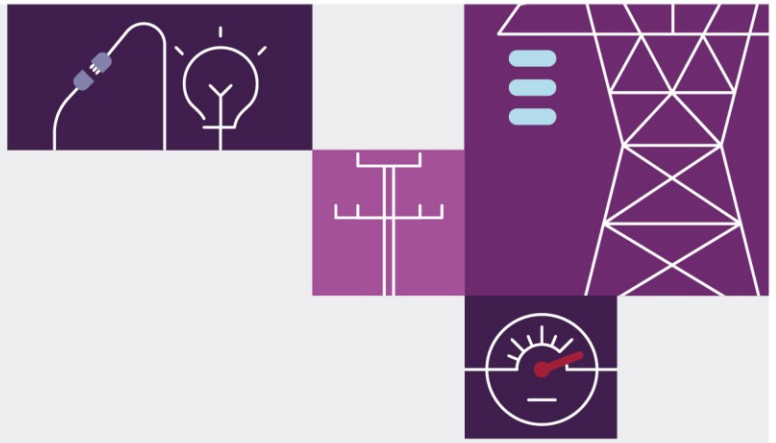


Appendix 1. Stakeholder engagement

June 2022

Appendix to the 2022 ISP for the
National Electricity Market





Important notice

Purpose

This is Appendix 1 to the 2022 *Integrated System Plan* (ISP), available at <https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp>.

AEMO publishes the 2022 ISP under the National Electricity Rules. This publication has been prepared by AEMO using information available at 15 October 2021 (for Draft 2022 ISP modelling) and 19 May 2022 (for 2022 ISP modelling). AEMO has acknowledged throughout the document where modelling has been updated to reflect the latest inputs and assumptions. Information made available after these dates has been included in this publication where practical.

Disclaimer

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Version control

Version	Release date	Changes
1.0	30/6/2022	Initial release.



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A1.1 Consultation in the development of the 2022 ISP

Consultation and dialogue with all NEM stakeholders is critical to AEMO's role as the National Transmission Planner for the NEM, helping to improve and refine scenario development, forecasting, decision-making and assessment processes.

For the 2022 ISP, consultation commenced in September 2020, about 10 months before publication of the 2021 IASR and the ISP Methodology on 30 July 2021. Consultation continued through until the publication of the Draft 2022 ISP on 10 December 2021, and included additional opportunity for engagement on the publication of the Draft ISP Addendum that AEMO published in response to the Australian Energy Regulator's (AER's) transparency review. Engagement since the publication of the Draft ISP has included written submissions to the Draft ISP and the Addendum, two large public forums, and additional targeted engagement with consumer advocates.

This appendix provides information about the engagement processes (shown in Figure 1) that have informed the entire ISP development process, and focusing on the engagement that has occurred between the publication of the Draft 2022 ISP and the 2022 ISP.

A1.1.1 Consultation on the development of inputs, assumptions and scenarios

Consultations for the Draft ISP commenced in September 2020. The first phase culminated in the 2021 IASR¹ and the ISP Methodology² reports, both published on 30 July 2021. These reports benefited from the insights of industry and consumer stakeholders, through 88 detailed written submissions, four workshops, and numerous stakeholder meetings.

A further minor consultation on the ISP Methodology, focusing on the method for calculating competition benefits where appropriate, commenced in October 2021 and concluded that, for now, assumptions needing to be made to assess this class of benefits were too uncertain. Consequently, no changes to the ISP Methodology report were applied, and competition benefits would not be routinely calculated in the ISP.

