ISP Methodology Webinar

AEMO Planning and Forecasting

17 June 2021

We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture.
We pay our respects to their Elders past, present and emerging.

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Slido – Today's discussion

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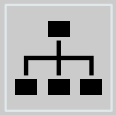
Join with your name (no account required)

Slido will be used throughout the session for Q&A and polls

Objectives of the day

Initial Response to Submission Feedback with Discussion on Key Points Raised

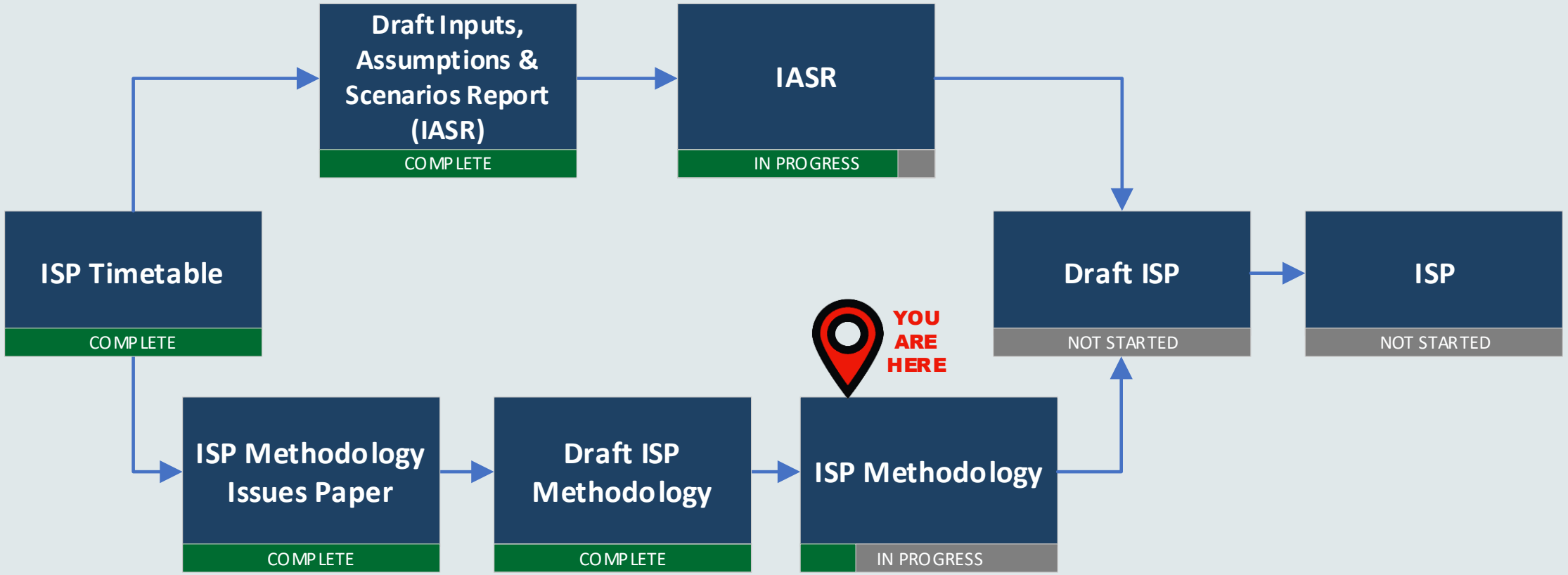


To detail common areas of feedback in the submissions and provide an indication of AEMO's current intentions and considerations

