

2 October 2026

AusEnergy Services Ltd
GPO Box 2008
MELBOURNE VIC 3001

Submitted electronically: engagement@asl.org.au.

Dear Electricity Contract Co-Design Working Group

Industry-led Electricity Contract Co-Design Consultation Paper

Tilt Renewables welcomes the opportunity to provide feedback on the preferred Electricity Service Entry Mechanism (ESEM) contract structures for bulk energy, shaping and firming services developed by the Electricity Contract Co-Design Working Group. The consultation will inform the Working Group's final report and recommended contract suite to be provided to Energy Ministers in November 2026.

The proposed contracts may play an important role in supporting the ESEM and Market Making Obligation (MMO), and ultimately facilitating investment in the National Electricity Market (NEM).

Tilt Renewables is one of Australia's largest developers, owners, and operators of wind, solar and battery storage projects. Proudly Australian-owned and operated, we currently manage 2.0 GW of renewable capacity across 12 operational assets, with a development pipeline exceeding 6.0 GW. We are committed to advancing Australia's renewable future and delivering clean, reliable and affordable energy solutions.

We thank the Working Group for its open consultation process and acknowledge the significant contribution made by its members.

1. General

Achieving the Australian Government's target of 82% renewable electricity by 2030 will require substantial investment in new renewable generation and supporting infrastructure. Electricity demand is also forecast to grow materially, including from large-scale data centres, industrial electrification and broader economy-wide decarbonisation.¹ This increases the importance of enabling sufficient new wind generation to reach financial close and proceed to construction.

¹ AEMO, [2026 Electricity Statement of Opportunities](#) (ESOO), pp. 38-39. Forecasts data centre electricity demand will increase from ~5 TWh today to ~15 TWh by 2030 and ~34 TWh by 2035.

Tilt Renewables supports the policy objective underpinning the ESEM. Long-duration revenue support mechanisms can facilitate investment in new generation and address the “tenor gap” between customer contracting horizons and the revenue certainty required to finance new projects.

These mechanisms remain particularly important for new entrant wind projects, where the commercial environment has deteriorated materially in recent years. Long-term offtake opportunities have reduced, forward wholesale electricity prices have declined and merchant exposure has increased. At the same time, debt, equity, development and construction costs have risen, including the cost and complexity of delivering foundation projects in Renewable Energy Zones.

These are structural, industry-wide challenges. Together, they have created a growing gap between available market revenues and the revenues required to finance, construct and operate new wind generation. This risks constraining delivery of the generation required to achieve government renewable energy objectives.

The ESEM therefore has the potential to play an important role in supporting new investment. Its effectiveness will depend on whether the final contract structures are bankable and capable of supporting real-world project financing.

Tilt Renewables generally supports the positions advanced by the Clean Energy Investor Group (CEIG) and Clean Energy Council (CEC). Our detailed comments focus on the Regional Reference PPA (RRPPA), which is the product most relevant to new wind generation investment. We generally support the positions advanced by CEIG and the CEC on the shaping and firming products and common contract features.

2. Phased implementation and market testing

The proposed contract structures represent a significant departure from existing contracting arrangements and introduce a number of novel features, including reference fleet settlement, contract recycling mechanisms and future interaction with a Market Making Obligation (MMO).

Tilt Renewables considers that ESEM products should initially operate alongside existing support mechanisms, including the Capacity Investment Scheme (CIS), and commercial contracting pathways. This would allow participants, lenders and investors to gain confidence in the products before significant volumes are committed.

Confidence in contract valuation, tradeability, recycling and secondary-market liquidity will take time to develop. A phased approach would allow:

- Participants to build confidence in settlement outcomes and hedge effectiveness
- Investors and lenders to observe actual contract performance
- Recycling and liquidity arrangements to be tested in a live market
- Unintended consequences to be identified and addressed, and
- Contract design to be refined before broader deployment.

