



Energy for  
generations

ESB Generation & Trading's response to  
SEMC Options for Decarbonisation of the  
existing CRM design Consultation Paper  
SEM-25-070

26/02/2026



## 1. EXECUTIVE SUMMARY

ESB Generation & Trading (ESB GT) welcomes this consultation and strongly supports the SEM Committee's ambition to advance practical, timely decarbonisation of the CRM. As an organisation committed to achieving net-zero by 2040, we value the opportunity to engage collaboratively with SEMC on measures that both reduce emissions and maintain security of supply.

Across the options presented, ESB GT recognises the potential for the Green Scalar to act as a useful decarbonisation lever. Whether or not this is possible to implement within the timeframe set out in this consultation is hard to assess against the lack of clarity on various parameters. Regarding the Green Bonus, based on the level of detail provided to date, ESB GT are not convinced that the Green Bonus as it is set out in the consultation offers a strong enough incentive to operate as an effective decarbonisation measure within the remaining lifetime of the existing CRM. While market participants could in principle respond to the option, the one-year contract extension is unlikely to provide a meaningful investment signal, particularly for projects involving significant refurbishment or upgrades.

We also highlight that, in any case, aspects of the Green Bonus would require refinement. Specifically, the proposed 30% hydrogen readiness requirement is unlikely to be achievable for many assets due to OEM certification constraints. ESB GT considers that any hydrogen ready requirement should be aligned with the timelines and commitments set out in national hydrogen strategies, as well as the readiness of the transmission network.

Looking beyond the current CRM timeframe, ESB GT sees greater long-term potential in the Green Scalar. While there are uncertainties around its parameterisation, functional form and deliverability in the immediate term, the scalar probably offers a more nuanced, performance-based approach that could provide stronger decarbonisation signals under a future CRM design. ESB GT would welcome early engagement with SEMC should this mechanism be progressed as part of the next CRM iteration post 2027, to ensure its design is transparent and effective. A key consideration within the development of a Green Scalar would be the status of storage assets with regards to the application of the scalar.

Overall, ESB GT does not consider the Green Bonus, as currently defined to be an effective near-term decarbonisation measure. Instead, we support continued exploration of the Green Scalar. ESB GT remain committed to constructive engagement with SEMC to ensure that the CRM continues to support both system adequacy and meaningful decarbonisation.

It should be noted that energy storage is a decarbonisation enabler and should be encouraged as part of any decarbonisation of the CRM and as such should be included in any chosen mechanism. A combination of the scalar and increasing energy storage derating factor would improve the investability of energy storage.

## 2. VIEWS AND COMMENTS ON CONSULTATION QUESTIONS

### 2.1. ***Q1: Would the Green Bonus create an incentive that market participants can respond to within the timeframe of the remaining auctions under the existing CRM?***

A1: ESB Generation & Trading (ESB GT) supports the principle of using the CRM to incentivise decarbonisation and welcomes the opportunity to engage with the SEM Committee on measures that can drive meaningful progress toward net-zero. Careful consideration will be required to ensure that the principal objective of the Capacity Market, that being to ensure the security of supply, is not undermined by introducing mechanisms to promote decarbonisation. ESB GT is not convinced that the Green Bonus, as set out in the consultation, would create a meaningful investment incentive within the remaining lifetime of the existing CRM. While participants could theoretically respond to the measure, we feel that the one-year contract extension is too modest to materially influence refurbishment or upgrade decisions - particularly given long development cycles, projects already well advanced for upcoming delivery years, and the limited net-present-value impact of an additional year at the end of a contract. These concerns lead us to believe that that the Green Bonus is unlikely to drive significant decarbonisation actions in practice.

### 2.2. ***Q2: Where should the CO<sub>2</sub> emissions threshold be set to incentivise higher efficiency gas plant as well as lower carbon technologies? Please provide appropriate evidence and rationale to support.***

2.3. A2: ESB GT believes that, if the SEMC did decide to proceed with the Green Bonus the CO<sub>2</sub> emissions threshold for the Green Bonus should not be set lower than the legislated 550g/KWh as this would disadvantage existing gas fired generation. The overall annual emissions from these generating plants could actually be relatively low due to the low load factors.

### 2.4. ***Q3: Is one year the appropriate additional contract duration?***

2.5. A3: As noted in response to Q1, ESB GT is not convinced that the Green Bonus, as set out in the consultation, would create a meaningful investment incentive within the

remaining lifetime of the existing CRM. However, if the SEMC did decide to proceed with the Green Bonus, ESB GT would be concerned that an additional one-year contract duration would not be a sufficiently strong investment signal to materially influence refurbishment or new build decisions in practice. While AFRY's analysis notes that a one-year bonus is more appropriate than a two-year bonus in the SEM context - to avoid the risk of overcompensation - we believe that the scale of the incentive would still need to be meaningful enough to shift investment decisions within what is already a challenging and compressed timeframe.

In reality, the capital expenditure associated with efficiency upgrades or lower carbon modifications to existing assets can be significant, and the incremental value of a single extra contract year may not always be adequate to justify such investment. This is particularly relevant where OEM certification, planning requirements, and supply chain constraints create long lead times or added uncertainty.