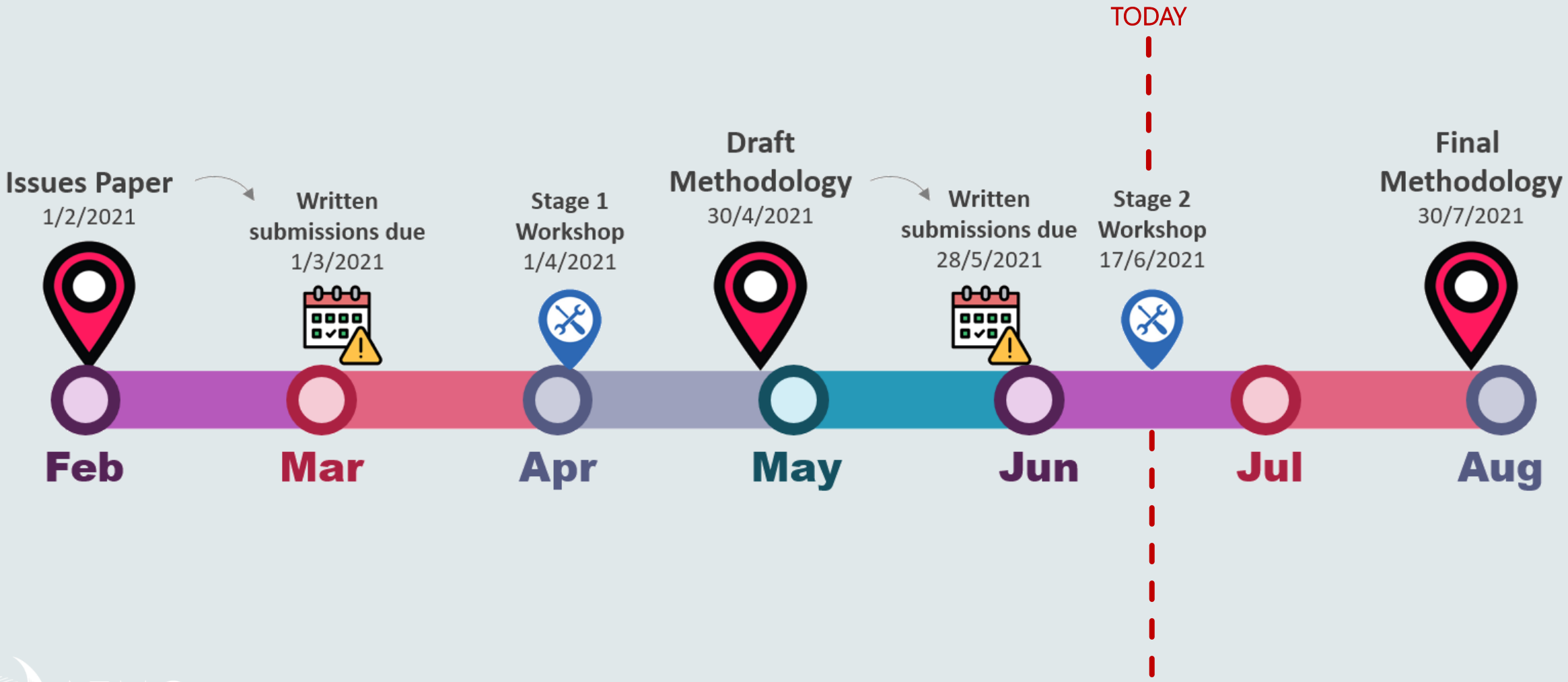
Deeper discussions on areas of contention, or where more clarity is needed.