Tilt Renewables therefore recommends a staged implementation that tests and refines ESEM products alongside existing support and contracting pathways before they become the primary mechanism for long-term revenue support.

3. Bulk Energy Regional Reference PPA

The Working Group's preferred bulk energy contract is the Regional Reference PPA (RRPPA). The RRPPA is a financial swap designed to provide renewable generators with long-term revenue certainty and buyers with exposure to the performance of a regional renewable generation fleet.

Tilt Renewables supports the RRPPA as the preferred bulk energy contract for wind generation and agrees that technology-specific reference fleets are likely to provide a more effective hedge than alternative approaches. Subject to sufficient fleet depth, the structure may also be suitable for other renewable technologies where a representative regional reference fleet can be established. The RRPPA is also preferable to fixed-volume structures that require renewable generators to defend a contracted volume regardless of project performance.

However, several design elements remain unresolved and will ultimately determine whether the product is bankable and capable of supporting long-term investment. Sections 3.1 to 3.7 address those aspects of the proposed design most critical to bankability, liquidity, risk allocation and investor confidence.

3.1. Contract Recycling and Fair Value Exit

Working Group proposal

A core objective of ESEM is the creation of standardised, fungible contracts that can be traded and sold back into the market over time. The NEM Review envisages that contracts will initially be acquired by ESEMA and subsequently sold into the market at a point when retailers and large customers are able to manage the associated energy market risks. Project proponents are also expected to be able to buy back their sold positions from either secondary markets or ESEMA.

Tilt Renewables position

We support the objective of creating fungible and tradeable contracts. The ability to recycle positions and exit contracts is fundamental to liquidity, bankability and investor confidence.

The consultation paper assumes the existence of a future recycling market. However, it currently provides limited detail regarding how contract recycling will operate in practice and how participants will be able to trade out of positions at fair market value.

In our view, further clarification is required regarding:

- Who takes the opposite side of trades
- Whether ESEMA acts as a market maker
- Whether ESEMA acts as buyer of last resort

- How fair market value is determined
- How contracts are bundled, recycled and repriced over time, and
- Whether participants can reliably exit positions throughout the contract term.

This detail is necessary to demonstrate that a functioning market will develop and provide sufficient liquidity for long-dated positions. If participants cannot rely on a fair-value exit, they may incorporate significant liquidity premiums into bids or choose not to participate. Participants must ultimately have confidence either that positions can be recycled at fair market value or that the product remains commercially viable if held to maturity.

3.2. Market Making Obligation (MMO) and Secondary Market Liquidity

Working Group proposal

The consultation paper notes that the proposed contract structures are intended to support a future Market Making Obligation. The Working Group seeks feedback on whether there are concerns with the proposed contracts being subject to an MMO in the future. However, broader MMO policy design and implementation are outside the scope of the current contract co-design process.

Tilt Renewables position

We support the objective of developing liquid secondary markets for ESEM contracts. However, the practical operation of the MMO and its interaction with contract recycling remain unclear.

Further detail is required regarding:

- How the MMO will operate in practice
- Which entities will be required to provide liquidity
- How liquidity obligations will be allocated
- How bid and offer prices will be established
- How the MMO will interact with ESEMA recycling arrangements
- Whether the framework can support large contract volumes, and
- How participants can be confident that liquidity will be available when required.

A functioning MMO requires genuine market depth, reliable pricing and capacity to trade large positions. The current proposal does not explain how liquidity will be created where trading activity or natural counterparties are limited.

Greater clarity on the interaction between the MMO, contract recycling and ESEMA's role is therefore critical. Without it, participants may price additional risk premiums into bids or reduce their participation.

Broad market participation will also depend on resolution of force majeure, negative-price treatment and index design issues. These mechanisms need to work together so that the MMO and contract-recycling framework reinforce, rather than crowd out, each other.

3.3. Reference Production Index Design

Working Group proposal

A core feature of the RRPPA is the Reference Production Index, which determines contract volumes in each trading interval. The index is based on the performance of a regional Reference Fleet comprising operational projects of the relevant technology within a specified NEM region with a nameplate capacity of 30 MW or greater.