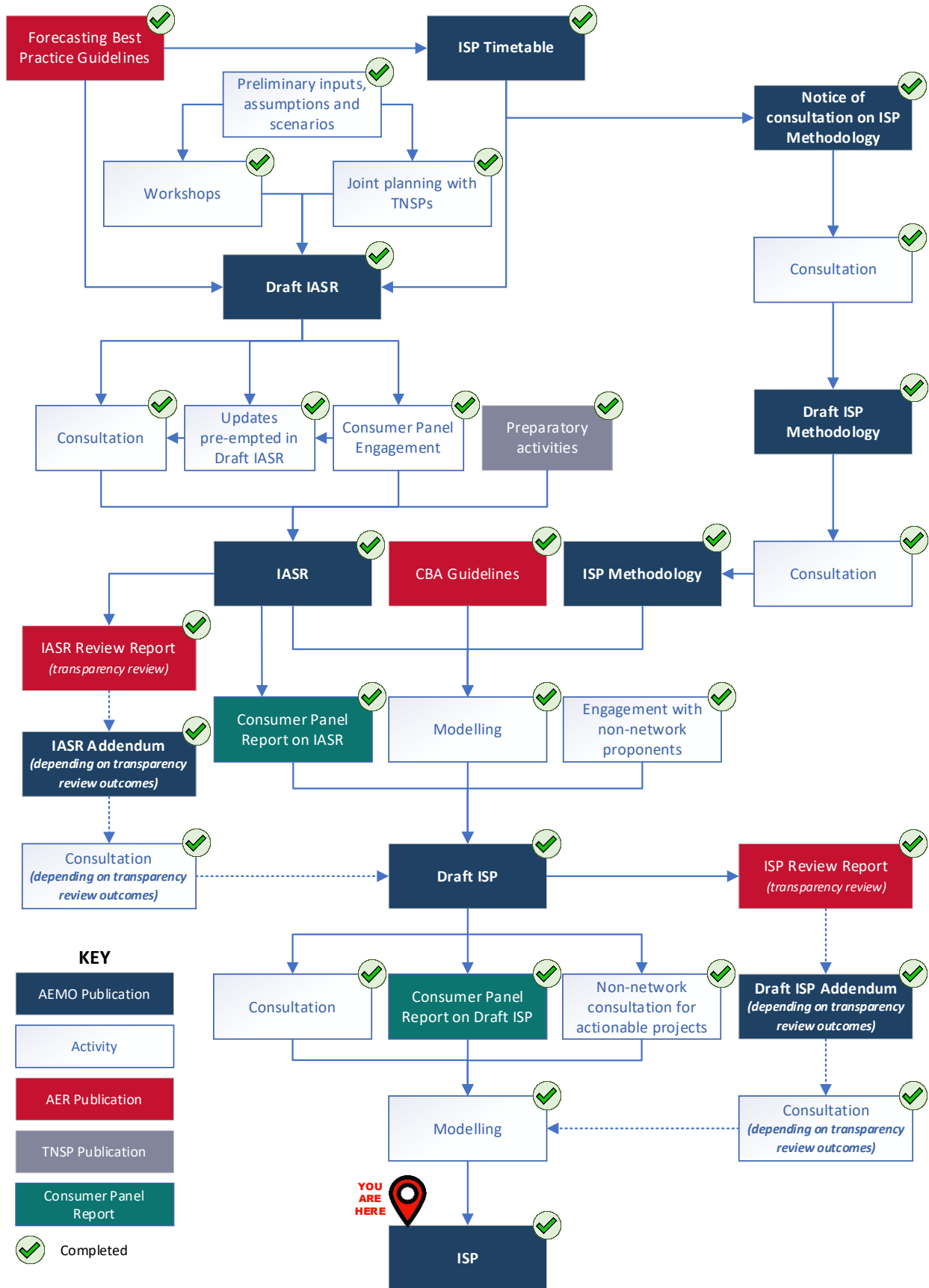
Full details of the process and outcomes of stakeholder engagement are available in the consultation summary reports for each of the 2021 IASR, ISP Methodology, and Competition Benefits in the ISP³.

¹ The 2021 IASR, and all supporting materials and demand trace data, are at <https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp/current-inputs-assumptions-and-scenarios>.

² The ISP Methodology and all supporting materials are available at <https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp/isp-methodology>.

³ 2021 IASR Consultation Summary Report, at <https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp/current-inputs-assumptions-and-scenarios>, and ISP Methodology Consultation Summary Report, at <https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp/isp-methodology>, Competition Benefits in the ISP at: <https://aemo.com.au/consultations/current-and-closed-consultations/competition-benefits-in-the-isp>

Figure 1 The ISP development process





A1.2 Consultation on the Draft ISP

The Draft ISP was published on 10 December 2021. Stakeholder submissions were due on 11 February 2022. This submission window was longer than the minimum requirement, in recognition of the fact that the timing coincided with the Christmas-New Year holiday period.

AEMO held two public webinars between publication and the submission deadline, to support stakeholders' active engagement with the Draft ISP.

The NER also require both the AER and ISP Consumer Panel (the Panel) to produce assessments of the Draft ISP (within one month and two months of the Draft ISP's publication, respectively). AEMO published the Draft 2022 ISP Addendum in response to the AER's report, and then received further stakeholder submissions on the Addendum.

Further detail on each of these consultation stages is provided in the following subsections. AEMO's discussion of specific issues raised in submissions, and AEMO's response to those submissions, is provided in the *2022 ISP Consultation Summary Report*. Table 2 below summarises topics covered in stakeholder submissions and lists submitters in each topic area.

A1.2.1 Public webinars

AEMO held a public launch briefing on the day the Draft 2022 ISP was published. The 90-minute session was designed to provide an introductory overview of the material AEMO had released, including important 'headline' findings.

The public launch briefing was attended by 468 representatives of external stakeholders, and 88% of survey respondents rated the event as having been useful or very useful.

On 1 February 2022, AEMO held a second public webinar. The pre-submission question and answer session was intended to offer stakeholders the opportunity to talk to the AEMO experts who had developed the Draft ISP. The session was timed to give stakeholders as much time as possible to review the Draft ISP materials, and then an opportunity to seek clarifications from AEMO in a timely manner ahead of finalising and making their submissions.

This pre-submission forum was attended by 206 representatives of external stakeholders, and 82% of survey respondents rated the event as having been useful or very useful.

The recordings and presentations from both webinars are available on the 2022 ISP Opportunities for Engagement page⁴.

A1.2.2 AER transparency review of the Draft ISP

The NER require the AER to complete a transparency review of the Draft ISP within one month of publication. The AER published its transparency review of the Draft 2022 ISP on 7 January 2022⁵. The AER concluded

⁴ See <https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp/opportunities-for-engagement>

⁵ See <https://www.aer.gov.au/networks-pipelines/performance-reporting/transparency-review-of-aemo-draft-2022-integrated-system-plan>

that AEMO had adequately explained the majority of inputs and assumptions, and how these contributed to the Draft 2022 ISP outcomes.

