



Market Reform & Strategy Team

Australian Energy Market Operator (AEMO)

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Re: Market Visibility Framework (MVF) for Price Responsive Resources – Consultation Paper

Dear Market Reform & Strategy Team,

BlueScope welcomes the opportunity to provide feedback on AEMO's proposed Market Visibility Framework (MVF) for price responsive resources.

BlueScope supports reforms that improve the efficiency, reliability and competitiveness of the National Electricity Market (NEM). As recognised in the NEM Review, greater visibility of price responsive resources may contribute to these outcomes, particularly for actively coordinated resources whose behaviour can materially affect market operations. We also support the principles reflected in AEMO's draft framework that any requirements should be tailored to different resource types, evidence-based and proportionate to expected benefits, with existing information and processes utilised before additional obligations are introduced.

The success of a Market Visibility Framework should ultimately be measured against the National Electricity Objective (NEO), which places the long-term interests of electricity consumers at the centre of market design and operation. Any proposed requirements of consumers should be justified by demonstrable improvements in market performance, with the marginal benefits weighed against the associated costs and complexity of implementation for different resource types. Greater visibility should not be pursued as an end in itself.

AEMO's proposed phased approach to MVF design provides an opportunity to better understand the nature and materiality of price-responsive behaviour through existing data and targeted investigation and analysis. However, BlueScope considers it premature to establish the framework and associated regulatory obligations for industrial consumers before proposed evidence-gathering and cost-benefit assessment has been completed. These activities should inform the design and necessity of any regulatory obligations for different resource types, rather than being undertaken after the framework has already established a pathway for their introduction. Any subsequent proposal to apply mandatory Mode 2 or Mode 3 requirements to industrial consumers should be subject to further consultation with affected parties and a demonstrated net consumer benefit before implementation.

BlueScope's operating context

BlueScope is Australia's largest steel manufacturer and only flat steel producer, employing around 7,000 people nationally, including around 3,500 in the Illawarra region, which is home to the Port Kembla Steelworks. As a major industrial electricity user, BlueScope has a strong interest in the design and operation of the NEM and has actively engaged in the NEM Wholesale Market Settings Review, including advocating for the recognition of the distinct characteristics of industrial demand and demand response.

For BlueScope, electricity is an essential input to our processes, with consumption primarily determined by production requirements. While certain processes can provide flexibility in response to prevailing electricity prices, this is subject at any given time to plant availability, production schedules, safety considerations and operational and maintenance constraints. The complex and variable nature of industrial operations also means that electricity demand cannot always be accurately predicted, even where production intentions are known. Unplanned operational events and variability within normal production processes can result in material changes in consumption over short timeframes. Industrial electricity demand should therefore not be assumed to be predictably responsive to wholesale prices.

BlueScope acknowledges the NEM Review Panel's recognition of these characteristics in its Final Report, including the move away from mandatory dispatch participation and continuous interval-level forecasting for industrial consumers. Nevertheless, an important distinction remains between improving visibility of industrial demand and improving its predictability. Additional information about production intentions or anticipated price responses may have limited value in predicting actual consumption, particularly where variability is inherent to point-in-time operations. This raises questions about the extent to which additional industrial reporting would materially improve AEMO's forecasts or market outcomes.

The MVF must also recognise that industrial consumers participate in the electricity market primarily to support their core business activities. While voluntary demand response can provide valuable flexibility to the electricity system, participation should remain voluntary and commercially driven. Additional forecasting, reporting or compliance requirements should not divert resources from core industrial activities or introduce unnecessary complexity, particularly where their contribution to market performance has not been demonstrated.

These considerations reinforce the importance of an evidence-based approach to the MVF. For large industrial loads, AEMO should first maximise the use of existing data and assess whether there is a material forecasting or operational need that cannot be adequately addressed through existing information and processes. Any further investigation involving industrial consumers should be targeted and collaborative, with additional information requirements only considered where there is a reasonable prospect of improving market performance. Mandatory obligations should only proceed where their net benefits to electricity consumers have been demonstrated, taking account of the operational characteristics of the affected industrial loads, in addition to the cost and complexity of implementation.

Our detailed comments on the application of the proposed framework to large and complex industrial loads are set out in the following pages.

BlueScope appreciates the opportunity to contribute to this important element of the NEM reform process and looks forward to continuing to engage as the MVF is refined. For any questions on our submission, or our energy needs generally, please contact me via megan.ritchie@bluescopesteel.com.

