

AusEnergy Services Limited,

Submitted by ESEM Contract Co-Design Consultation Survey Page

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ESEM Contract Co-Design Consultation

Q9. Is a \$600 cap, in comparison to a \$300 cap, appropriate to support the entry of new firming assets? If not, why?

Enel X supports the objective of developing standardized and fungible contract products capable of supporting investment and improving market liquidity through the proposed Electricity Services Entry Mechanism (ESEM). The broader intent of the mechanism to provide longer-dated revenue certainty is particularly important given the challenges faced by both supply-side and demand-side resources in securing long-term revenue streams. The NEM has made significant progress in enabling demand-side participation, and the ESEM presents an opportunity to complement this by improving the investment case and revenue certainty for demand response resources.

On its current design, however, there is a risk that this opportunity is missed for demand response providers. From a demand response perspective, we do not believe the proposed \$600 cap is appropriate to support the entry of new demand response backed firming assets.

Demand response represents a significant and largely underutilised source of firming capability for the NEM. International experience suggests demand response can routinely contribute 5-10% of peak demand. Applied to the NEM, this equates to several gigawatts of flexible capacity. The opportunity could be significantly larger if future industrial decarbonisation investments, including batteries, thermal storage, heat pumps, electrified industrial processes and managed EV charging infrastructure, are able to access investable revenue streams through market mechanisms such as the ESEM. The design of the firming product will therefore play an important role in determining the extent to which these resources participate in the future market.

The key issue is not the strike price itself, but the potentially unlimited duration of activation exposure. Demand response resources are generally highly cost-effective in managing relatively infrequent periods of market stress. However, their economic and operational characteristics differ materially from generation and storage assets when activation requirements extend into the hundreds of hours per year. For this reason, Enel X considers that a duration-limited cap product would represent a more effective and investable contract structure for demand response providers. A cap contract paying against the first defined number of hours above the strike price, for example a \$1,000/MWh cap with a predetermined quarterly duration limit, would more closely align risk exposure with the operational capabilities of demand response resources.

Recommendations

Accordingly, Enel X recommends that the Working Group:

1. Further investigate duration-limited cap products as part of the ESEM contract suite.
2. Recognise that cumulative payout limits are not a substitute for defined duration limits.

3. Use historical scarcity pricing analysis to identify duration thresholds that preserve the majority of hedge value, ensuring buyer demand for the product while limiting excessive activation risk for sellers.
4. If duration limits are not adopted, prefer a \$1,000/MWh strike price to a \$600/MWh strike price.
5. Ensure sufficient liquidity exists in the five-to-seven-year horizon while allowing longer-dated products where they support investment in new flexibility assets.

Recommendation 1: Investigate duration-limited cap products as part of the ESEM contract suite

Historical market outcomes support a duration-limited design

Enel X considers that a duration-limited cap structure is supported by historical NEM pricing outcomes. Analysis of historical cap value and duration exposure indicates that scarcity pricing is highly concentrated, with the majority of value generated during a relatively small number of high-priced intervals. This means that the strike price itself performs most of the economic function of the product, while a duration limit primarily serves to protect sellers against infrequent but potentially extreme tail-risk events.