The AER also identified four areas in which AEMO should provide more information for stakeholders:

- Inputs and assumptions regarding coal plant retirements.
- VNI West and Humelink decision rules.
- The optimal timing of each cable of the MarinusLink project.
- The use of a low gas price sensitivity in ISP modelling.

The AER required that AEMO undertake further consultation of these issues. Accordingly, AEMO published the 2022 Draft ISP Addendum in March 2022⁶. Section A1.3.5 below discusses the Addendum and stakeholder submissions received in response.

A1.2.3 ISP Consumer Panel's report on the Draft ISP

About the ISP Consumer Panel

AEMO established the Panel to provide expert advice and lift up the views and ideas of consumers during the development of the 2022 ISP⁷. The Panel is required to submit two reports to AEMO, within two months of the publication of the final IASR and Draft ISP. Under the NER, the Panel's reports are required to provide their "assessment of the evidence and reasons supporting" the IASR and Draft ISP, and in preparing these reports the Panel "must have regard to the long-term interests of consumers"⁸.

AEMO appointed five members to the Panel, including a Chair, in November 2020. Since its creation, the Panel has engaged in great depth on numerous aspects of the development of the 2021 IASR and Draft 2022 ISP. As well as engaging in direct discussions with AEMO on key issues, the Panel has provided extensive written advice in the form of submissions to additional consultations within the overall ISP process, and attended multiple Forecasting Reference Group meetings.

Further information on the Panel, including terms of reference, member biographies, and all the Panel's reports and submissions, is available on the Panel's page of AEMO's website⁹.

It is important to note that the Panel was not a replacement for engagement with energy consumers or their advocates in the ISP process. While some members of the Panel work as energy consumer advocates, and the Panel actively sought to engage with the broader consumer advocate community as part of its work, it remained AEMO's responsibility to directly pursue effective engagement with consumer stakeholders.

AEMO wishes to once again record sincere thanks to the Panel Chair, Andrew Nance, and Panel members Gavin Dufty, Mark Grenning, Richard Owens and Stephanie Bashir. AEMO acknowledges the Panel's significant contribution to the development of the 2022 ISP. The Panel both constructively challenged and extensively supported AEMO throughout its tenure.

⁶ See <https://aemo.com.au/consultations/current-and-closed-consultations/2022-draft-isp-addendum-consultation>.

⁷ The 2022 ISP Consumer Panel is a new advisory body set up under changes to the NER that were put in place after the release of the first ISP in 2020.

⁸ NER 5.22.7(d)(2) and (e)(3)

⁹ See <https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp/get-involved/consumer-panel>.

AEMO will publish a call for expressions of interest for membership of the 2024 Consumer Panel shortly. AEMO intends to appoint the 2024 Panel as near as possible to the beginning of the next two-year ISP development cycle, consistent with a key recommendation from the 2022 ISP Panel.

The ISP Consumer Panel's report on the Draft 2022 ISP

The Panel provided its report on the Draft ISP to AEMO on 10 February 2022¹⁰. This report built on the Panel's earlier report on the 2021 IASR¹¹.

The report frames the ISP as a risk management tool, that must be deployed to manage the risk of over- and under-investment in the transmission network, in the long-term interests of consumers. It contained recommendations regarding the completion of the 2022 ISP and improvements to the 2023 IASR and 2024 ISP processes, discussed further below. Discussion of all material issues raised in the Panel's report, as well as AEMO's responses, is provided in the *2022 ISP Consultation Summary Report*, along with the points raised by all other stakeholders. The key elements of the Panel's conclusions, recommendations, and AEMO's responses are summarised below.

Assessment of evidence and reasons supporting Draft ISP conclusions

The Panel's report states that "the Panel considers that to achieve the long-term interests of consumers, the [Optimal Development Path] ODP must represent a transparent balance of the most material risks – managed in a way that is consistent with the risk appetite of consumers"¹². The Panel said it had therefore decided it should assess "whether the evidence and reasons would support us saying "the Draft ISP's ODP represents an appropriate balance of the most material risks to consumers"¹³.

The Panel's assessment was that the Draft ISP "lacks sufficient evidence and reasons for assumptions made of consumer risk preferences"¹⁴. Without that evidence, the Panel could not make an assessment of whether the ISP effectively balanced the risk of over- and under-investment in the shared transmission network.

The engagement undertaken by AEMO in response to this recommendation¹⁵ is discussed in Section A1.3.6 below.

Recommendations in the Panel's report

The Panel's report made 16 recommendations across three categories¹⁶. The categories were:

- Develop processes to understand consumer risk preferences and use those preferences to inform how risks are managed in the ISP (six recommendations)
- Provide more information and engage with consumers on staging decisions for VNI West and HumeLink for the 2022 Final ISP (four recommendations)
- Other recommendations for the 2024 ISP process (six recommendations).

¹⁰ See <https://aemo.com.au/-/media/files/major-publications/isp/2022/isp-consumer-panel-report-on-draft-2022-isp.pdf?la=en>.

¹¹ See <https://aemo.com.au/-/media/files/major-publications/isp/2021/isp-consumer-panel-report-on-2021-iasr.pdf?la=en>.

¹² See <https://aemo.com.au/-/media/files/major-publications/isp/2022/isp-consumer-panel-report-on-draft-2022-isp.pdf?la=en>, page 6.

¹³ See <https://aemo.com.au/-/media/files/major-publications/isp/2022/isp-consumer-panel-report-on-draft-2022-isp.pdf?la=en>, page 6.