Yours faithfully,



Megan Ritchie

Head of Energy & Carbon

Large industrial loads should not be assumed to be predictable price-responsive resources

BlueScope strongly supports AEMO's recognition that a one-size-fits-all approach is inappropriate. AEMO itself notes that resource classes differ materially in who controls their response, what information can practically be provided and how readily that information can be translated into improved forecasts and operational outcomes. These distinctions are particularly important when determining how the MVF should apply to large industrial facilities.

For industrial consumers, the technical ability to curtail electricity consumption should not be treated as equivalent to predictable price responsiveness. Whether, when and for how long an industrial process can respond to wholesale prices depends on prevailing operational conditions, which may change in real time. A potential response may be delayed, altered or not proceed at all. Furthermore, exposure to wholesale spot prices does not necessarily translate into a corresponding operational response, particularly where financial hedging arrangements mitigate that exposure.

The MVF should therefore distinguish between a facility's technical flexibility, its demonstrated response to wholesale prices and the predictability of that response. Classification should reflect actual behaviour, the extent to which responses are coordinated and their material impact on market operations, rather than relying on facility demand, retail pricing arrangements or theoretical curtailment capability.

For large industrial facilities where price-responsive behaviour is limited, variable or difficult to predict, Mode 1 may remain the most appropriate approach. This would enable AEMO to assess behaviour through existing data and statistical analysis without presuming a need for resource-specific information requirements. This is consistent with AEMO's proposal that Mode 2 testing should focus on demonstrated price-responsive behaviour rather than technical capability alone.

More visibility does not necessarily mean greater predictability

Even where industrial loads demonstrate price-responsive behaviour, additional visibility of their intentions does not necessarily translate into improved accuracy of AEMO's forecasts and decision-making.

As noted above, substantial changes in the electricity demand for such loads can arise from production and operational conditions independently of wholesale prices. These changes may be inherently difficult to predict, including by the facility itself, because loads reflect dynamic operating conditions, often across a number of independent production processes, rather than a simple or predetermined response to electricity prices. Requiring forward-looking forecasts for such facilities will impose material operational burdens without necessarily producing sufficiently accurate or decision-useful information.

There is a further risk that requiring large industrial users to provide detailed intentions or forecasts creates an appearance of precision without producing decision-useful information. If AEMO incorporates inherently uncertain and unreliable industrial forecasts into market processes, the additional information could actually increase rather than reduce forecast error.

This is particularly important given the proposed Mode 2 framework could require forward-looking quantities, availability or price-responsive information across pre-dispatch timeframes, with updates where expected behaviour materially changes. For complex industrial facilities, producing and maintaining this information could require significant additional systems, processes and operational resources without necessarily improving forecast accuracy.

BlueScope considers that the value of additional visibility should be assessed by its demonstrated contribution to market performance, rather than the volume or granularity of information collected. Before undertaking further investigation or testing, AEMO should consider whether there is a reasonable prospect that additional information from a resource class would materially improve existing forecasting methodologies (cost-benefit test). Where there is no reasonable prospect of such improvement, additional mandatory obligations should not proceed.

Existing information should be exhausted before additional requirements are considered

BlueScope strongly supports AEMO's proposal that Phase 1 first maximise existing data sources and forecasting capability before introducing new resource-specific requirements. AEMO proposes using existing systems, market processes and participant data, including statistical analysis of historical information, to improve its ability to identify, understand and forecast price-responsive behaviour. This approach reflects AEMO's broader commitment to maximise existing data and build evidence before imposing detailed obligations which is particularly important for large industrial users.

Phase 1 involves the execution of Mode 1 where AEMO utilises existing standing and historical datasets, including metering, MSATS and Demand Side Participation Information. It includes provisions for supplementary information requests only where existing information is insufficient to calibrate or validate forecasting models.

BlueScope recommends AEMO first test whether an enhanced Mode 1 approach can deliver the required forecast improvement for complex industrial loads. In particular, greater use of the Demand Side Participation Information already provided to AEMO, together with RERT participation details and other existing information such as WDRM inputs, has the potential to materially improve pre-dispatch price-sensitive forecasts without imposing additional obligations on large industrial consumers.

Further information provision for large industrial consumers, including the Mode 2 and Mode 3 testing activities contemplated on Phase 1, should only be considered where AEMO identifies a material forecasting problem that cannot be adequately addressed through Mode 1 and existing information, and demonstrates that additional information has a reasonable prospect of materially improving market outcomes. This approach would be consistent with the draft framework's broader principle of maximising existing data and avoiding duplication and unnecessary costs.

BlueScope cautions against assuming that testing visibility information provisions would be a low-effort means of determining whether additional information would improve forecasting. For complex industrial facilities, the practicality and cost of developing the forecasting, communications, telemetry and internal system integration capabilities needed to facilitate testing may be significant. These considerations should be weighed against the likely forecasting value of the information produced.