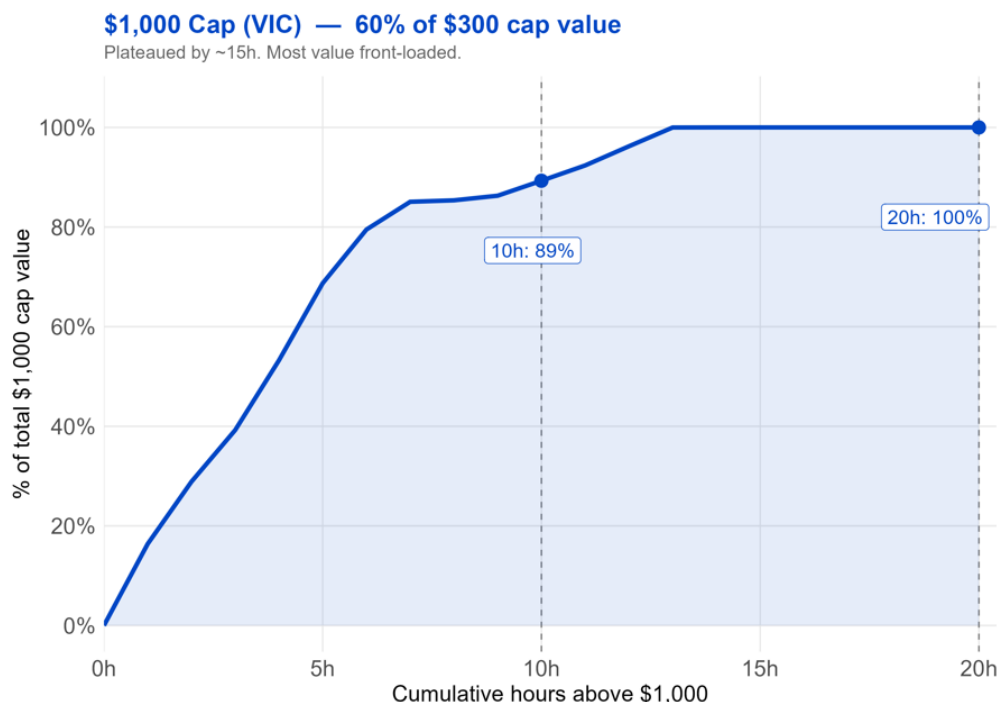


Figure (1): Cumulative cap value in the first H chronological hours per quarter, summed across all VIC quarters (2020-2025), as % of \$1000 strike total.

The Victorian wholesale market was selected as a worked example to investigate the suitability of a duration-limited cap. Historical market outcomes between 2020 and 2025 (Figure 1) demonstrate that approximately 90% of \$1,000/MWh cap value was captured within the first 10 hours of scarcity events

each quarter, with the value effectively plateauing thereafter. This suggests that a relatively modest duration limit could preserve the vast majority of the economic value of the product while substantially improving the risk profile for providers of flexibility services.

This contrasts with lower strike products where activation hours become materially larger and more difficult to manage. The analysis shows that establishing practical duration limits becomes increasingly challenging as strike prices decline, reinforcing the view that higher-strike products are more naturally aligned with demand response capabilities. These findings demonstrate that a duration-limited higher-strike cap can retain a substantial proportion of the economic value sought by buyers.

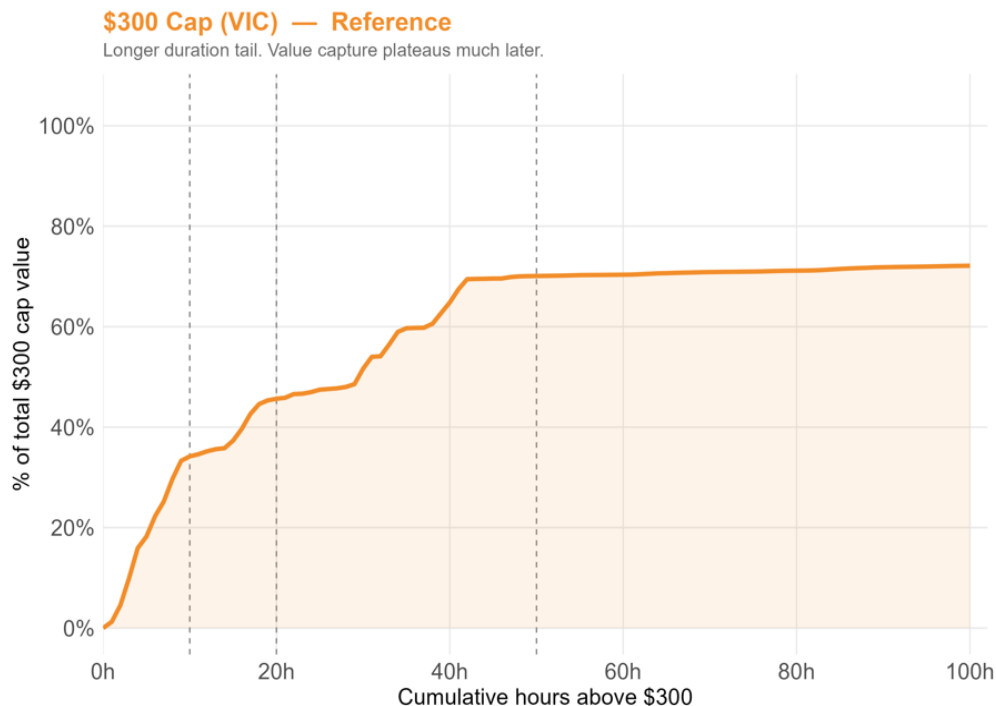


Figure (2): Cumulative cap value in the first H chronological hours per quarter, summed across all VIC quarters (2020-2025), as % of \$300 strike total.