¹⁴ See <https://aemo.com.au/-/media/files/major-publications/isp/2022/isp-consumer-panel-report-on-draft-2022-isp.pdf?la=en>, page 6.

¹⁵ Similar recommendations were made by Energy Consumer Australia (ECA) and the South Australia Council of Social Service (SACOSS).

¹⁶ See <https://aemo.com.au/-/media/files/major-publications/isp/2022/isp-consumer-panel-report-on-draft-2022-isp.pdf?la=en>, pages 9-12.

As stated above, AEMO undertook a process with energy consumer advocates in an effort to better understand consumer risk preferences. Section A1.2.6 below discusses this process and its outcomes.

The Panel's recommendations regarding VNI West and HumeLink were considered carefully by AEMO, along with all stakeholder comments on those topics¹⁷.

The Panel's recommendations regarding the 2023 IASR and 2024 ISP have informed AEMO's development of a Draft 2024 ISP Engagement Plan, which AEMO intends to release for stakeholder comment in July 2022. AEMO will also work with the 2024 ISP Consumer Panel on the further consideration and implementation of recommendations regarding the 2024 ISP cycle.

A1.2.4 Submissions to the Draft ISP

AEMO received 75 submissions to the Draft ISP. Of these, 72 were written submissions and three were verbal submissions provided by energy consumer advocates. AEMO received three written submissions in response to the Draft 2022 ISP Addendum. Submitters are listed in Table 1.

AEMO wishes to again express sincere thanks and appreciation to all stakeholders who made submissions to the Draft 2022 ISP and to earlier stages of the ISP process.

Table 1 Submitters to the Draft 2022 ISP and Draft 2022 ISP Addendum

Submissions to Draft 2022 ISP		
AGL	Energy Networks Australia (ENA)	Powerlake
ANLEC R&D	EnergyAustralia (EA)	Powerlink Queensland (Powerlink)
APA Group	Engineers Australia	Protect the West Group
ATCO	Environment Victoria	Public Interest Advocacy Centre (PIAC)
AusNet Services	Flotation Energy	Queensland Conservation Council (QCC)
Australian Conservation Foundation (ACF)	Fortescue Future Industries (FFI)	RE-Alliance
Australian Energy Infrastructure Commissioner (AEIC)	GE Renewable Energy (GE RE)	Regulation Economics
Australian Hydrogen Council (AHC)	Grampians New Energy Taskforce (G-NET)	Robert Honeywill
Australian Pipelines and Gas Association (APGA)	Greenpeace Australia Pacific	Robert Monteath
Australian Resources Development Limited (ARD)	Hepburn Shire Council (Hepburn)	Sligar and Associates
Australian Sugar Milling Council (ASMC)	Hydro Tasmania	Smart Wires
Beyond Zero Emissions (BZE)	Iberdrola	Snowy Hydro (Snowy)
Bob Brown Foundation (BBF)	Independent Engineers and Scientists (IE&S)	South Australian Council of Social Service (SACOSS)
Clean Energy Council (CEC)	Institute for Energy Economics and Financial Analysis (IEEFA)	South Australian Department of Energy and Mines (SA DEM)
Clean Energy Investor Group (CEIG)	ISP Consumer Panel	Star of the South (SS)
Climate Council of Australia (CC)	Jemena	Tasmanian Department of Premier and Cabinet (TPC)
ClimateWorks Australia	Lee Kingma	TasNetworks

¹⁷ See 2022 ISP Consultation Summary Report, p 19.

Submissions to Draft 2022 ISP		
CopperString 2.0	Macroeconomics Advisory (MA)	Tesla
Delta Electricity (Delta)	MGA Thermal	Tilt Renewables (Tilt)
ElectraNet	Moyne Shire Council (Moyne)	Transgrid
Electric Power Consulting (EPC)	Neoen	Uniting Communities (UC)
Electric Vehicle Council (EVC)	Network of Illawarra Consumers of Energy (NICE)	Victoria Energy Policy Centre (VEPC)
Electrical Trades Union (ETU)	Northern Grampians Shire Council	Walcha Energy (Walcha)
Energetic Communities (EC)	Origin Energy (Origin)	Wimmera Development Association (WDA)
Energy Users Association of Australia (EUAA)	Pacific Hydro Australia (Pacific)	World Wildlife Fund (WWF)
Submissions to Draft ISP Addendum		
AGL	Hydro Tasmania	Snowy Hydro (Snowy)

Topics covered in stakeholder submissions

AEMO has published the *2022 ISP Consultation Summary Report* to accompany the final 2022 ISP. It discusses all material issues raised in submissions, arranged across 16 categories. It also provides AEMO’s discussion of, and responses to, the matters raised in submissions. Table 2 summarises the topics covered in submissions.

