

Draft Business Case Package-Industry Response

- Identity and Access Management (IDAM)
- Industry Data Exchange (IDX)
- Portal Consolidation (PC)

Draft Report – Consultation
for the Draft Business Case Package

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Executive summary and consultation notice

AEMO identified IDAM, IDX and Portal Consolidation as foundational initiatives that serve as prerequisites to the NEM Reform Implementation Program. These involve uplifting AEMO & participant systems to align capabilities with reform dependencies. The key outcome from these initiatives will be creating a fit-for-purpose, resilient and secure framework for existing market business services and provides the agility to support services for new NEM Reform Initiatives as well as an extensible framework for other energy markets.

AEMO published the Draft Business Case Package (IDAM, IDX, and PC) on December 18th, 2023. The purpose was to allow industry participants to review the business case and provide any further submissions or approaches to better inform the final business case. The deadline to submit any feedback or input was February 9th, 2024.

- AEMO has received a total of 9 submissions.
 - Large Gentrailers: 3 submissions
 - Medium-sized retailer: 2 Submissions
 - Distributors: 3 effective submissions
 - Generator: 1 Submission

Stakeholders were generally supportive of the recommendations and the majority of the feedback was specific items to make the business case clearer or more compelling.

There were four main feedback themes received from multiple stakeholders:

1. **IDAM, IDX and PC Benefits:** Stakeholders expressed a desire for a simple Benefits table to be included in the updated version of the Business Case pack that clearly articulates and summarises AEMO benefits, and Industry benefits broken down by each IDAM, IDX and PC initiative.
2. **Addressing residual security risk:** Stakeholders requested that there is a need for more clarification regarding the "Addressing residual security risks" slide of the business case.
3. **Industry costs:** Some stakeholders provided feedback and cost submissions on the industry costs represented for the IDX DP1 vs DP2 split.
4. **Assessment of Risk:** Some stakeholders highlighted the importance of assessing risk in this business case and that a risk assessment matrix should articulate a measurable and evidence-based scale of consequence including impacts on the market, e.g., the highest potential consequence being that the initiative somehow stopped the energy market from operating.

All feedback themes have been addressed in the document. A full summary of the stakeholder responses and AEMO's response is included in **Appendix A** of this document.

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1. Stakeholder consultation process

AEMO has been collaborating with the industry participants (FaSI Focus Group) to develop a business case to assess the feasibility of implementing these three initiatives: IDAM, IDX and Portal Consolidation.

This was completed over more than 6 months and more than 10 consultation workshops of on average 4 hours each:

1. Identification of current industry pain points relating to these domains
2. Development of conceptual target state solutions that would materially address those pain points, and refinement based on feedback.
3. Transition Strategy covering guiding principles, sequencing, and bundling of business services and prioritisation of tranches, including a flexible sunset period.
4. Initial Implementation Cost Estimates and a methodology for assessing the business case.
5. Draft business case package published on 18th December 2023

Figure 1: Consultation process

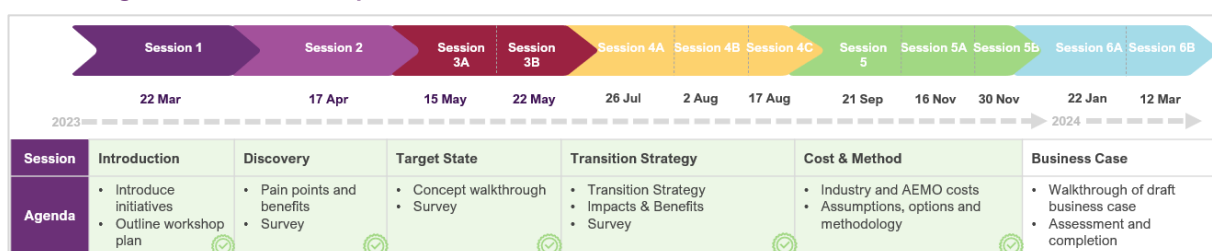


Table 1 Consultation steps

Consultation steps	Dates
Introduction: Introduce initiatives & Outline workshop plan	22 nd March 2023
Discovery: Pain points and benefits and Survey	17 th April 2023
Target State: Concept walkthrough and Survey	15 th May and 22 nd May 2023
Transition Strategy: Transition Strategy, Impacts & Benefits Survey	26 th July 2 nd Aug 17 th Aug 2023
Cost & Method: Industry and AEMO costs, Assumptions, options, and methodology	21 st Sep 15 th Nov 30 th Nov 2023
Business Case: Walkthrough of draft business case	22 nd Jan 2024
Formal Submissions Due	9 th Feb 2024
Final Business Case walkthrough	12 th March 2024

AEMO's consultation webpage for the proposal is at [Fasi webpage](#), containing all previously published material and other consultation documents or reference material.

