This event will be recorded and the recording published on AEMO's website

Draft ISP Methodology

Pre-submission webinar

3 April 2025

We acknowledge the Traditional Custodians of the land, seas and waters across Australia. We honour the wisdom of Aboriginal and Torres Strait Islander Elders past and present and embrace future generations.

We acknowledge that, wherever we work, we do so on Aboriginal and Torres Strait Islander lands. We pay respect to the world's oldest continuing culture and First Nations peoples' deep and continuing connection to Country, and hope that our work can benefit both people and Country.

'Journey of unity: AEMO's Reconciliation Path' by Lani Balzan

AEMO Group is proud to have launched its first Reconciliation Action Plan in May 2024. 'Journey of unity: AEMO's Reconciliation Path' was created by Wiradjuri artist Lani Balzan to visually narrate our ongoing journey towards reconciliation – a collaborative endeavour that honours First Nations cultures, fosters mutual understanding, and paves the way for a brighter, more inclusive future.

Read our RAP

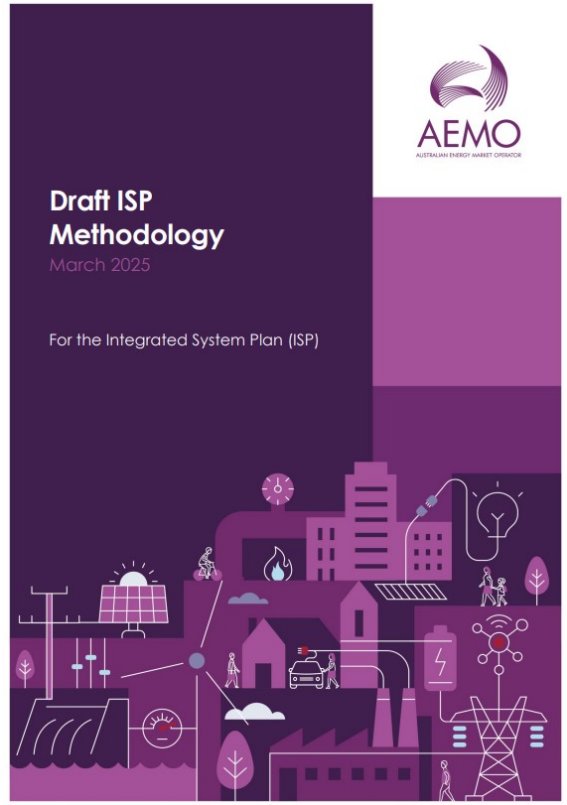
Today's agenda

Time (AEDT)	Item	Speaker
3:30 pm	Agenda & welcome	**Samantha Lloyd**, Stakeholder Engagement Lead
3:35 pm	Introduction	**Merryn York**, Executive General Manager System Design
3:40 pm	Stakeholder feedback	**Samantha Christie**, Manager Strategic Planning
3:45 pm	Draft ISP Methodology key proposed changes, and next steps	**Samantha Christie** **Alice McLaren**, Manager Market Operability **Saliw Cleto**, Manager Integrated Modelling **Nathan White**, Manager System Security Planning
4:15 pm	Q&A	*Facilitated by Samantha Lloyd*
5:00 pm	Survey & close	**Samantha Lloyd**

Today's objectives

Present the proposed changes to the Draft ISP Methodology to support stakeholder engagement and consultation submissions.

Ask questions using Slido for response by AEMO in a Q&A session after the presentation