Table 2 Summary of topics addressed in stakeholder submissions

Topic	Description	Submitters
Actionable projects	<ul style="list-style-type: none"> Many stakeholders commented on the specific projects in the Draft ODP, especially the staged delivery of Humelink and VNI West. Marinus Link also received specific comments. The risk of increasing capital costs, benefits of the project to energy consumers and optimal timing were the topics raised most often. Some stakeholders also advocated for a general acceleration of all transmission development, to support reductions in carbon emissions as quickly as possible. 	ISP Consumer Panel, Transgrid, TasNetworks, Powerlink, Jemena, Origin, Delta, Snowy, Tilt, Walcha, CEC, ENA, Tas DPC, CEIG, Hepburn, WDA, AEIC, Climate Works, Smart Wires, BBF, VEPC, WWF, IES, QCC, RE-Alliance, NICE, Lee Kingma
Consumer risk preferences	<ul style="list-style-type: none"> Stakeholders commented that AEMO should do more to understand consumer risk preferences between the Draft and Final ISPs. The ISP Consumer Panel suggested that this engagement focus on how the risks of over- and under-investment can be managed within the ISP, especially in relation to staged actionable transmission projects. PIAC, ECA, and EUAA expressed the view that the Draft ODP appropriately balanced the risk of over and under-investment. PIAC, ECA, EUAA and QEUN told AEMO that consumer risk preferences can only be effectively gleaned through direct surveying or other engagement with bill payers. 	ISP Consumer Panel, ECA, SACOSS, EWOSA, PIAC, EUAA, QEUN.
Benefits, challenges and risks of new transmission projects generally	<ul style="list-style-type: none"> Stakeholders commented on the need to consider the potential price impacts of new transmission projects, including distributional effects. Jemena and Origin raised the need to consider the risk of assumed project delivery costs and timelines, and the impact of a cost increase or delay. Several stakeholders (CEC, VEPC, WWF, Tilt) argued that the public benefit of emissions reduction should be included in cost-benefit calculations Other benefits identified by stakeholders included those related to employment, both direct and indirect. Stakeholders commented on the potential growth of offshore wind and the need to analyse the impact of such a development on the ODP. 	ISP Consumer Panel, CEIG, SACOSS, SA DEM, TasNetworks, Jemena, Neoen, Hydro Tas, Origin, Delta, Tilt, CEC, WWF, ETA, EC, NICE, SS, Flotation, RE-Alliance

Topic	Description	Submitters
Scenario weightings	<ul style="list-style-type: none"> Many stakeholders commented on the scenario weighting used in the Draft ISP. While there was no consensus about the appropriateness of the weightings, there was a notable level of agreement that <i>Step Change</i> is the most likely scenario. AGL and Delta submitted that <i>Step Change</i> is not the most likely scenario, as it does not reflect current policy commitments. Some stakeholders commented on the Delphi Panel scenario weighting process, including factors that may have impacted how participants answered the question. 	ISP Consumer Panel, AGL, Delta, Jemena, APGA, Hydro Tas, Iberdrola, Tilt, CEIG, FFI, NICE, ECA, EC, Climate Works, BZE, ACF, QCC, Greenpeace, ARDL,
Coal closures: outcomes and approach	<ul style="list-style-type: none"> Delta expressed concerns about AEMO's approach to modelling the future level of coal-fired generation in the NEM, including outcomes regarding timing of coal retirements and the level of plant flexibility. EA noted that the ISP assumes perfect foresight of coal retirements and the replacement thereof with new capacity. EA believes further work between AEMO and stakeholders is needed, given the level of uncertainty that exists about both issues. EA also suggested AEMO should be clearer about why retirements are projected to occur. CEC and Walcha Energy commented on the risk of earlier than expected coal closures, 	Delta, EA, Powerlink, MA, CEC, Walcha
Social licence	<ul style="list-style-type: none"> Stakeholders agreed that securing social licence for new projects was a challenge and risk for the ISP and that there is a need to better plan for and work to address these challenges. Many submitters offered suggestions about how social licence discussions and solutions could be explored and progressed through collaboration with community and First Nation groups. Some stakeholders called for AEMO to take a leadership role in managing social licence conversations with effected parties. 	ISP Consumer Panel, SS, Ausnet, CEC, CEIG, EC, RE-Alliance, SACOSS, EFF, AEIC, BZE, Moyne, WDA, ACF, Walcha, Moyne,
DER and distribution network impacts	<ul style="list-style-type: none"> Several stakeholders took the view that AEMO's projection for growth in Distributed Energy Resources (DER), especially battery storage, are too high. Other submissions argued for consideration of a future with higher levels of DER and low overall consumption, or further growth in microgrids. ECA submitted that DER should not be an ISP input, but rather viewed as a development option for the system, alongside new transmission investments 	Snowy, HydroTas, GE, EA, Powerlink, ENA, EVC, CEC, FFI, IES, NICE, UC, EPC, Engineers Aus, ECA, ACOSS
Renewable Energy Zones (REZs)	<ul style="list-style-type: none"> Stakeholders raised the need to further examine the impact of Renewable Energy Zones (REZs) on Marginal Loss Factors (MLFs) Sligar and Associates suggested that locating REZs further west would allow solar supply to continue further into the east coast peak consumption time. Origin submitted that forecast growth in wind generation in the New England REZ was unlikely to be feasible. Stakeholders supported AEMO's proposal for the development of REZ Design Reports, with further recommendations about specific changes to the REZ Design Report process and highlighting specific regional issues 	Powerlink, ENA, SA DEM, Sligar, ElectraNet, Origin, Moyne, WDA, QCC, Northern Grampians, AusNet, RE-Alliance, ASMC, Delta, NICE, Walcha
Hydrogen	<ul style="list-style-type: none"> ENA and QEUN raised concern that consumers should not fund transmission infrastructure for hydrogen export. Origin and APGA submitted the use of hydrogen pipelines could complement electrical transmission infrastructure. Stakeholders made comments in relation to the impact of electrolyzers on the network, including possible 	ISP Consumer Panel, ENA, QEUN, Origin, APGA, AHC, FFI, Greenpeace, CEC, VEPC, SA DEM, ATCO, ClimateWorks, BZE, R Honeywell,
Role of gas	<ul style="list-style-type: none"> APA Group, Jemena and APGA raised concerns about the fact the ISP forecasts a future in which gas network infrastructure is not used. Stakeholders submitted that the gas network can offer cost effective energy transport and storage solutions. EA and other stakeholders noted the technical and cost challenges of the level of electrification forecast in the ISP. EA, Iberdrola and APA commented on the economics of gas generation, in both the coming years and across the ISP time horizon to 2050. Other stakeholders argued that gas fired generation did not have a viable part to play in the future energy system. 	APA Group, Jemena, EA, APGA, Iberdrola, Tesla, Hydro Tas, CEC, ETU.