AEMO would like to thank the industry for their participation throughout 2023 via the Foundational and Strategic Initiatives Focus Group (FaSI FG); this participation, collaborative engagement and development of the target state, transition strategy and business case inputs including costs and benefits have enabled the development of this package. The development and assessment of options in the draft business case package would not have been possible without this collaboration.

1.1. Context for this consultation

AEMO was established in 2009 and has since expanded its mandate and technology landscape to cover the NEM, WEM, and gas markets, leading to the use of diverse solutions by industry participants and AEMO in a fragmented technology environment. This has led to increased systems complexity and inefficiencies, and higher AEMO and Industry costs, exacerbated by a strong tendency of back-compatibility as new services are rolled out. As the energy transition rollout continues at pace, the market systems require a review to assess the ability to provide a foundation for future requirements. Given the inflection point we are at as an industry, AEMO has taken the time to assess whether strategic step-change investments in our foundational services are preferred, over continuing to invest in tactical legacy software for the provision of:

- Identity and Access Management (IDAM),
- Industry Data Exchange (IDX), and
- Portal Consolidation (PC) capability.

The key outcome from these initiatives will be creating a fit-for-purpose, resilient and secure framework for existing market business services and providing the agility to support services for new NEM Reform Initiatives as well as an extensible framework for other energy markets.

The working draft business case released in December 2023 aims to assess the benefits and costs of those different approaches and ensure that we are able to provide a secure foundation for the renewable energy market transition.

The Draft Business Case package has a detailed assessment of options, cost, risk, indicative timeline, and driver and aims to achieve the following:

IDAM: A unified mechanism to authenticate and authorise external identity when accessing AEMO services, consolidating and improving overall cyber security controls.

IDX: A unified data exchange mechanism to support the secure and efficient exchange of data between energy stakeholders for new services required by NEM Reforms, and existing legacy services and provide a framework extensible to other energy markets.

Given short-term reform roadmap congestion & need for fiscal prudence, AEMO recommends a phased investment approach for IDX to address critical security needs, support near-term NEM reforms, provide flexibility for the future & address priority industry pain points.

PC: The Portal Consolidation project aims to enable a unified stakeholder experience that hosts web applications. The portals framework is an enabling platform that supports energy market participants and other partners to consume AEMO browser services securely.

1.2. Consultation feedback and responses

On 18th December 2023, AEMO published the Draft Business Case Package, inviting feedback on Draft Business Case assumptions, risks, options, implementation costs ranges, drivers, phased investment etc to better inform the final business case.

AEMO received 9 submissions in response to the Draft Business Case Package.

- Large Gentailers: 3 submissions
- Medium-sized retailer: 2 Submissions
- Distributors: 3 effective submissions
- Generator: 1 Submission

Stakeholders were generally supportive of the recommendations and the majority of the feedback was specific items to make the business case clearer or more compelling.

There were four main feedback themes received from stakeholders:

1. IDAM, IDX and PC Benefits:

Stakeholders expressed a desire for a simple Benefits table to be included in the updated version of the Business Case pack that clearly articulates and summarises AEMO benefits, and Industry benefits broken down by each IDAM, IDX and PC initiative.

How addressed by AEMO: A new slide has been created to address this ask, Slide 7 within the Introduction section.

2. Addressing residual security risk:

Stakeholders requested that there is a need for more clarification regarding the "Addressing residual security risks" slide of the business case concerning:

- a. The Option 1 timeline, and the actions that are required to address the high-risk vulnerabilities of Option 1.
- b. Whether under option 2 security vulnerabilities be prioritised so that they are implemented before the transition to IDX is complete
- c. Effective risk assessment and clarification on how the decision point around IDX options 2a and 2b could be compared.

How addressed by AEMO: The "Addressing residual security risk" slide has been extended and re-worked, and the Option 1 timeline slide modified. This now provides a more realistic implementation timeline for Option 1 and reframes more clearly the approach to compliance

including August 2024 vs the broader intended end state and further to show the availability of compliant capability to enable participants to best visualise when they can transition services driven by compliance.

3. Industry costs:

Some stakeholders provided feedback and cost submissions on the industry costs represented for the IDX DP1 vs DP2 split.