Under the proposed approach:

- Contract volumes are determined by the performance of the Reference Fleet rather than the output of an individual project
- The index is based on actual dispatched generation data
- Individual projects may be subject to scaling factors that limit their influence on the index, and
- Settlement volumes are derived directly from the Reference Production Index.

The Working Group considers this approach improves fungibility, reduces buyer exposure to project-specific volume risk and avoids the need for sellers to defend a fixed contract volume.

Tilt Renewables position

We support the concept of a technology-specific Reference Production Index and agree that a regional reference fleet is likely to provide a more fungible and tradeable product than alternative fixed-volume structures.

However, the index sits at the heart of the proposed contract and will determine the residual basis risk borne by sellers. Further detail is required regarding:

- How project allocations are calculated
- How scaling factors will be applied
- Treatment of commissioning projects, outages and curtailment
- Treatment of network constraints and marginal loss factor impacts
- Annual updates to the Reference Fleet
- Transition arrangements following fleet updates
- Governance and oversight arrangements, and
- Publication of index values and methodology.

We support separate wind and solar reference fleets, as a combined index would be unlikely to provide an effective hedge for either technology. We also support including all operational projects greater than 30 MW within the relevant technology class and NEM region to improve representativeness and index stability.

While a single regional reference fleet is likely to be appropriate in most jurisdictions, further analysis should be undertaken in geographically diverse wind regions, including NSW and Queensland, to confirm that a single regional index remains an effective hedge for participating projects. While maintaining liquidity is important, the effectiveness of the hedge for individual projects should remain a key consideration in determining the appropriate geographic scope of the Reference Fleet.

Clear, rules-based arrangements for how the Reference Fleet evolves over time will be critical. A project that is well matched to the Reference Fleet at financial close may become less aligned over the life of a long-term contract as new projects enter the fleet and generation patterns evolve. Consideration should therefore be given to whether Reference Fleet composition is fixed, or substantially locked, at the time a contract is entered into. If ongoing fleet updates are retained, the final design should provide certainty regarding how fleet composition changes are managed and how any resulting impacts on contract performance are addressed.

Actual dispatched generation should form the basis of the index as it reflects actual fleet performance, including system-level constraint outcomes. The Reference Production Index should also incorporate the Fleet marginal loss factor (MLF). This would allocate fleet-level MLF risk to buyers while leaving sellers exposed only to the difference between their project-specific MLF and the Fleet MLF.

However, sellers will remain exposed where their project output diverges from fleet output because of differences in capacity factor, generation profile, constraint outcomes or location.

We support real-time or near real-time publication of index values, Reference Fleet composition and supporting methodology. This transparency will be important for contract valuation and secondary-market liquidity.

The governance framework should also provide confidence that the Reference Production Index remains transparent, representative and not susceptible to distortion or unintended market incentives as contract volumes and secondary-market activity increase over time.

Tilt Renewables Preliminary Analysis

Our preliminary assessment of historical NSW wind generation data indicates that the proposed structure may provide an effective hedge on average. However, the analysis also identified material interval-level volume mismatch, tracking error and periods of over-hedging between an individual project and the Reference Fleet.

The results suggest that average hedge performance alone is unlikely to fully capture the residual risks borne by individual projects. They reinforce the importance of understanding basis risk under a range of operating conditions.

The final design should quantify residual basis risk under a range of realistic operating scenarios. Historical modelling and worked examples should demonstrate how hedge performance varies across project locations, generation profiles and constraint outcomes.

The modelling should also identify the interaction between the Reference Production Index and other contract features, including the proposed spot price cap.

The analysis should be tested with project financiers and investors to ensure residual risks can be understood, priced and financed.

Any bankability studies commissioned by ASL should also be made publicly available to support informed industry assessment of the final design.