Figure 2 illustrates why traditional \$300/MWh cap products have historically been difficult for demand response resources to support. Even after the first 100 hours of activation per quarter, only approximately 75% of cap value is captured when the 2022 energy crisis is included in the analysis.

This result can be compared to the result of more typical years in Figure (3) where the captured duration of a \$300/MWh cap is only determined from the years of 2023-2025. Excluding the exceptional conditions of 2022 significantly reduces the activation duration required to capture most \$300/MWh cap value. However, approximately 40 hours per quarter remains materially higher than the activation levels typically associated with cost-effective demand response programs.

The \$600/MWh strike price proposed in this consultation is explored in Figure (4). This is a significant improvement to the \$300/MWh strike price, even with the inclusion of the 2022 year most of the value above this strike price is captured with up to 20hrs per quarter. While this represents a substantial reduction in duration exposure, it remains considerably longer than the activation expectations implied by the duration-limited products discussed earlier.

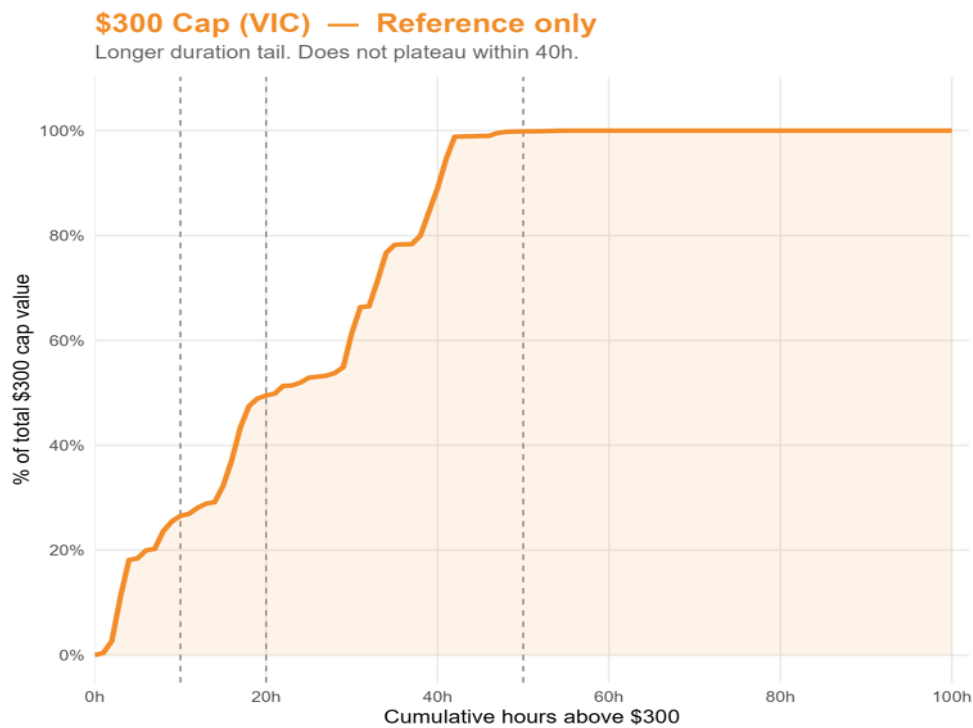


Figure (3): Cumulative cap value in the first H chronological hours per quarter, summed across all VIC quarters (2023-2025), as % of \$300 strike total.

