



20 May 2022

Daniel Westerman
Chief Executive Officer
Australian Energy Market Operator

Submitted via email to: stakeholderrelations@aemo.com.au

Dear Mr Westerman

NEM2025 Implementation Roadmap Information Paper

Stanwell Corporation Limited (Stanwell) welcomes the opportunity to respond to the Australian Energy Market Operator's (AEMO) NEM2025 Implementation Roadmap Information Paper (the Information Paper).

Stanwell is a major provider of electricity to Queensland, the National Energy Market (NEM) and large energy users throughout Australia. While providing reliable and affordable energy for today, we are exploring new generation and storage technologies that will help reduce emissions while also ensuring Queensland's electricity supply remains secure and reliable.

This submission contains the views of Stanwell and should not be construed as being indicative or representative of Queensland Government policy.

The transition of the NEM from a market dominated by coal-fired generators to one characterised by variable renewable energy and flexible resources is rapidly gaining pace. To facilitate this transition, the Energy Security Board (ESB) has initiated a number of far-reaching reform measures, which are at various stages of development and implementation.

New information technology systems and business processes will be central to the creation and efficient operation of the post-2025 electricity market. In this context AEMO's *NEM 2025 Implementation Roadmap* (the Roadmap) identifies a suite of initiatives central to delivery of the ESB reforms, setting out critical steps in their implementation, interdependencies among projects, and estimated delivery timeframes.

Stanwell acknowledges the role of information technology as a key reform enabler and recognises the challenges in efficiently planning, implementing and co-ordinating concurrent projects and initiatives in a constrained timeframe.

In this context, to the extent that market participants will be required to augment or replace their existing systems and implement new business processes, Stanwell considers it important that in developing the Roadmap, AEMO:

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- clearly articulates the benefits and accurately forecasts the costs of each initiative to be undertaken,
- transparently identifies individual project risks and prepares potential contingencies to mitigate against them,
- identifies critical dependencies between individual projects to enable pro-active management,
- considers opportunities for bundling and sequencing initiatives to enhance the efficiency of implementation,
- ensures new systems and processes are forward-looking, having the ability to accommodate new technologies over time, and
- minimises the costs of implementing the NEM2025 reforms on a whole-of-system basis.

The decisions that AEMO takes today will have fundamental implications for the post-2025 NEM system architecture and system efficiency. In recognition of this, it is important that AEMO builds as much flexibility as practical into its Roadmap to contend with the uncertainty it has acknowledged, and any potential unforeseen developments arising from the wider ESB Post-2025 market reform process.

An incomplete roadmap

The deliberate exclusion of the Capacity Mechanism and Congestion Management Mechanism elements of the ESB's recommendation undermines the purpose of producing an integrated roadmap.

Each of those elements is likely to be "large" in the categorisation provided by AEMO in that each is likely to have a complex design with multiple system touchpoints. Indications from the Australian Energy Market Commission (AEMC) are that each is expected to commence in the near-term (the Capacity Mechanism is planned to have rules and legislation in place during financial year 2023) meaning that the early part of the Roadmap will be disrupted.

While the full range of systems impacts and dependencies may not be known, including an estimate of the impact of these reforms is clearly a superior risk management approach than pretending they won't have any impact.

Reform Pathway

Given that many initiatives are in their early stages of planning and development, without detailed scoping and firm dates for implementation, Stanwell agrees that the strategic implementation pathway has key advantages over the alternative regulatory-led approach.

As the future state becomes clearer, this pathway is more likely to enable the program to be more simply optimised, generating cost efficiencies by minimising on the number of replacement investments over time, and allowing the framework to be suitably scaled.

Notwithstanding this, Stanwell agrees that AEMO's final decision on the implementation pathway should be guided by a robust review of the relative costs and benefits of each approach in its business case assessment.

Sequencing and prioritisation of initiatives

Stanwell considers there to be insufficient information about the individual initiatives in the Roadmap and the extent to which existing systems will need to be enhanced or replaced to confidently assess the merits of the proposed scheduling of initiatives which appear to be driven by regulatory timelines. It is likely that further scoping work on the initiatives will be needed to make a meaningful assessment of complexities and dependencies.

The Information Paper notes that there are several other reforms underway that will have implications for the implementation of NEM2025 reform initiatives. While these reforms are identified in AEMO's Regulatory Implementation Roadmap, it is unclear which dependencies have been considered in the NEM2025 Implementation Roadmap.

AEMO's proposal to merge the two Roadmaps in mid-2022 will provide an overall perspective of the full suite of reforms that are currently being undertaken or under consideration. This will more clearly demonstrate that clear linkages and dependencies in relation to all Post-2025 initiatives are accounted for. It is important that all reforms with IT impacts are considered holistically, and sequenced wherever possible to get the most efficient outcome, that is least cost for consumers over time.