Topic	Description	Submitters
Modelling approach and development outcomes	<ul style="list-style-type: none"> EA and Tesla submitted that the ability of battery energy storage systems to provide grid support services should be included in ISP analysis. Several stakeholders commented on the outcomes for newer energy technologies, such as deeper storage, thermal energy storage. EA and Origin both called for further consideration of assumptions about possible VRE curtailment. 	EA, Tesla, MA, MGA, EPC, Origin, IES, ANLEC R&D, Snowy, R. Monteath, ACOSS
Security and reliability	<ul style="list-style-type: none"> Stakeholders including Delta raised concerns about the use of non-synchronous technologies to maintain system security, or commented on the use of advanced inverters for grid forming. Engineers Australia and other stakeholders emphasised the need to keep the grid secure. Other stakeholders suggested there was a need for more information on – and consideration of – how system security is maintained after the retirement of the coal fleet. 	Delta, APGA, ARDL, Engineers Aus, Origin, EA, Tesla, EPC,
Communications	<ul style="list-style-type: none"> Many stakeholders requested greater clarity or information on certain topics, or for AEMO to consider how the coverage of certain issues in the ISP might be perceived by different stakeholder groups. Requests for additional emphasis on certain issues included increases in overall cost and caution against overemphasis of certain aspects of any scenario 	ISP Consumer Panel, EC, Jemena, Engineers Aus, MA, EA, AGL, CopperString, SACOSS, Iberdrola
2024 ISP	<ul style="list-style-type: none"> A number of stakeholders made recommendations for the 2024 ISP. Comments were received on topics including the use of a Delphi Panel to allocate scenario weightings, adjustments to emissions budgets and consideration of biomass technologies. 	ISP Consumer Panel, APGA, Iberdrola, ASMC,
Data and model release	<ul style="list-style-type: none"> Stakeholders requested additional data including: Half-hourly demand profiles, daily profiles on individual plant, financial data, reliability of supply and performance of storage, and additional data about carbon budgets and sources of decarbonisation. 	Delta, EA, EPC, Powerlink, IEEFA,
ISP Addendum	<ul style="list-style-type: none"> AGL questioned the ISP's use of a least-cost approach to coal generation closures and disagreed with the allocation of relatively high weights to scenarios that have sub-economic outcomes in the short term. Hydro Tasmania argued that a just-in-time approach to the delivery of new transmission infrastructure created additional risks for consumers. Snowy reiterated that the cost of applying decision rules to transmission projects outweighed any benefits provided by consumer protection, and that AEMO needed to better define what constitutes dispatchable capacity. 	AGL, Hydro Tas, Snowy

A1.2.5 Draft 2022 ISP Addendum

AEMO published the Draft 2022 ISP Addendum on 11 March 2022¹⁸. The Addendum was published in response to the AER's *Transparency Review of the Draft ISP* (discussed in Section A1.2.2). The Addendum provided further explanation of how the inputs and assumptions identified by the AER had contributed to the Draft 2022 ISP outcomes.

AEMO received three written submissions in response to the Draft ISP, from AGL, Hydro Tasmania and Snowy Hydro. AEMO's consideration of and response to those submissions is discussed in the *2022 ISP Consultation Summary Report*. Submissions are also summarised at the bottom of Table 2.

A1.2.6 Engagement with energy consumer advocates

AEMO recognises that most energy consumer advocates face acute resource constraints, as a result of both their own relatively low staff levels and the extensive consultation demands of the energy sector. In

¹⁸ See <https://aemo.com.au/consultations/current-and-closed-consultations/2022-draft-isp-addendum-consultation>.

recognition of these circumstances, and given the importance of consumer stakeholders, AEMO seeks to engage with consumer advocates in their preferred manner, as much as possible.

To this end, AEMO planned two key activities during consultation on the Draft ISP. The first was to provide a tailored presentation to the AEMO Consumer Forum on 15 December 2021¹⁹. The second was to accept verbal submissions from consumer advocates, as AEMO has done at earlier stages of the IASR and ISP process.

Engagement program with consumer advocates

At the 15 December 2021 AEMO Consumer Forum, consumer advocates expressed an interest in further engagement on the Draft ISP, and AEMO subsequently provided a deep-dive session on 25 January 2022, attended by nine consumer advocates. Before that session, the ISP Consumer Panel offered consumer advocates the chance to attend an 'ISP 101: Ask *any* questions' session, to further support advocates' participation in the ISP consultation process.