To seek feedback on AEMO's reflections on the Draft ISP Methodology submissions

2022 ISP Progress



Methodology consultation timeline



2022 ISP consultation milestones

AEMO Publication
AER Publication
TNSP Publication
Consumer Panel Report

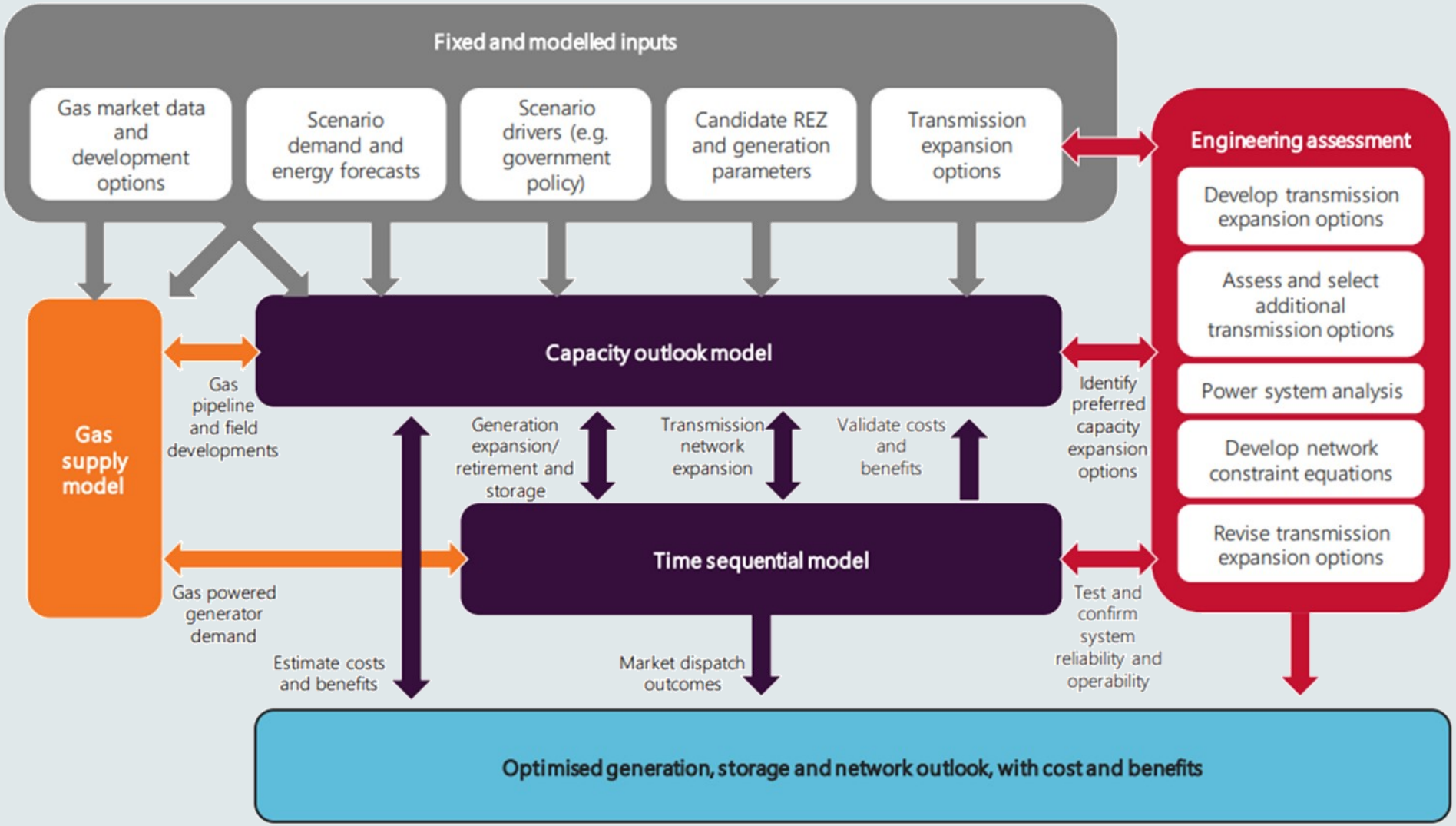
Publication	Timing	Responsibility
ISP Timetable	30 October 2020	AEMO
Establish ISP Consumer Panel	By 30 November 2020	AEMO & ISP Consumer Panel
Draft IASR	11 December 2020	AEMO
ISP Methodology Issues Paper	1 February 2021	AEMO
Draft ISP Methodology	30 April 2021	AEMO
Preparatory Activity Reports	By 30 June 2021	TNSPs
ISP Methodology	30 July 2021	AEMO
IASR	30 July 2021	AEMO
AER's IASR Review Report	By 30 August 2021	AER
Consumer Panel Report on IASR	By 30 September 2021	ISP Consumer Panel
Draft 2022 ISP	10 December 2021	AEMO
AER's ISP Review Report	By 10 January 2022	AER
Consumer Panel Report on Draft ISP	By 10 February 2022	ISP consumer panel
2022 ISP	30 June 2022	AEMO