Stanwell is of the view that AEMO needs to retain an element of flexibility in the overall sequencing and prioritisation of its initiatives, particularly in the early stages of the reform process. Given the pace of market evolution and the (arguably optimistic) implementation period indicated in the Roadmap it is likely additional rule changes or systems requirements will emerge before the roadmap is completed. As such there will be a likely need for AEMO to periodically revisit and refine its Roadmap.

Implementation Timeframes

Stanwell is strongly of the view that the timeframes afforded for the planning, development and implementation of Roadmap initiatives appear impractically short and may not make sufficient provision for inevitable delays. Clearly, this poses significant risks for market participants and AEMO in relation to allocated testing windows, on-time project delivery and cost minimisation.

Unintended delays or unexpected events in the design, development and implementation process can have serious implications for system readiness, the commencement and release of other dependent reform projects, and the development of projects undertaken by market participants to ensure system and operational readiness. If delays are not commensurately accommodated and instead result in the truncation of testing windows, the risks of system and/or market failure are heightened, with subsequent implications for the timely and effective delivery of the overall reform program.

While the Roadmap is based on the best available information, this data is limited. As a result, it is difficult to assess whether these project risks have been sufficiently accommodated in the scheduling process, particularly noting AEMO may potentially be moving from legacy to contemporary replacement systems.

In light of this, Stanwell believes that AEMO needs to demonstrate that adequate contingencies are or will be put in place, and that market participants will be provided with reasonable timeframes to undertake design impact analysis, additional testing, and additional re-builds required to align with any project shift.

Impacts on market participants

The system and business process changes foreshadowed in the Roadmap are comprehensive and will involve both AEMO and market participants incurring substantial financial costs in development, integration, testing and implementation. Given the number and scale of reforms that are identified in the Roadmap, it is essential that they be implemented as efficiently and effectively as possible, in order to minimise the impact on electricity prices for energy consumers.

Ideally, any cost benefit assessment of alternative reform pathways should consider all costs and benefits. Stanwell understands that AEMO is developing a business case on providing

cost estimates for the individual NEM2025 initiatives and a whole of life cycle cost comparison for each pathway. However, this review appears to be limited because, while it will explicitly consider the costs of AEMO's work program, it will only include a qualitative assessment of the impacts to industry and only the difference between the two pathways.¹

Both pathways appear to have multiple work streams in the same state at the same time leading to "peaky" resourcing requirements which would affect AEMO and all participants at the same time. For example in Q4 2023 the strategic implementation pathway has ten (10) initiatives in "solution delivery" plus eight in "incremental delivery" or "indicative development". The regulatory-led pathway also has 14 to 18² initiatives in those states at that time.

Learnings from past reform initiatives indicate there can be substantial upfront and ongoing costs incurred. For example, Stanwell's costs for implementing systems to move to five-minute settlement were consistent with the "tens of millions of dollars" estimated by the AEMC's consultant, Energy Edge.³ Similarly, participants are currently experiencing significant increases in AEMO fees related to AEMO's implementation costs.

It is likely that given the number and far-reaching implications of the initiatives set out in the Roadmap (and other ESB reforms not yet captured in the Roadmap), the system costs of the NEM2025 reforms that market participants will incur will be substantially higher.

It is important that the pathway selected provides a reasonable resourcing and implementation task for participants in order to avoid unnecessary costs which are ultimately borne by consumers.

Moreover, to assist industry minimise its costs in making required changes to internal delivery programs, Stanwell considers that AEMO should, as soon as possible, provide more of the anticipated changes in its tools, data (EMMS) and process. This could take the form of technical documents, work packages and high-level impact assessments across functional areas that will be impacted by each Roadmap initiative. This detailed specification document will enable market participants to more accurately assess the implications of proposed changes for their internal tools, data and business processes, and plan accordingly.

Conclusion

Stanwell acknowledges that comprehensive reforms are needed across the NEM to facilitate the ESB's post-2025 electricity market design and accommodate the transition to an electricity grid dominated by renewable energy generation. However, any IT changes, new technologies, or process changes needed to underpin these reforms should be undertaken in such a way that it minimises risks and costs to market participants and consumers, while protecting delivery dates.

Based on the information available, Stanwell considers that the current Roadmap does not provide market participants with sufficient assurance in this context. It urges AEMO to work closely with industry to provide more detailed information and update the Roadmap commensurately.

¹ AEMO, *Regulatory Implementation Roadmap (draft v7) & NEM2025 Implementation Roadmap*, presentation to Stakeholder Forum on 11 May 2022.

² Four initiatives are labelled as being delayed, but no timeline for the delay is provided.

³ [Energy Edge Proposal - 5 Minute Settlement Rule Change \(aemc.gov.au\)](https://www.aemc.gov.au/energy-edge-proposal-5-minute-settlement-rule-change)

Stanwell welcomes the opportunity to further discuss the matters outlined in this submission.
Please contact Ian Chapman on (07) 3228 4139.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'I. Chapman', with a long horizontal flourish extending to the right.

Ian Chapman
Manager Market Policy and Regulatory Strategy