

ESEM Contract Co-Design Consultation feedback

Submission details	
Organisation	Varial Energy
Date submitted	22 September 2026

Question	Response
Q1. Is the proposed contract structure suitable for a range of bulk energy technologies?	Conditional on certainty around the Reference Fleet methodology and scaling factor methodology.
Q2. Does a cap on spot price exposure aligned to the strike price of the firming product (e.g. \$600/MWh) appropriately balance risks for sellers and buyers?	Yes, provided there is sufficient liquidity in matching bulk-energy and firming contracts for the same region, volume, tenor and settlement basis.
Q3. Is a negative price provision required for the proposed contract, noting it is settled against the Reference Fleet's performance and LGCs/REGOs are not included in the swap? If so, is a volume knock-out (no settlement during negative price periods) or a \$0 price floor more preferable?	Any treatment should be reflected in offer pricing. Before selecting no floor, a \$0 price floor or a volume knock-out, ASL should assess the effects on rebidding, curtailment, Reference Fleet output and realised spot prices.
Q4. Does the proposed design of the Reference Production Index appropriately balance risks for sellers (primarily basis risk) and buyers (long-term value of the product)?	Somewhat favours buyers <i>Additional comment:</i> The risk balance cannot be assessed confidently until four matters are defined: 1. Reference Fleet membership: the use of Generation Information, the definition of Operational, and annual fleet entry and exit rules. 2. Scaling Factor: its intended outcome and its effect on final normalised project weights, particularly in thin or

	concentrated fleets 3. Dispatched Output: the exact AEMO field and measurement point: dispatch target, SCADA, connection-point meter or Regional Reference Node; and the treatment of DUID aggregation and MLFs 4. Negative price provision approach is finalised. These ambiguities leave sellers with benchmark basis risk that cannot yet be reliably measured or priced, so the current design somewhat favours buyers.
Q5. Does the proposed approach to determining charge/discharge periods on a day ahead basis, using residual demand calculation, appropriately balance operational risks/simplicity with long-term value?	Residual demand is directionally useful, but it is not price and its relationship with price differs materially by region, particularly where hydro, storages, constraints and interconnector flows are important. Demand and VRE forecast errors affect the nominated blocks, while outages, rebids, constraints, flows and hydro or storage opportunity costs create additional price-formation basis. Fixing the blocks day-ahead creates financial exposure during nominated periods that may not coincide with the realised low- and high-price intervals. Sellers may consequently reserve capacity or state of charge for those periods, potentially weakening their response to later five-minute market signals. ASL should compare residual-demand nominations with AEMO PREDISPATCH price-based nominations through cutoff-honest back tests by region and duration, assessing both buyer hedge performance and sellers' ability to physically defend the product. Any sensitivity assessment must account for market feedback rather than assume historical prices remain unchanged. At material contracted volumes, a common nomination may synchronise storage behaviour: charging can raise prices in nominated charge periods, while discharging can suppress nominated high prices and deplete fleet state of charge, potentially shifting scarcity and price spikes into subsequent intervals. The signal may therefore compress the nominated spread while recreating it outside the contract window, which can compound with residual demand forecast error. ASL should test endogenous dispatch and rebidding responses at different contracted volumes, rather than relying solely on price-taking historical back tests.

Q6. Does the use of AEMO's forecast data to determine shaping periods result in any material risks to the useability of this contract over the long-term?	Yes. As CER, VRE and storage penetration increase, residual demand alone may become a less reliable proxy for price - not necessarily because forecast accuracy must deteriorate, but because scarcity will increasingly depend on the energy state and opportunity cost of the dispatchable fleet. Although public PREDISPATCH includes modelled, region-aggregated battery energy storage, that aggregate does not reveal how energy is distributed across units, durations, network locations or FCAS commitments, nor each asset's willingness to charge or discharge. ASL should assess whether residual demand remains a usable signal as storage becomes a larger price-setting participant.
Q7. Does the proposed approach of determining nominations at 4pm on a day ahead basis pose any material operational risks?	Yes. A 16:00 nomination fixes financial exposure approximately 17–41 hours ahead. Although it does not impose a physical dispatch obligation, sellers may reserve state of charge or capacity to defend the nominated periods. If those periods are subsequently displaced by updated weather, rebids, outages, constraints or fleet state of charge, the product may weaken or synchronise responses to more current five-minute market signals. ASL should compare fixed day-ahead nominations with a provisional day-ahead nomination followed by a nearer-to-delivery final nomination.
Q8. Does the proposed Daily Shaping Period that commences at the Trading Interval ending at 09:05 and finishes at the Trading Interval ending at 09:00 the following day pose any material operational risks?	No separate concern with the boundary itself. However, together with the 16:00 cutoff, the 09:00 finish places the final intervals approximately 41 hours ahead and beyond the standard PREDISPATCH coverage observed in our testing. The shaping-day boundary, nomination time and forecast source should therefore be designed together.
Q9. Is a \$600 cap, in comparison to a \$300 cap, appropriate to support the entry of new firming assets? If not, why?	The difference between the strikes should be reflected in bid premiums, but it may still affect bankability. If gas remains the marginal backstop, ASL should test whether the short-run cost of physical cover - including fuel, heat rate, start costs and variable O&M - exceeds \$300/MWh during relevant periods. A strike below the cost of physical cover could create cap liabilities that are uneconomic to defend, whereas a \$600 strike creates a