How addressed by AEMO: All updated industry cost submissions provided by participants have been incorporated into the industry cost extrapolation methodology and reflected in the summary industry costs. For Option 1 industry costs for IDX, some participants raised questions about the validity of applying a scaling factor extrapolation based on AEMO’s internal estimates. Also, there were no specific estimates provided by any participants for Option 1, although some participants agreed that Option 2 should be more cost efficient than Option 1 in principle. Given the feedback, we have elected to present the Option 1 cost estimate as simply “>= Option 2 cost estimate”.

4. Assessment of Risk

Some stakeholders highlighted the importance of assessing risk in this business case and that a risk assessment matrix should articulate a measurable and evidence-based scale of consequence including impacts on the market, e.g., the highest potential consequence being that the initiative somehow stopped the energy market from operating.

How addressed by AEMO: We have provided the underlying calculations for how our risk assessment was conducted (i.e. the likelihood and consequence ratings against each risk) in the Appendix. We have also added commentary around proposed risk mitigation through the delivery of the project.

2. Final Changes

In response to the submissions, AEMO has made the following additional changes to the draft business case package.

The key changes made to the Draft Business Case Package are listed in the following table:

Table 2 List of changes

Draft Business Case Package V0.2 (Slide number)	Change Description
Slide 7	Added a new slide to reflect IDAM, IDX and PC Benefits.

Draft Business Case Package V0.2 (Slide number)	Change Description
Slide 12 (Cosmetic Change)	Updated to remove word aseXML based on industry feedback
Slide 13 (Cosmetic Change)	Added headers IDX, IDAM and Portals based on industry feedback
Slide 15 and Slide 16	Updated slide “addressing residual security risks” to provide clarification to industry stakeholders
Slide 33 (Cosmetic Change)	Formatted the layout of the slide to be aligned with IDAM and IDX Pain point slide
Slide 38 (Cosmetic Change)	Added 2a/b for IDAM and PC
Slide 41	Updated timelines for a Draft timeline for Option 1 to address participants’ concerns around upcoming reform roadmap congestion
Slide 97	Risk rating has been updated based on industry feedback for Risk #4 and Risk#5
Multiple slides	Updated industry costs based on specific feedback on DP1 vs DP2 costs and an extra submission on IDAM costs
Multiple slides	Further assessment of operational costs has identified additional incremental supporting costs relating to infrastructure and technology support staff
Multiple slides	Added uncertainty range +-40% within financial assessment tables.
Slide 130	Added a new slide explaining a Risk Rating Methodology

Appendix A. Summary of Submissions and AEMO Responses

Table 3 summarises feedback on the Draft Business Case Package. Descriptions in the ‘Detail’ column are not a verbatim reproduction of the stakeholder submissions but instead are a summarised interpretation of the original comment. In some cases, similar comments from separate stakeholders have been addressed together.

Table 3: Stakeholders' Feedback on the Draft Business Case Package

No.	Issue	Stakeholders Comment	AEMO response
1	IDAM, IDX and PC Benefits	Some stakeholders expressed a desire for the Benefits table to be included in the updated version of the Business Case pack that clearly articulates and summarises AEMO benefits, and Industry benefits broken down by each IDAM, IDX and PC initiative.	AEMO confirms that the updated version of the Draft Business Case Package incorporates a new slide to reflect IDAM, IDX and PC Benefits.
2	Addressing residual security risks	<p>The stakeholders have requested that there is a need for more clarification regarding the "Addressing residual security risks" slide of the business case concerning</p> <ol style="list-style-type: none"> I. The Option 1 timeline, and the actions that are required to address the high-risk vulnerabilities of Option 1. II. Whether under option 2 security vulnerabilities be prioritised so that they are implemented before the transition to IDX is complete III. Effective risk assessment and clarification on how the decision point around IDX options 2a and 2b could be compared. 	<p>AEMO recognises that there wasn't sufficient clarity in the draft business case to explain the overlay of the scope of the business case against broader cyber program activities. Slides have been extended to reframe the approach to compliance including August 2024 vs the broader intended end state and further to show the availability of compliant capability to enable participants to best visualise when they can transition services driven by compliance.</p> <ol style="list-style-type: none"> I. For completeness, any activities required to be effected by August 2024 beyond the development of this Business Case itself are not in the scope of this Business Case. For AEMO, these activities sit within our broader Cyber program. II. We have noted the potential for additional requirements which may drive the assessment of additional controls or potentially additional transition states as a consequence of the extended transition window requested by Industry.