Given this, our view is that while the one-year duration is aligned with AFRY's concerns, it may ultimately prove insufficient as a standalone incentive.

**2.6. Q4: Is the definition of blended hydrogen-readiness appropriate i.e. that the unit must incorporate combustion equipment that is capable of burning a blend of up to 30% hydrogen? Should a higher/lower percentage blend be applied for the blended hydrogen-readiness definition?**

2.7. A4: ESB GT fully supports measures that facilitate the long-term decarbonisation of the dispatchable generation fleet and recognises the strategic importance of hydrogen readiness in enabling the transition to net-zero. We remain committed to working closely with the SEM Committee and wider industry to progress credible and technically grounded pathways toward hydrogen utilisation.

However, based on our assessment of current OEM capabilities and the practical realities of existing gas turbine configurations, we are concerned that the proposed definition of blended hydrogen readiness - requiring combustion of up to a 30% hydrogen blend - is not currently achievable or appropriate for many units.

Achieving compliance with this definition is heavily dependent on the availability of OEM commercial guarantees, and in practice, OEMs may not be in a position to retrospectively endorse such capability for equipment. This constraint may apply even where assets are technically capable of limited hydrogen blending from an engineering standpoint.

Requiring a formal OEM signoff at a 30% blend level could therefore exclude otherwise efficient units from eligibility to any mechanism that required participants to meet such a target. ESB GT considers that any hydrogen ready requirement should be aligned with the timelines and commitments set out in national hydrogen strategies, as well as the readiness of the transmission network.

**2.8. Q5: *Would the Green Scalar create an incentive that market participants could respond to within the timeframe of the remaining auctions under the existing CRM?***

2.9. A5: ESB GT recognises the potential of the Green Scalar as an innovative mechanism to support the decarbonisation of the CRM, and we appreciate the SEM Committee's willingness to explore new tools that can more granularly incentivise lower-carbon technologies. As an organisation fully committed to achieving net-zero by 2040, we welcome mechanisms that strengthen the investment case for cleaner assets while retaining a fair and competitive market structure.

Our initial assessment is that it is unclear whether ESB GT could respond to the Green Scalar within the timeframe of the remaining auctions under the existing CRM.

Conceptually, the mechanism appears workable and could be incorporated into commercial strategies, provided its parameters are clearly defined well in advance of any auction in which it applies.

However, at this stage, we do not have sufficient detail on critical design elements, notably the scalar values, the emissions bands, and the overall form of the mechanism. Without clarity on these parameters, it is difficult for market participants to make an informed commercial judgement of the incentive that the Green Scalar would create in practice. Additionally, a mechanism such as the Green Scalar would likely impact the bidding behaviour of market participants, allowing lower carbon capacity providers to reflect the Green Scalar value in the formation of the capacity market bids. In this way the Green Scalar has the potential to re-order the capacity market supply curve and be significantly price affecting. Given these impacts and the risk of unintended consequences careful consideration of the parameterisation of the Green Scalar would be required. In addition, careful consideration would be required to ensure that capacity providers who, as a result of TSO dispatch instructions, operate at minimum generation for extended periods are not disadvantaged under a Green Scalar by having a higher outturn carbon intensity factor as a result.

Despite these uncertainties, ESB GT does see strong potential for the Green Scalar to become an effective decarbonisation tool in the longer term, particularly given its ability to differentiate between technologies on a more continuous basis than threshold-based measures. We believe this approach may be better suited to the next iteration of the CRM design, where timelines, implementation pathways and State Aid considerations can be more fully accommodated.

Accordingly, if the SEM Committee is open to considering the Green Scalar in the future CRM framework, ESB GT would welcome early and ongoing engagement, and we would value the opportunity to actively participate in the development and design of the mechanism.

**2.10. Q6: What are the appropriate CO<sub>2</sub> emissions thresholds that should apply for the Green Scalar? Please provide appropriate evidence and rationale to support.**

2.11. A6: We support the application of the Scalar which rewards the reduction in carbon intensity of a generator as set out in the consultation section 2.2. We do not have enough information on the parameters of the Scalar to state what we think that the emissions thresholds should be at this stage.

**2.12. Q7: Should the Green Scalar be a continuous or stepwise function?**

2.13. A7: At this stage, ESB GT would require more information on the detailed parameters of the Green Scalar - including the proposed emissions bands, the scalar values, and how these would interact with auction outcomes - before we could form a definitive view on whether a continuous or stepwise structure is preferable.

Having considered both approaches it is not yet clear which would deliver the most effective decarbonisation signal within the existing CRM framework. ESB GT believe that more analysis should be done, given the carbon intensities of exiting gas plants and those that are likely to be participating in future CRM auctions. ESB GT would welcome further engagement with the SEM Committee as the mechanism is developed.