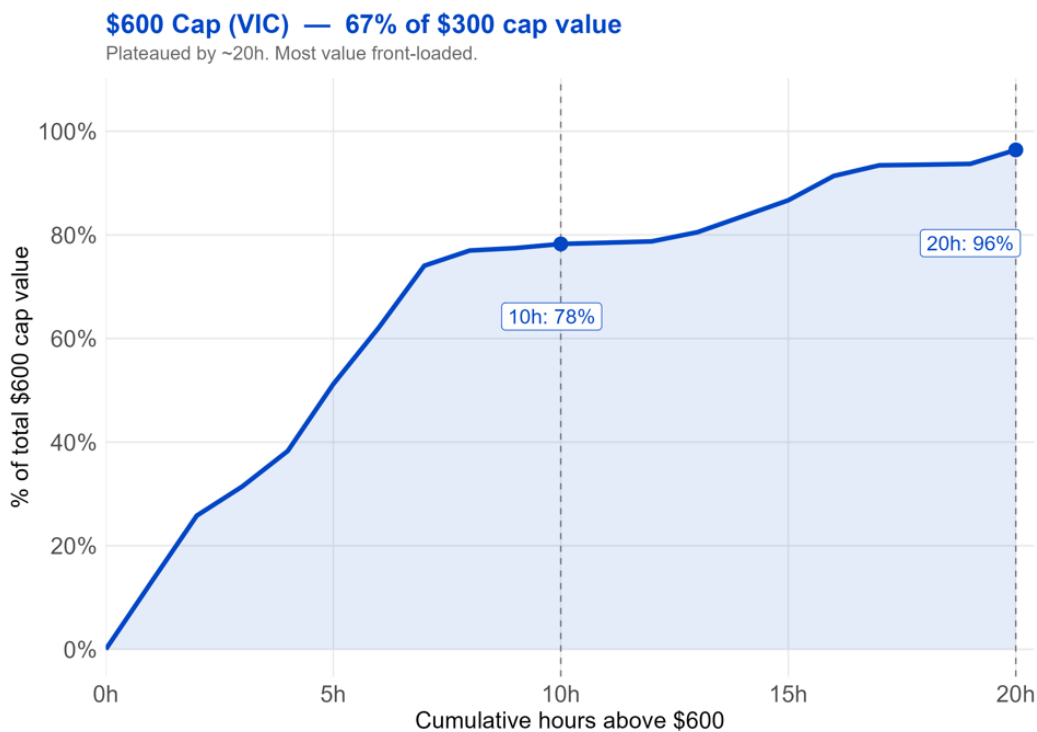


Figure (4): Cumulative cap value in the first H chronological hours per quarter, summed across all VIC quarters (2020-2025), as % of \$600 strike total.

The historical analysis further demonstrates that a relatively small number of hours account for a disproportionately large share of cap contract value. This suggests that duration-limited products are not simply a concession to sellers. Rather, they reflect the underlying shape of scarcity pricing in the NEM and may represent a more efficient allocation of risk between buyers and sellers.

Better alignment with demand response capability

Demand response is typically highly competitive when called upon relatively infrequently. However, the economics become materially more challenging as activation expectations increase.

The difference between a product requiring approximately 50 hours of activation annually and one requiring exposure to several hundred hours is substantial. Customer recruitment and retention costs, operational management requirements, performance risk and customer willingness to participate all deteriorate as utilisation rises above approximately 50 hrs annually.

For this reason, caps are generally not a natural fit for demand response as activation duration is unconstrained. By contrast, a duration-limited cap product would align much more closely with the physical and commercial characteristics of the resource.

More broadly, the demand response sector requires both:

1. Eligibility to participate in markets; and
2. Access to investable and reliable revenue streams.

Significant progress has been made on the first objective through a range of market reforms. The ESEM presents a rare opportunity to address the second. While generation and storage developers are actively seeking long-dated offtake arrangements to support investment decisions, demand response providers face a similar underlying challenge. On its current design, there is a risk that the ESEM becomes another mechanism primarily suited to supply-side resources, missing an opportunity to support long-term investment in demand-side flexibility.

Recommendation 2: Cumulative Price Threshold (CPT) is not an adequate substitute for a true duration limit

We do not agree that the Cumulative Price Threshold (CPT) is an adequate substitute for a true duration limit. While the CPT may constrain total payout obligations, it does not provide sellers with certainty regarding the number of activation hours that may ultimately be required. These are fundamentally different risk characteristics. Demand response providers manage operational exposure primarily in terms of activation duration rather than cumulative settlement value.