AEMO offered consumer advocates the opportunity to provide verbal comments on the Draft ISP at a session held on 4 February 2022, and subsequently converted these comments into a formal submission following review and agreement from advocates in attendance. AEMO experts during this session also provided clarifications and asked questions to ensure participant submissions were correctly understood. Verbal submissions were received from the ACOSS, Brickworks, Etrog Consulting, EWOSA, the NICE and the Sunrise Project, and was considered consistently with all other submissions²⁰.

Targeted engagement on consumer risk preferences

In written submissions to the ISP, the Panel, ECA and SACOSS highlighted the need for AEMO to further examine how the Draft ODP reflects consumer risk preferences. In response, AEMO commenced a specific engagement effort on consumer risk preferences at the March 2022 AEMO Consumer Forum, where AEMO sought expressions of interest from consumer advocates to participate in such a process. PIAC, ECA, EUAA, QEUN and Renew expressed interest in participating.

AEMO approached the design of the consultation process in a spirit of co-design. Given the time constraints in the development of the final ISP, it was agreed that the process should be as efficient as possible, consisting of scheduled discussions and written correspondence until it was agreed a logical end point had been reached. Two workshops were held to allow participants to convey their views about how the Draft ODP reflects consumer risk preferences. These sessions were conducted on 11 and 20 April 2022.

AEMO sincerely thanks all participants in the targeted engagement process for their commitment and contributions to the process, which were all highly constructive and considered.

The following subsection has been agreed with participants in the process as accurately reflecting their comments on two issues:

- How the Draft 2022 ODP balances risk and reflects consumer risk preferences.
- The importance of engaging directly with consumers on risk preferences as part of the 2024 ISP.

¹⁹ See <https://aemo.com.au/en/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/consumer-forum>.

²⁰ See <https://aemo.com.au/-/media/files/major-publications/isp/2022/submissions/consumer-advocates-draft-2022-isp-verbal-comments.pdf>.



Comments from consumer advocates on how the Draft 2022 ODP balances risk and reflects consumer risk preferences

EUAA

In EUAA's view, the Draft 2022 ISP ODP appropriately balances the risk of over- and under-investment in the selection and timing of the actionable projects given the assumptions. For example, EUAA support the staged timing for HumeLink and VNI West.

EUAA has concerns, however, regarding the risks that:

- Given the ISP capital cost assumptions are often AACE Class 4 (-30% to +50%) with history suggesting costs are much more likely to increase than decrease, capital costs will increase significantly from the levels assumed in the ISP due to a combination of supply chain and social licence factors, and
- Despite the decision rules around total (including early works) capital expenditure (capex) for HumeLink (not materially above \$3.3 billion) and VNI West (not materially above \$2.9 billion), the application of the feedback loop stage will not protect consumers from the risk that consumers will pay for uneconomic projects.

The feedback loop only assesses whether the project is still part of the ODP, it does not assess whether the project meets the RIT-T requirements i.e. it still has net benefits and is the lowest cost option. EUAA members support the development of ISP projects that are part of the ODP and have net benefits.

EUAA supports the use of staged CPAs to better assess net benefits, but in return for consumers taking the risk on early works costs (\$330 million for HumeLink and \$480 million for VNI West) being a stranded asset, consumers reasonably expect a very accurate capex and hence net benefit calculation to go into the feedback loop. This is required to give consumers confidence that the residual risk they are being asked to bear post project approval (certain capex in the regulatory asset base [RAB] that may be higher due to a post construction pass through but uncertain benefits over the life of the asset) is acceptable. EUAA does not have that confidence now.

EUAA cited the example of HumeLink. In the PACR, Transgrid included 'competition benefits' as part of the net benefit calculation. After engaging with stakeholders, AEMO explicitly excludes such benefits in the ISP. If, at the end of early works, Transgrid presents a project that:

- has capex materially above \$3.3b, and
- achieves net benefits by including competition benefits,

EUAA members would only support the project proceeding if the level of capex that goes into the Transgrid RAB is no higher than the level of AEMO identified benefits i.e. excluding competition benefits. It is then up to governments to fund the additional capex.

EUAA is also concerned about the uncertainty and potential impact of government policies that are seeking to achieve objectives that may only somewhat align with those of the ISP. For example, the New South Wales Government and Victorian Government are developing certain REZs that may increase overall costs for consumers, compared with the Draft 2022 ODP. Where governments wish to see projects accelerated ahead of the ODP, EUAA's view is that the cost of doing so should be borne by taxpayers, not energy consumers.



PIAC

PIAC expressed a reluctance to translate another consumer preference into a view about risk preferences in relation to actionable ISP projects. Nonetheless, PIAC noted as relevant and potentially instructive the fact that 40% of consumers responded to the AER's 2019 Value of Customer Reliability (VCR) survey that, if given a choice, they would not elect to spend anything at all to avoid the next outage to their electricity services. PIAC suggested that this could be considered an expression of a strong reluctance to risk any possible over-investment or early investment in the transmission network.

PIAC also stated that it will never be able to be convinced that HumeLink provides net benefit to New South Wales energy consumers, even if delivered at a capital cost of the current lower-bound estimate, and it is not plausible to think it would be delivered at or below that cost.

