tariffs. A discount of only 20% seems very optimistic given the tariff rates were reduced by 10% in January 2022 and the move to competitive arrangements is forecast to introduce significant competition into the market. Consultants such as Aurora have forecast DS3 values dropping to well over 60% of their current level with the move to competitive arrangements.² This puts increasing focus on the need for multi-hour storage to diversify revenue streams and their ability to participate in the energy and capacity markets becomes much more important.

- **Methodology** - We also note that the methodology outlined in the CEPA/Ramboll analysis and accompanying consultation document is not futureproofed in the sense that it does not take into account the technologies that should be prioritised in the system in 2030. It should be acknowledged that the use of CCGT and OCGT plants will decline, while low and zero carbon technologies will become more crucial in meeting Ireland's energy targets.

² <https://auroraer.com/insight/taking-charge-outlook-for-battery-storage-projects-in-ireland/>

- **Charges** - With regards to the information provided on BESS assumptions, a number of figures may be inaccurate. In Table 4 of the consultation document, the electricity charges cited for BESS are lower than what we would expect for a 100MW/200MWh BESS site, while we believe that the network capacity charge is also underestimated here. While Table 5.2 of the CEPA/Ramboll report shows an assumption of 6,295/MW/yr for ROI, BESS in ROI do not pay G-TUoS and the [2021/22 EirGrid Statement of Charges](#) notes that charges for a storage asset would include the Demand Network Capacity Charge of 1,320/MW/month or 15,840/MW/yr, which is significantly higher. This is in addition to demand network usage charges which are also very high per MWh. On capital fixed costs provided in Table 4.14 of the CEPA/Ramboll analysis, connection costs for BESS are underestimated. On water connection costs, it should also be taken into account that depending on the nature and location of the BESS site, a number of BESS sites may not need to pay water connection costs. It should also be acknowledged that ECP costs have increased substantially over the last 12 months due to supply chain issues and material costs. We would be happy to provide more detail on this if you wish.
- **Multipliers for storage** – We note that the multipliers intended for new storage capacity are currently still being considered by the SEM Committee and that a decision will be communicated to the industry as it is made. We would encourage the SEMC to liaise with industry **prior** to a decision being made in order to ensure that this is chosen accurately and in consultation with industry.

Conclusion

We would like to thank the SEM Committee for the opportunity to provide feedback on the Best New Entrant Consultation. As stated previously, the proposals in this consultation around reductions to BNE Net CONE, combined with proposed changes to de-rating factors in a separate SEMC consultation, will not deliver new multi-hour storage capacity. We would urge the SEM Committee against rushing to any decision without considering the types of capacity that the system will need in the coming years and how these will integrate with an 80% RES-E system by 2030. The necessary storage deployments will not materialise without supporting policy frameworks and investment signals and there is a real risk that developers and investors will look to other countries instead of Ireland and Northern Ireland. We are available to discuss any of the points made above in more detail should you require.

Kind Regards,

A handwritten signature in black ink, appearing to read "Bobby Smith".



Bobby Smith
Head of Energy Storage Ireland