3.4. Negative Price Treatment

Working Group proposal

The Working Group is considering whether a negative-price mechanism is required to support efficient dispatch under the RRPPA. Two options are under consideration:

- a volume knock-out, where the contract volume is reduced to zero during negative price intervals, or
- a price floor, which limits buyer payments during negative price intervals.

The treatment of negative-price intervals remains unresolved. The proposed RRPPA also excludes Large-scale Generation Certificates (LGCs) and Renewable Energy Guarantee of Origin certificates (REGOs) from the swap product.

Tilt Renewables position

Tilt Renewables agrees that negative-price treatment is a critical outstanding design issue. A specific negative-price mechanism is required.

Our preferred approach is a \$0 price floor rather than a volume knock-out mechanism.

A volume knock-out removes contract protection during periods when sellers are most exposed to negative pricing outcomes and may increase the level of risk transferred to generators. By contrast, a \$0 floor provides more stable and predictable cashflows while avoiding incentives to generate solely to access contract payments.

The final design must also address the interaction between dispatch behaviour and an index based on actual dispatched generation. If generators curtail during negative-price intervals, the Reference Production Index may fall, affecting settlement volumes for all contract holders.

Further assessment should therefore consider whether an unconstrained generation measure, such as an Unconstrained Intermittent Generation Forecast (UIGF) based approach, should apply during negative-price intervals. This may reduce unintended interactions between dispatch decisions and index outcomes.

Further modelling and worked examples are required to demonstrate:

- The effect of each option on project economics
- Impacts on generator dispatch incentives
- Interaction with the Reference Production Index, and
- Likely outcomes under increasing levels of renewable penetration.

The preferred solution should support efficient dispatch while maintaining the bankability and hedge effectiveness of the RRPPA.

3.5. Force Majeure Risk

Working Group proposal

The consultation paper recognises that traditional long-term offtake arrangements typically contain asset-specific force majeure relief provisions. However, the RRPPA is designed as a fungible financial product and is not directly linked to the physical performance of an individual asset.

The Working Group notes that proponents may be able to manage force majeure events through buy-back arrangements with ESEMA or secondary markets. It is considering whether this may be insufficient or inefficient and whether additional mechanisms, including pooled insurance administered alongside ESEM, are required.

Tilt Renewables position

We agree that conventional force majeure provisions may not translate directly to a fungible contract structure such as the RRPPA. However, force majeure risk remains one of the most significant unresolved bankability issues within the proposed design.

Particular consideration is required regarding:

- Treatment of prolonged project outages
- Major plant failures and asset replacement events
- Network outages and transmission constraints
- Curtailment events outside a generator's control
- Circumstances where a project is unable to generate but remains exposed to contract settlement obligations, and
- The role of ESEMA in administering relief.

Given the long-term nature of the proposed contracts, these events have the potential to create material financial exposure that may affect project financing and investor confidence.

We support an ESEM-level force majeure mechanism, including consideration of pooled arrangements administered by ESEMA. Force majeure protection should be embedded within the ESEM framework rather than established through a separate scheme. This would provide greater certainty, preserve fungibility and allow extreme, infrequent risks to be managed more efficiently across participating projects.

The final design should clearly define eligibility criteria, funding arrangements, governance processes and the circumstances in which force majeure relief may apply. This will be critical to ensuring that the RRPPA can support project-financed generation.

3.6. Spot Price Cap

Working Group proposal

The Working Group proposes a cap on the Floating Price equal to the Firming Product strike price, with \$600/MWh its preferred level. It considers this strikes an appropriate balance between reducing downside exposure for sellers and preserving value in the bulk energy product.

Under the proposed design, settlement exposures above \$600/MWh are capped. Sellers retain their spot-market revenue, while their RRPPA settlement obligations are limited. The same \$600/MWh level is proposed for the firming product.

Tilt Renewables position

We support including a cap on the Floating Price. Alignment with the firming product strike price provides consistency across the contract suite. The cap should align with the Firming Product strike price so that buyer and seller risks remain symmetrical and the firming product can cover buyer exposure above the RRPPA cap.