AEMO received 17 submissions (including submissions provided in a verbal feedback session held with consumer advocates)

Advisory	Etrog Consulting
Consumer Advocacy	ISP Consumer Panel; public interest ADVOCACY CENTRE LTD; QFF QUEENSLAND FARMERS' FEDERATION; Ai GROUP; UNITING COMMUNITIES; Major Energy Users Inc.
Electricity Network	Powerlink QUEENSLAND
Generation/ Retail	origin; EnergyAustralia; Victorian Bioenergy Network; agl
Industry Body	Maritime Union of Australia 1872; ETU Electrical Trades Union; ENERGY & WATER OMBUDSMAN SA
Environment	TOTAL ENVIRONMENT CENTRE
Research/ Academia	MONASH University

Submissions are published on AEMO's website.

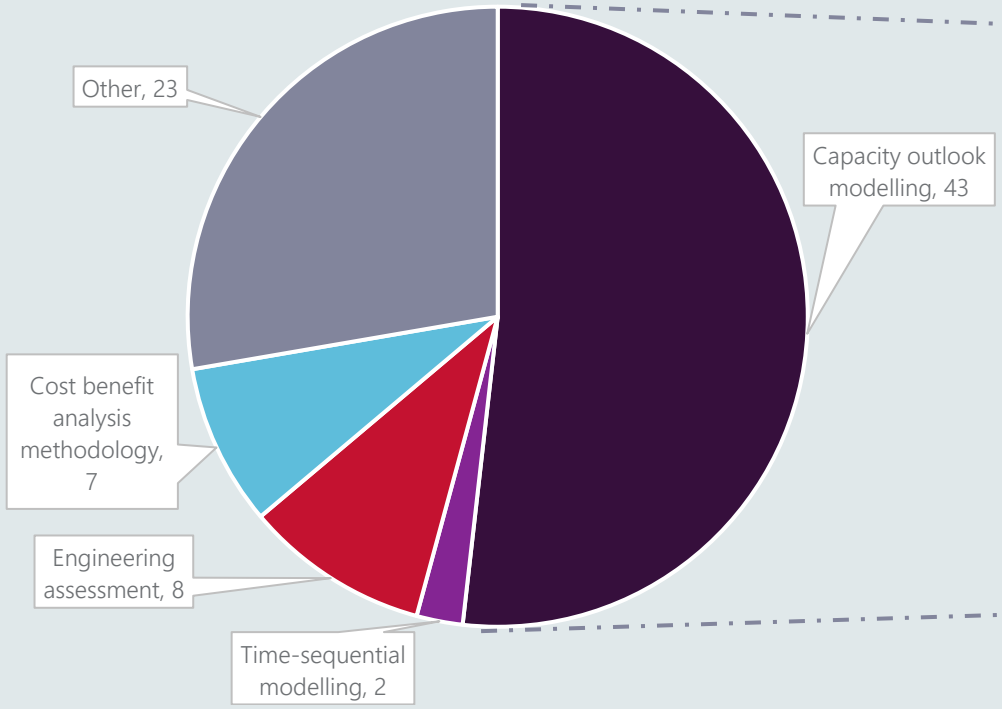
ISP modelling approach recap



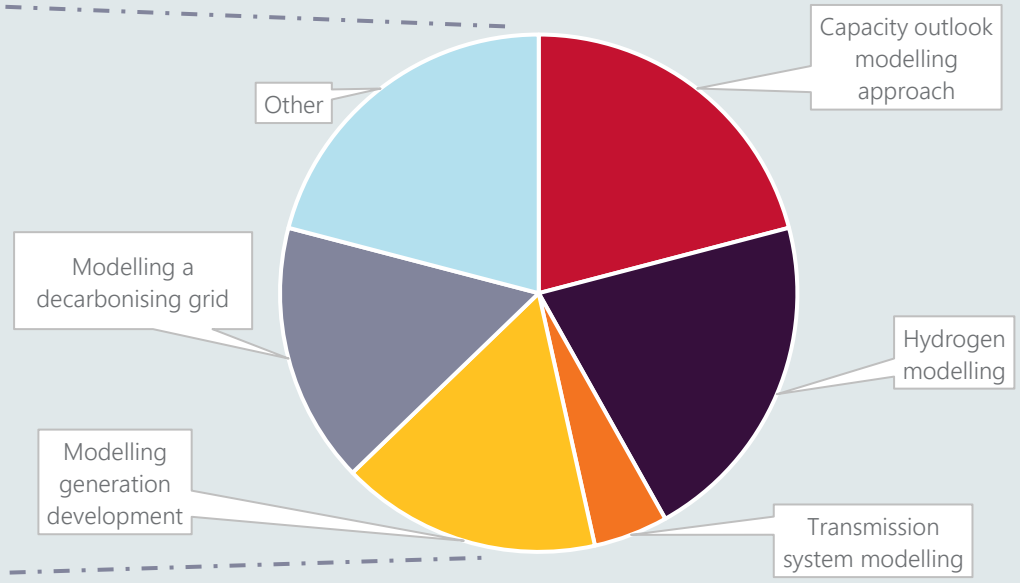
Summary of feedback

- Submissions have been categorised into which section of the Draft ISP Methodology they fall within.
- Areas with higher levels of response or relative significance will form the focus of this webinar.
- The *Capacity outlook modelling* category has received the most submissions similar to the previous Issues Paper consultation.

Total feedback (83 responses)



Capacity outlook modelling (43 responses)



Theme 1: Scenario weights

Feedback	There was general support for the use of the Delphi technique described in the ISP methodology as the means for determining scenario weights.
	Both the ISP Consumer Panel and PIAC raised the importance of including consumer representatives from different types of consumers in the panel.
Our current consideration	AEMO welcomes further views on the approach described, and the make-up of the Panel.

Theme 2: Hydrogen in the ISP

Feedback

A consistent theme in the feedback received was for caution around the uncertainty regarding uptake of hydrogen (ISP 2022 Consumer Panel, PIAC, MEU) and the location of electrolysers (EWOSA, MEU).

Recommendation to consider full range of services hydrogen could provide (Australian Industry Group).

Our current consideration

AEMO recognises the challenges associated with being definitive regarding a new and potentially disruptive addition to the energy sector. For this reason, the Hydrogen Superpower scenario has been introduced as a scenario to explicitly test the impact of this export uncertainty. The weighting of the scenario will be subject to the scenario consultation process which is expected to take this uncertainty into account. The other scenarios have minimal domestic hydrogen development.

AEMO also recognises the uncertainty of the possible locations but notes sites must be identified. Likely locations for export facilities were nominated and AEMO sought if additional stakeholder guidance was available. AEMO considered that industrial ports are a more reasonable assumption for potential export facilities in this scenario than capital cities. The location of the export ports in this scenario applying the draft methodology will be an endogenous outcome of the approach that minimises costs.

AEMO welcomes further input on the approach to modelling hydrogen in the ISP.