	thinner and more event-concentrated product. This should be tested regionally across gas, storage, hydro and demand response, including conditions experienced during the 2022 energy crisis and plausible future fuel-price stresses.						
Q10. Are there any concerns with the proposed weekly settlement approach, aligned to the AEMO settlement calendar?	No comment						
Q11. Are alternate approaches to manage Force Majeure risk exposure (outside of the contracts) required to support the entry of new assets?	No comment						
Q12. Do the proposed contract structures achieve the Working Group's Terms of Reference and perform well against the identified evaluation criteria?	<table border="1"> <tr> <td>Bulk energy: Regional Reference PPA</td><td>Medium</td></tr> <tr> <td>Shaping: Dynamic Time of Day Block Spread Swap</td><td>Very poor</td></tr> <tr> <td>Firming: \$600 cap</td><td>Well</td></tr> </table> <i>Additional comments:</i> The bulk-energy and firming structures are directionally sound, but the bulk-energy index requires further definition before it is reproducible and capable of being reliably valued. The shaping product does not yet perform well against the operationally achievable, adaptable or simple-to-value criteria. The nomination algorithm and forecast source are incomplete; exposure is fixed approximately 17–41 hours ahead without contemporaneous granular fleet state-of-charge information; and the design may synchronise bidding and storage behaviour. Evaluation must not assume historical prices remain unchanged when nomination signals or contracted volumes change. ASL should test both price-taking and endogenous market-response scenarios at different levels of contracted capacity, and compare	Bulk energy: Regional Reference PPA	Medium	Shaping: Dynamic Time of Day Block Spread Swap	Very poor	Firming: \$600 cap	Well
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	residual-demand nominations with PREDISPATCH-price and nearer-to-delivery alternatives.						
Q13. Are there any concerns with the ability of the contract structures proposed to be subject to a Market Making Obligation (MMO) in the future?	<table> <tr> <td>Bulk energy: Regional Reference PPA</td><td>Some concerns</td></tr> <tr> <td>Shaping: Dynamic Time of Day Block Spread Swap</td><td>Significant concerns</td></tr> <tr> <td>Firming: \$600 cap</td><td>Expects contract to perform well</td></tr> </table> <i>Additional comments:</i> A Market Making Obligation can create displayed quotes, but it cannot create underlying risk appetite or hedgeability. The Regional Reference PPA could support market making once fleet membership, scaling, dispatched-output measurement, annual reconstitution and correction rules are fully objective and versioned. Otherwise, governance risk and fragmented contract vintages will be reflected in wider spreads. There are significant concerns for the shaping product. Its value depends on dynamic day-ahead nominations, forecast methodology and endogenous bidding and storage responses, and it cannot readily be replicated using existing liquid products. A mandatory quote obligation could therefore produce wide spreads or transfer substantial unhedgeable inventory risk to marketmakers. The \$600 cap is the strongest candidate because the payoff is simple and familiar. However, its sparse and regionally concentrated payouts mean quote size, maximum spread, collateral requirements and event-management rules should be calibrated using regional stress testing. A voluntary market-making pilot should precede any mandatory obligation.	Bulk energy: Regional Reference PPA	Some concerns	Shaping: Dynamic Time of Day Block Spread Swap	Significant concerns	Firming: \$600 cap	Expects contract to perform well
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Q14. Will the proposed contract structures, in conjunction with other risk management contracts, such as flatswaps, evening peak swaps or caps, be effective for buyers (e.g. retailers, large loads, etc.) to manage financial risks?	Potentially, but the proposed products do not automatically combine into a complete or internally consistent buyer hedge. The Regional Reference PPA provides technology-shaped volume, the Dynamic Time of Day Swap hedges the spread between nominated periods, and the \$600 cap covers only the upper price tail. Buyers retain load-volume and shape risk. ASL should test the products jointly against representative retailer and C&I load traces using settled cash flows						

	across multiple weather years, forecast-error cases and endogenous market-response scenarios. Results should report residual cost distributions, prudential requirements and transaction costs - not expected hedge value alone. Critically, the proposed portfolio should demonstrate an incremental improvement over simpler existing combinations of flat swaps, peak swaps and caps. If it cannot materially reduce buyer residual risk after basis and implementation costs, the additional contract complexity is not justified.
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