We support a \$600/MWh cap in principle. It limits extreme settlement exposure while preserving merchant value above the cap. Compared with a lower cap, a \$600/MWh cap would reduce the share of merchant upside retained by sellers but increase the value of the contracted product to buyers. This may allow sellers to secure a greater proportion of contracted revenue, supporting bankability and reducing reliance on uncertain merchant income.

However, the cap cannot be assessed in isolation from the broader contract design.

Further analysis is required regarding:

- Residual seller exposures under different cap levels
- Interaction between the cap and the Reference Production Index
- Impact on hedge effectiveness
- Implications for participant bidding behaviour
- Whether lower cap levels would reduce project value or increase required support, and
- The expected price-duration curve above \$300/MWh and the resulting effect on contracted and merchant revenue.

Additional modelling and worked examples should demonstrate the cap's performance under different market conditions and the resulting allocation of risk between buyers and sellers.

3.7. Green Products and Certificates

Working Group proposal

The Working Group proposes that green certificates remain with the seller and are not included in the RRPPA. The product sheet notes that certificates are linked to the physical asset and

should remain with the seller to preserve contract fungibility. The consultation paper similarly notes that LGCs and REGOs are excluded from the swap.

Under the proposed design, the RRPPA operates as an energy product, with environmental attributes retained and managed separately by the project owner.

Tilt Renewables position

We support the exclusion of LGCs, REGOs and other environmental attributes from the RRPPA.

Separating green products from the underlying energy contract preserves the simplicity and fungibility of the RRPPA while allowing developers and customers to contract environmental attributes separately.

Retaining certificates as a separate revenue stream also provides flexibility to respond to evolving customer preferences, including growing demand for tailored green products and additionality outcomes.

The final design should confirm that environmental attributes will remain outside the RRPPA and available for separate contracting by the seller.

Maintaining this separation provides the clearest and most commercially flexible approach at this stage of market development.

3.8. Overall Assessment of the RRPPA

Subject to resolution of the issues identified in this submission, Tilt Renewables considers the RRPPA has the potential to provide an effective, bankable and tradeable bulk energy hedging product.

A regional, technology-specific Reference Production Index and an appropriate price cap provide a sound foundation for a fungible and tradeable product. The structure may also provide buyers with a more diversified bulk energy hedge and reduce exposure to individual project performance risk.

However, the RRPPA cannot yet be confidently assessed as bankable. Further work is required on fair-value exit, contract recycling, secondary-market liquidity, MMO arrangements, basis risk, negative-price treatment and force majeure protection.

Its successful implementation will depend on participants being able to understand, value, finance, trade and manage their positions throughout the contract term.

Resolving these matters and establishing confidence in contract valuation, liquidity, recycling arrangements and secondary markets will take time. Tilt Renewables therefore recommends that ESEM be implemented in phases alongside the Capacity Investment Scheme and existing commercial contracting pathways. This will help maintain the revenue support required for new renewable projects, particularly wind generation, to reach financial close while ESEM is tested and refined.

4. Conclusion

Tilt Renewables supports continued development of the RRPPA and the broader ESEM framework. Subject to resolution of the issues identified in this submission, the RRPPA has the potential to improve fungibility, support long-dated investment and contribute to the development of deeper secondary markets.

This approach will also support timely investment in the renewable generation required to meet growing electricity demand and advance the Australian Government's target of 82% renewable electricity by 2030.

We welcome ongoing engagement with the Working Group to ensure the final ESEM contracts are workable, bankable and capable of providing confidence to investors.

Should you have any questions or wish to discuss further, please feel free to contact me on 0477 701 873 or at stephanie.mcdougall@tiltrenewables.com.

Yours sincerely

A handwritten signature in black ink that reads "Stephanie McDougall". The script is cursive and fluid.

Stephanie McDougall
Head of Policy and Regulation