No.	Issue	Stakeholders Comment	AEMO response
			<p>Should such requirements eventuate participants who have not yet transitioned to the end state capability would then have the option to choose to bring this forward or adopt the additional controls / transitional state requirements</p> <p>III. Options 2a and 2b (which would be considered under decision point 2) do not have any differentiation in residual security risk as they relate only to the decision on retention of legacy payloads vs transition to fit-for-purpose payloads</p>
3	<p>Deliverability of the Future Reforms</p>	<p>Some stakeholders requested confirmation if the proposed foundation's timeline aligns with upcoming reforms such as the DER Data Hub and Metering Services Framework.</p>	<p>The timelines put forward in the business case reflect the transition timing consulted with the industry, these have included consideration of alignment to DER and metering services. As noted through consultation it is anticipated with a multi-year program and ongoing refactoring of the NEM Reform roadmap that adjustments may be required to the delivery roadmap to best optimise this alignment. AEMO has proposed a roadmap governance group be established specifically to address this need.</p> <p>The specifics of the data exchange patterns for DER are still being assessed as the DER program determines its data exchange requirements and will be taken as input into the foundational development</p>
4	<p>Future Extensibility to WEM and Gas Markets</p>	<p>Stakeholders have acknowledged that the foundational capabilities framework is useful and reasonable for assessing the business case. However, they raised concerns that the benefits assumed are only for NEM, whereas participants' benefits span across multiple fuels instead of just one. Additionally, they indicated that it is unclear whether other markets will bear some of the cost.</p>	<p>The benefits to other energy markets have been referenced but no quantitative measure claimed under this business case, consistent with the discussion throughout consultation that the intent is for the strategic foundation to be extensible to support other energy markets.</p> <p>The foundational work as presented has only been scoped, and discussed within the NEM consultation, extension of the capability to other energy markets would be the subject of future discussion with the relevant regulatory and market stakeholder groups.</p>

No.	Issue	Stakeholders Comment	AEMO response
5	Pilot Lite Scope	Stakeholders requested confirmation if Pilot Lite will include both existing and new business services, such as the DER Data hub.	The scope of the pilot will be determined as part of the delivery of the foundation through industry consultation and collaboration; typically, a pilot for a new business service would be managed through the reform delivering that new business service. It is anticipated that the 'pilot lite' as put forward will be a technical validation to prove the foundational capability, not to prove the transition of the legacy business services since these are beyond the scope of this business case.
6	IDX Decision Point 2	<p>Stakeholders supported the concept of two decision points for IDX. However, some stakeholders requested that AEMO establish:</p> <ul style="list-style-type: none"> • Criteria for entry and demonstrated success at DP2. • Detailed implementation plan with critical milestones marked. 	<p>AEMO confirms that during the Tranche 0a consultations, the criteria for entry into DP2, success criteria for Pilot Lite and detailed implementation will be defined in consultation with industry stakeholders.</p> <p>The transition of legacy services will be assessed as part of decision point 2; as noted the legacy services 'must' change to at least consider security compliance so while any change is a risk, it is equally an unacceptable risk to not make change. Redundancy for wholesale bidding - and more broadly for all data exchange services will be addressed through the detailed design for the IDX foundation. As part of the decision point 2 assessment, AEMO would welcome further submissions on transition planning noting the consultation to date on the transition roadmap which formed the draft plan as presented.</p>

No.	Issue	Stakeholders Comment	AEMO response
7	Financial Assessment - Industry Cost	Some Industry stakeholders provided updated cost estimates specifically for Decision Point 1 vs Decision Point 2 distinction which was introduced after the last round of cost submissions.	AEMO confirms that the updated costs have been factored into the numbers within the Draft Business Case Package but have not made a material difference nor changed the recommendation.
8	Risk Assessment	Some stakeholders have raised concerns that the Risk assessment Matrix should articulate a measurable and evidence-based scale of consequence including impacts on the market. The highest consequence would be the initiative has somehow stopped the energy market from operating	The transition of legacy services will be assessed as part of decision point 2; as noted the legacy services 'must' change to at least consider security compliance so while any change is a risk, it is equally an unacceptable risk to not make change. Redundancy for wholesale bidding - and more broadly for all data exchange services will be addressed through the detailed design for the IDX foundation. As part of the decision point 2 assessment, AEMO would welcome further submissions on transition planning noting the consultation to date on the transition roadmap which formed the draft plan as presented.
9	Minor changes	Some stakeholders have suggested minor format changes for the draft business case package. <ul style="list-style-type: none"> • Remove word aseXML (slide 12) • Formatted the layout of the Portal Consolidation pain point slide (slide 33) • Re labelled options 2 to 2a/b for IDAM and PC (slide 38) • Risk #4 Rating for Pre-mitigation column (slide 97) 	AEMO confirms that the updated version of the Draft Business Case Package incorporates suggested changes.