Theme 3: Annuity Approach

Feedback	The ISP Consumer Panel and MEU outlined their ongoing concerns around the annuity approach to costs and benefits, particularly around the uncertainty of benefits beyond the modelling horizon.
	The MEU proposed three changes on account of this perceived issue: - Higher discount rates - Benefits needing to match costs within the modelling horizon. - Growing cost of capital over time
Our current consideration	AEMO has engaged independent expert economic consultants to provide a recommended range for the discount rate to apply in the ISP which will apply across the scenarios assessed in the cost-benefit analysis, as well as provide sensitivity analysis to understand the sensitivity of the Optimal Development Path to this variable.
	AEMO has interpreted the MEU's proposal that benefits match costs to mean the entire cost of the project should be justified within the modelling period. This would have the effect of biasing towards early project delivery and is therefore not considered suitable.
	AEMO at this stage is not aware of a reasonable alternative to the approach proposed for comparing costs of different development paths considering the complexity of modelling many concurrent capital investments with different timings and economic life assumptions.
	AEMO notes that any actionable projects are likely to be delivered in the 2020s, meaning that by the end of the 2050 modelling horizon, approximately 80% of the upfront capital costs are considered within the modelling period when applying the annuity approach.
	AEMO welcomes further input on the annuity approach outlined in the Draft ISP Methodology.

Annuity approach

For actionable transmission projects, a high proportion of the total cost will be included within the modelling horizon.

The annuity approach is applied consistently for generation and transmission investments.

Theme 4: Types of Benefits and Costs

Feedback

Scope of benefits in the ISP should be expanded to include wider societal benefits such as:

- Emission reduction benefits (AI Group)
- Employment, education and health (ETU, MUA)

The ISP should consider additional costs such as transition costs for affected communities, particularly when Renewable Energy Zones are located more than 50 km from an existing coal fired power station (ETU, MUA).

Our current consideration

Wider economic benefits and costs such as emissions reduction, employment, education, health and other transition costs are best captured through government policy. AEMO may only consider classes of benefits set under the actionable ISP framework and must exclude economic impacts that accrue to parties other than those that produce, consume or transport electricity in the market.

AEMO's cost estimation process for transmission includes adjustment factors to account for delivery when a number of large projects are occurring concurrently (e.g. due to competition for labour and materials). The majority of projects in the ISP have the highest factor applied for this in our transmission cost estimates.

AEMO welcomes further input on the categories of benefits considered in the Draft ISP Methodology.

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Theme 5: Other improvements

Feedback	Offshore wind developments are only presently considered for Gippsland REZ. Offshore wind should be a candidate for a number of other REZs. (MUA, ETU)
	AEMO needs to clarify how it models system strength requirements and costs (AGL) and the impact of who pays (MEU).
	AEMO needs to improve how it models non-network solutions. (MEU)
Our current consideration	AEMO will update the ISP methodology, to include offshore wind as a generation candidate for all scenarios including the counterfactual.
	System strength requirements and costs are considered explicitly in both the capacity outlook modelling and power system analysis.
	AEMO has non-network options considered throughout the ISP process which are compared against network solutions. Importantly the ISP does not 'lock in' network solutions. AEMO has and will continue engage with non-network providers to ensure appropriate consideration.
	AEMO welcomes any other suggestions on how to improve the ISP Methodology.

Theme 6: General support of Methodology

AEMO received widespread support for the majority of the ISP methodology.

This includes support for:

- The Draft ISP Methodology broadly – with comments on potential refinements.
- Structure of Consultation Paper and Methodology.
- The sub-regional approach – an improvement to the former regional approach.
- Inclusion of anticipated projects.
- The proposed use of sensitivities.
- Approaches proposed to select the optimal development path.
- The inclusion of hydrogen modelling and the importance of reflecting the uncertainty of the scenario.
- Scenario weightings approach – noting importance of consumer representation.