ECA

ECA believes the ISP's attempt to balance risks in the ODP is reasonable, provided that:

- The costs of ODP projects do not materially increase.
- There is no additional transmission development outside of what the ISP assumes.
- The market operates with rational bidding consistent with locational marginal pricing and congestion management (as the ISP models).
- The significant load growth from large-scale electrification of transportation and buildings that the ISP assumes, materialises.

ECA also noted that one in four households in the NEM has shown a preference for investing in rooftop solar, to reduce their exposure to the decisions of other factors that influence energy prices. Investments in the shared transmission network, in contrast, increase consumers' exposure to the impacts of external factors.

QEUN

QEUN takes the view that the question of whether the Draft 2022 ODP over-invests or under-invests in new transmission will be dependent largely on the impact of a range of state and federal government policies (e.g. phasing out period for internal combustion engine [ICE] and hybrid vehicles) and the potential growth of green hydrogen production prior to 2030.

In QEUN's view, it is almost impossible for AEMO to de-risk for consumers the ODP without state and federal governments working cooperatively and collaboratively on national energy policy. The re-signing of the Australian Energy Market Agreement as per the Finkel Recommendation would greatly assist AEMO to develop an achievable ISP.

If the announced green hydrogen production intentions of local and international corporations in Queensland are achieved, QEUN sees significant risk to price and reliability in coming years to the entire NEM.

QEUN concurs with the EUAA that the capital cost risk above the level of the identified benefit in a RIT-T should not be passed onto consumers. It remains highly concerned that state governments with verbal and/or financial support from the Federal Government will not want to accept the capex risk and will seek to pass the risk/cost through to consumers through state government derogations to state legislation e.g. what is currently being considered by the Queensland Government for the \$2.5 Billion CopperString Project in Queensland.



Comments on the importance of engaging directly with consumers on risk preferences as part of the 2024 ISP

ECA

ECA does not know the ISP-related risk preferences of the residential and small business consumers whose long-term interests it represents, because no one has effectively engaged them on the risk issues and asked them what their preferences are. ECA notes that the ISP Consumer Panel stated that direct surveying of consumers was desirable, but not achievable for the 2022 ISP. ECA supports the next ISP spending time and resources to better identify consumer risk preferences through direct consultation with households and businesses.

PIAC

PIAC's view is that noting:

- HumeLink will not provide a material reliability improvement,
- any decarbonisation benefit is captured elsewhere, and
- any market price benefits are efficiency considerations rather than consumer preferences,

the relevant consumer preferences regarding progressing HumeLink are the trade-off between energy bills that are lower on average but more volatile (without HumeLink) and bills that are less volatile, but higher on average (with HumeLink). To PIAC's knowledge, consumers have not expressed informed preferences of this nature in an appropriate targeted forum. It will be necessary to undertake community engagement to understand this preference for different types of consumers for future ISPs.

EUAA

On the International Association for Public Participation (IAP2) spectrum²¹, this consumer engagement should be 'collaborate' given the NEO. However, to get meaningful 'collaboration' requires a lot of 'inform' and 'consult' for consumers to be able to meaningfully 'collaborate'.

EUAA noted the importance of making any survey about consumer risk preferences robust, as the AER's VCR review was.

QEUN

QEUN emphasised the importance of ensuring any survey of consumer risk preferences was constructed to take account of the diversity of business and residential consumer experiences across the five regions in the NEM and the difference between urban and regional consumers (for example, wholesale prices in Queensland in CY 2022 have ranged from 45-70% above New South Wales and double to triple that of the three southern regions of the NEM, i.e. Victoria, South Australia and Tasmania).

²¹ See IAP2 Public Participation Spectrum, at <https://iap2.org.au/resources/spectrum/>.



Assessment of consumer risk preferences in the ISP

The targeted engagement on consumer risk preferences was very helpful in building an understanding of the wide spectrum of consumers and their risk preferences. Through this process, AEMO has formed the following views:

1. **The 2022 ISP broadly aligns with consumer risk preferences** – the Draft ISP appropriately balanced the risk of over- and under-investment. Given that the final ISP maintains the same level of consumer protection, and finds the cost of providing consumer protection is now more economic than calculated in the Draft ISP, the 2022 ISP therefore also appropriately balances the risk of over- and under-investment.

The protections provided by the ISP Feedback Loop are important in balancing these risks.

2. **Quantification of consumer risk preferences can be improved** – while consumer advocates are clearly skilled in advocating on behalf of their respective consumers, any true quantification of consumer risk preferences requires direct engagement or assessment of consumer behaviour. The suggestions from consumer advocates to apply consumer surveying or an assessment of consumer behaviour may improve the approach to quantifying consumer risk preferences in the 2024 ISP.



A1.3 Reflection and continuous improvement

AEMO is committed to continuous improvement in engagement practice and to working with stakeholders as collaboratively and effectively as possible.

AEMO will publish a Draft 2024 ISP Engagement Plan cycle shortly after the final 2022 ISP, for stakeholder comment. The development of the draft engagement plan is informed by stakeholder feedback on the 2022 ISP cycle, including through both written submissions and a specific stakeholder survey.

Once again, AEMO thanks all stakeholders for their huge contributions to the 2022 ISP. AEMO looks forward to continuing to work with all stakeholders across the development of the 2023 IASR and 2024 ISP.