Testing involving individual industrial facilities should therefore be targeted, collaborative, genuinely necessary, and only be considered where a) AEMO identifies a material forecasting problem that cannot be adequately addressed through Mode 1 and existing information, and b) demonstrates that additional information has a reasonable prospect of materially improving market performance. This approach would be consistent with the draft framework's broader principle of maximising existing data and avoiding duplication and unnecessary costs.

Critically, the MVF should not establish provisions that enable additional mandatory information requirements to be applied to industrial consumers without further consultation. Any proposal to extend Mode 2 or Mode 3 obligations to industrial facilities should be subject to targeted engagement with affected consumers, a demonstrated net consumer benefit and an opportunity to assess the practicality, costs and implications of the proposed requirements before any decision on their application is made.

The MVF should preserve voluntary demand-side flexibility, not discourage it

Demand-side flexibility can deliver valuable benefits to the NEM, and the MVF should support continued voluntary participation, both coordinated and uncoordinated by industrial users. This is consistent with AEMO's objective of developing a proportionate framework that improves visibility while preserving consumer participation and value.

For large industrial users, this means ensuring that any forecasting, telemetry and compliance requirements are proportionate to the value of the information provided and do not create unnecessary barriers to voluntary demand-side participation. In particular, any requirement placed on large industrial users will need to recognise that an intention to respond is not equivalent to a commitment to respond, and should not result in inappropriate compliance risk where actual behaviour differs from an intended response.

Commercially sensitive industrial information must be protected

The potential commercial sensitivity of MVF information requires greater attention as the framework develops. Industrial load intentions can reveal information about production schedules, plant availability, outages, maintenance and operational constraints. In competitive markets, that information may itself be commercially sensitive.

AEMO's proposed framework identifies data privacy, confidentiality and cyber security as relevant design considerations, particularly where visibility information supports reliability, security or market operations. These protections should be embedded in detailed MVF design before new information requirements are introduced. Information collection should be limited to the minimum necessary to meet a clearly identified operational purpose, access should be appropriately restricted, and publication or sharing arrangements should avoid enabling inference of commercially sensitive production information.

Mandatory obligations should only follow demonstrated net consumer benefit

BlueScope supports AEMO's staged implementation approach and the principle that mandatory visibility and market participation obligations should only be introduced where their benefits have been demonstrated. Additional visibility must be shown to materially improve forecasting, dispatch and market efficiency, and ultimately contribute to lower costs for consumers. This is consistent with AEMO's proposed approach of testing whether additional visibility can deliver measurable market improvements before mandatory obligations are activated.

In assessing this benefit, AEMO will need to consider the net impact of the proposed obligations, rather than forecasting improvements in isolation. For large industrial users, additional requirements may entail significant new forecasting, systems integration, telemetry and ongoing compliance activities, introducing operational complexity and costs for consumers whose core business is industrial manufacturing rather than active participation in the electricity market. These users should be able to focus resources on their core operations, for which energy is a critical input. Additional obligations may also create risks associated with the provision of commercially sensitive operational information and, if poorly designed, discourage voluntary demand-side flexibility.

The existence of a visibility gap alone should not justify additional obligations where the incremental benefit does not outweigh the associated costs and impacts. Any consideration of mandatory Modes 2 or 3 obligations for large industrial users should be preceded by targeted and meaningful consultation with affected users to ensure proposed requirements are practical, proportionate and capable of delivering demonstrated net consumer benefit. Where this net consumer benefit cannot be demonstrated, additional mandatory obligations should not proceed.

Conclusion

BlueScope supports AEMO developing better capability to understand material price-responsive behaviour in the NEM. We also acknowledge the significant improvement in the proposed framework associated with its emphasis on tailored requirements, staged implementation, use of existing data and demonstrated consumer value.

For large industrial energy users, however, the critical issue is ensuring the framework recognises the fundamental difference between a coordinated price-responsive resource and industrial manufacturing facility where electricity demand may be flexible or variable, but does not necessarily respond to wholesale prices in a predictable way.

For these consumers, **more visibility does not necessarily mean greater predictability.**

BlueScope therefore recommends that AEMO prioritise existing information and enhanced observational forecasting for large industrial users. Further investigation or testing should only be considered where AEMO identifies a material forecasting or operational need that cannot be adequately addressed using existing information, and where there is a reasonable prospect that additional information will improve forecasting or market outcomes. Any subsequent requirements should be targeted and proportionate, and mandatory obligations should only proceed where the resulting consumer benefits can be demonstrated to exceed the costs.