Discussion

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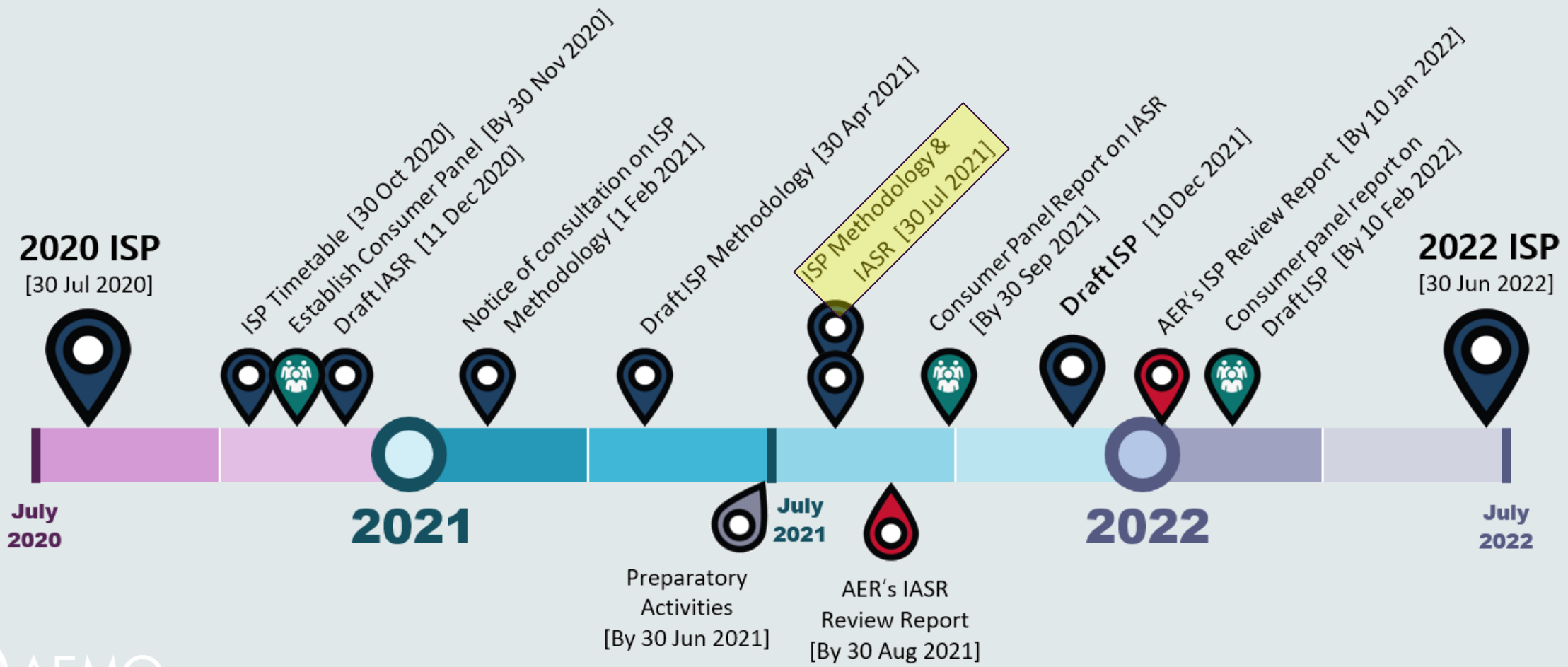
Please type in your questions in the Q&A section

Next Steps


2020 ISP
[30 Jul 2020]
ISP Timetable [30 Oct 2020]
Establish Consumer Panel [By 30 Nov 2020]
Draft IASR [11 Dec 2020]
Notice of consultation on ISP Methodology [1 Feb 2021]
Draft ISP Methodology [30 Apr 2021]
ISP Methodology & IASR [30 Jul 2021]
Consumer Panel Report on IASR [By 30 Sep 2021]
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AER's ISP Review Report [By 10 Jan 2022]
Consumer panel report on Draft ISP [By 10 Feb 2022]
2022 ISP
[30 Jun 2022]
July 2020
2021
July 2021
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Preparatory Activities [By 30 Jun 2021]
AER's IASR Review Report [By 30 Aug 2021]


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