A participant may be exposed to the same cumulative payout through a small number of extreme price events or through a much larger number of moderate price events. While these outcomes may appear similar from a financial settlement perspective, the operational burden on a demand response portfolio is fundamentally different. The number of dispatch events and total activation hours materially influences customer fatigue, operational complexity and the cost of maintaining the demand response capability.

This distinction is particularly important because market participants can alter bidding behaviour in response to cumulative payout thresholds. Public market outcomes have demonstrated that generators may optimise dispatch offers and bidding strategies around cumulative settlement limits. Such behaviour may reduce exposure to the threshold itself while simultaneously extending the duration over

which elevated prices occur. This further reinforces the point that cumulative payout protection and duration protection are fundamentally different concepts.

Recommendation 3: Set duration limits that preserve the majority of hedge value

Our discussions with market participants suggest there is genuine commercial interest in duration-limited higher-strike cap products. Retailers increasingly require products that complement renewable generation portfolios by providing coverage during periods where renewable output is declining or unavailable, particularly during morning and evening peak periods. We believe a duration-limited \$600/MWh or \$1,000/MWh cap supported by demand response would fill an existing gap within retailer portfolios.

Importantly, such a product would provide retailers with a hedge that is underpinned by demand-side flexibility rather than fossil-fuel generation. This may become increasingly valuable as retailers seek risk-management products that are consistent with broader decarbonisation objectives and customer expectations.

A duration-limited cap is intended to complement, rather than replace, existing hedging instruments. Retailers would continue to utilise bulk-energy hedges, swaps and other risk-management products to manage sustained periods of elevated prices. The proposed duration-limited cap instead provides targeted protection against scarcity events that are most difficult to hedge through renewable generation alone. In this sense, the product is intended to fill a gap within existing renewable-focused portfolios rather than replicate existing derivatives.

In our experience, there are retailers that are interested in protection against limited periods of genuine scarcity rather than in purchasing open-ended exposure to a large number of moderately elevated price intervals. A duration-limited product therefore appears well aligned with both retail hedging requirements and the operational characteristics of demand response resources.

Recommendation 4: Align strike prices with practical activation expectations

Appropriate strike price for a non-duration limited cap

If the Working Group elects not to pursue a duration-limited design, Enel X would support a higher strike price of \$1,000/MWh in preference to \$600/MWh.

The historical data also highlights the fundamental distinction between duration risk and payout risk. For example, during the extraordinary market conditions of 2022, the number of hours above \$300/MWh increased dramatically, resulting in very substantial activation expectations under a traditional cap structure. By contrast, hours above \$1,000/MWh remained comparatively limited. These outcomes demonstrate why a demand response provider may reasonably be willing to manage exposure above \$1,000/MWh but be significantly less willing to provide an open-ended obligation at lower strike prices.

While both products (\$600/MWh and \$1000/MWh) may ultimately settle to similar cumulative values, the operational burden imposed on the underlying resource can be dramatically different. From a demand response perspective, duration is often a more important determinant of risk than total payout exposure.

Lack of differentiation to the \$300 cap

From our experience a non-duration limited \$600 cap would be priced at 80% or more of the value of a conventional \$300 cap. This creates a risk that the proposed \$600 cap becomes a product that is well supported conceptually but attracts limited voluntary participation in practice. For demand response providers, the decrease in spot price exposure may not sufficiently offset the duration risk of a cap style product. For buyers, the premium discount relative to a traditional \$300 cap may not be large enough to justify moving away from a well-understood and liquid product.

As a result, Enel X is concerned that the proposed product may occupy an uncomfortable middle ground. This concern is particularly relevant given the stated objective of creating standardised contractual products that support broad participation, competition and investment. A product that exists in theory but attracts limited voluntary uptake from one of the most flexible resource classes in the market risks becoming a missed opportunity for the ESEM.

Recommendation 5: Support investment through appropriate contract tenors

From a demand response perspective, liquidity and contracting opportunities extending approximately five to seven years forward are likely to provide the greatest value.

This timeframe is sufficiently long to support investment, customer acquisition and portfolio growth, while remaining within a horizon where market participants can reasonably assess risk. Longer-dated products may have a role for some generation and storage technologies but are unlikely to materially improve the investment case of demand response portfolios.

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