**2.14. Q8: Which of these two options – the Green Scalar or the Green Bonus – do respondents consider is likely to be more effective within the timeframe of the remaining auctions under the existing CRM?**

A8: At this stage, ESB GT considers the answer to this question to be difficult to conclude based on the varying challenges between the two mechanisms. AFRY's analysis

highlights significant deliverability risks associated with the Green Scalar, particularly given that it is a novel, untested concept in the context of European capacity markets. If accepted as presented in AFRYs analysis, these uncertainties - relating to State aid approval, and the fact that its untested in the context of European Capacity Markets - increase the likelihood that the scalar could face delays or require substantial development work before it could be deployed effectively. We note that these uncertainties do introduce uncertainty regarding the deliverability of the Green Scalar within the remaining CRM timeframe, but we also believe that the IT processes could be implemented within the given timeframe.

However, as noted previously, ESB GT is not convinced that the Green Bonus, as it is set out in the consultation provides a meaningful decarbonisation incentive. While it may appear more established and proven in other markets, the one-year contract extension represents too modest an investment signal to materially influence refurbishment or upgrade decisions. This significantly limits its effectiveness as a decarbonisation measure, even if its delivery risks are lower than those associated with the scalar.

Looking beyond the immediate timeframe, ESB GT sees a clear, greater long-term potential in investing time and resources in the Green Scalar, particularly in its ability to differentiate between technologies across a spectrum of emissions intensities. We believe this approach could play a valuable role in the next iteration of the CRM, where timelines are better suited to a more complex, parameter driven mechanism. Should SEMC consider taking forward the Green Scalar as part of the future CRM design, ESB GT would strongly welcome early engagement and would wish to be actively involved in its development.

- 2.15. **Q9: What technologies could be expected to benefit from the Green Bonus or the Green Scalar in the specified timeframe? a. For each technology referred to, what is the associated scale of and timeframe for investment for an existing or a new plant?**
- 2.16. A9: ESB GT has no comment
- 2.17. **Q10: What is the expected commercial running pattern for each technology and are there constraints on its flexibility?**
- 2.18. A10: ESB GT don't believe that we have sufficient information at this stage to comment appropriately to this question.

- 2.19. **Q11: What verification process should apply to ensure compliance with the emissions thresholds for either measure?**
- 2.20. A11: ESB GT don't believe that we have sufficient information at this stage to comment appropriately to this question.
- 2.21. **Q12: Do you agree with the proposal to publish the carbon emissions data submitted at qualification by successful units, and where relevant, ex-post data provided by successful units?**
- 2.22. A12: ESB GT supports the principle of transparency, but we would have reservations about publishing unit-level emissions data. These figures can reflect operational choices, commercial arrangements and technical characteristics that vary across assets, and publishing them could influence competitive dynamics in ways that may not be intended.
- 2.23. **Q13: How effective do respondents consider the proposed "Decarbonisation Declaration" would be?**
- 2.24. A13: ESB GT believe that requiring a director to sign a declaration for aspects that are out of their control is not an appropriate requirement to have in place. Further to this, we do not believe that it would be equitable to place perceived decarbonisation responsibilities solely on generators rather than recognising the role that other market participants can play.
- 2.25. **Q14: Is the proposed content of the "Decarbonisation Declaration" sufficient? Could other elements be included e.g. feasibility study, interim targets?**
- 2.26. A14: ESB GT don't believe that we have sufficient information at this stage to comment appropriately to this question.
- 2.27. **Q15: Do you consider that any of the other measures discussed in the accompanying AFRY Assessment Report, or any measures to achieve decarbonisation that not identified by AFRY, should be considered further by the SEM Committee? If so, please state clearly if your view relates to the timeframe of the present 14 workstream (lifetime of the existing CRM) or longer-term CRM development. If so, please provide supporting evidence.**
- 2.28. A15: ESB GT appreciates the breadth of analysis carried out by AFRY and welcomes the SEM Committee's openness to considering a wide range of options to support the decarbonisation of the CRM. We remain strongly committed to collaborative engagement

on the development of both near-term and longer-term measures that can accelerate progress toward net-zero.

In this context, ESB GT believes that the Green Scalar warrants further consideration as part of the longer-term CRM development process. While we acknowledge that the Green Scalar may present deliverability challenges within the remaining lifetime of the existing CRM - particularly given its novelty and the deliverability uncertainty highlighted by AFRY - we also see significant potential for this mechanism to become a valuable and effective decarbonisation tool in future iterations of the CRM.

The scalar's ability to differentiate between technologies along a variety of emissions intensities offers a more nuanced and flexible approach than threshold-based measures. For this reason, we believe it could play an important role in enabling a more sophisticated, performance-based incentive framework over the longer term.

Accordingly, ESB GT would welcome early engagement with the SEM Committee should the Green Scalar be taken forward for future CRM design work. Early dialogue on design, parameter setting, and State Aid considerations would help ensure that, if implemented on a longer timescale, the mechanism can be optimised collectively.

ESB GT remains fully committed to supporting SEMC in shaping the next phase of CRM evolution and is ready to work proactively with industry, policymakers and regulators to deliver mechanisms that underpin the long-term decarbonisation of the electricity system.