Read the report and supporting material

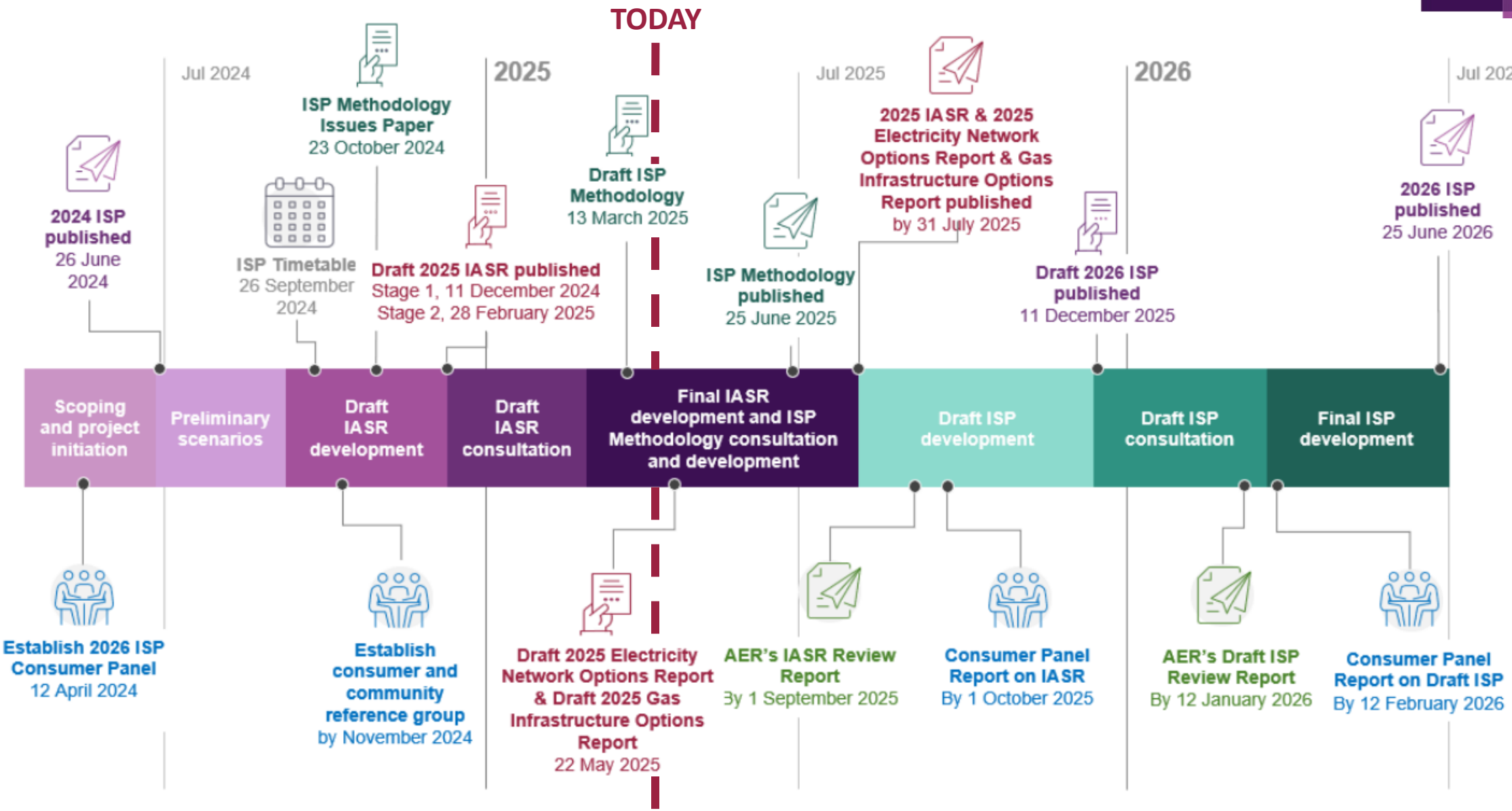
How to interact today

www.sli.do
#AEMO

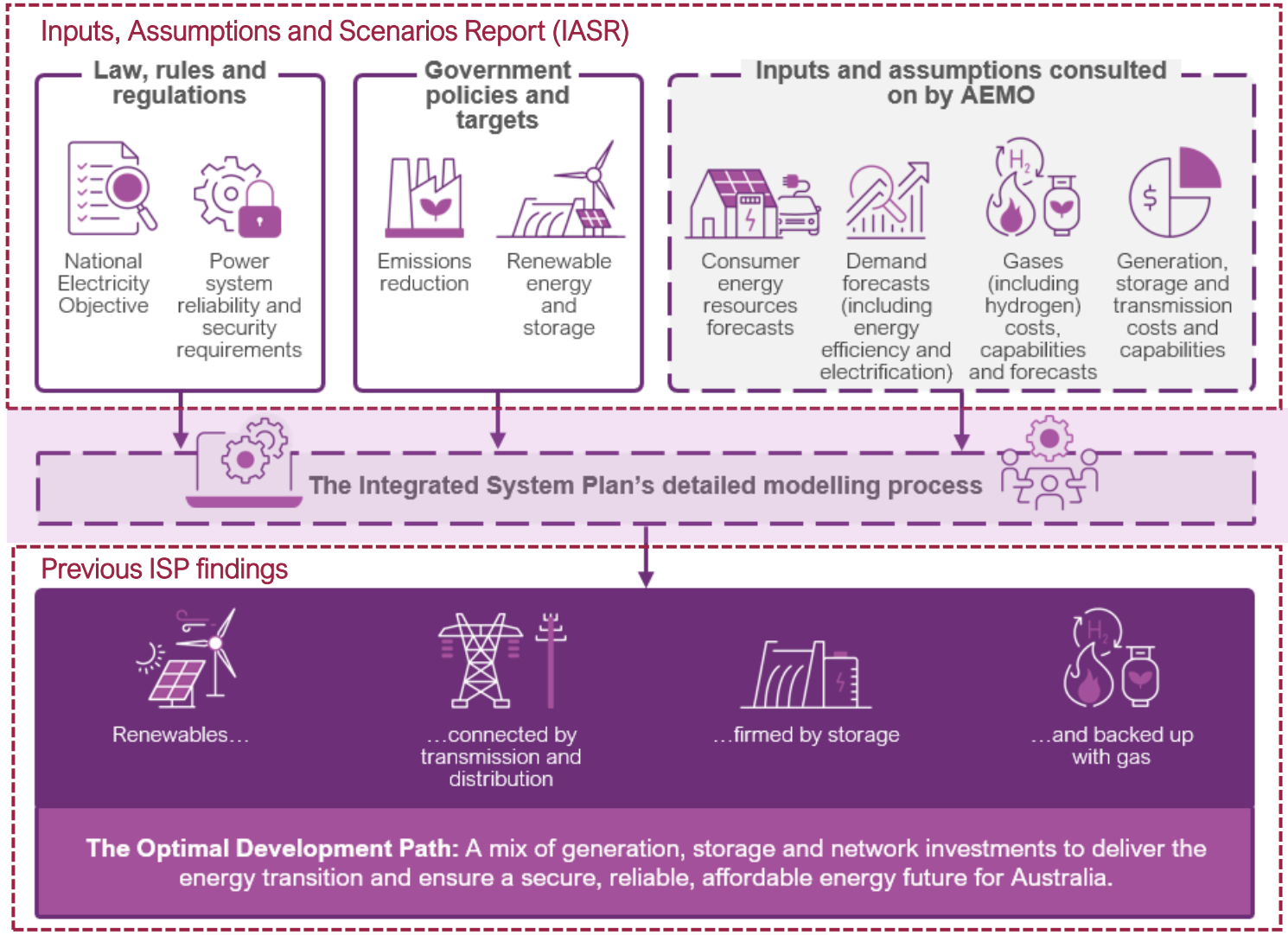
- Please ask questions using Slido www.sli.do #AEMO
- Join with your name, no need to log in
- Ask your own questions or up-vote others' questions
- Provide feedback through our post-webinar survey

Introduction

2026 ISP Timetable



AEMO undertakes a two-year process to deliver the Integrated System Plan



ISP Methodology consultation

ISP Methodology Issues paper

Stage 1 consultation

Draft ISP Methodology and Consultation paper

Stage 2 consultation

ISP Methodology and Consultation summary report

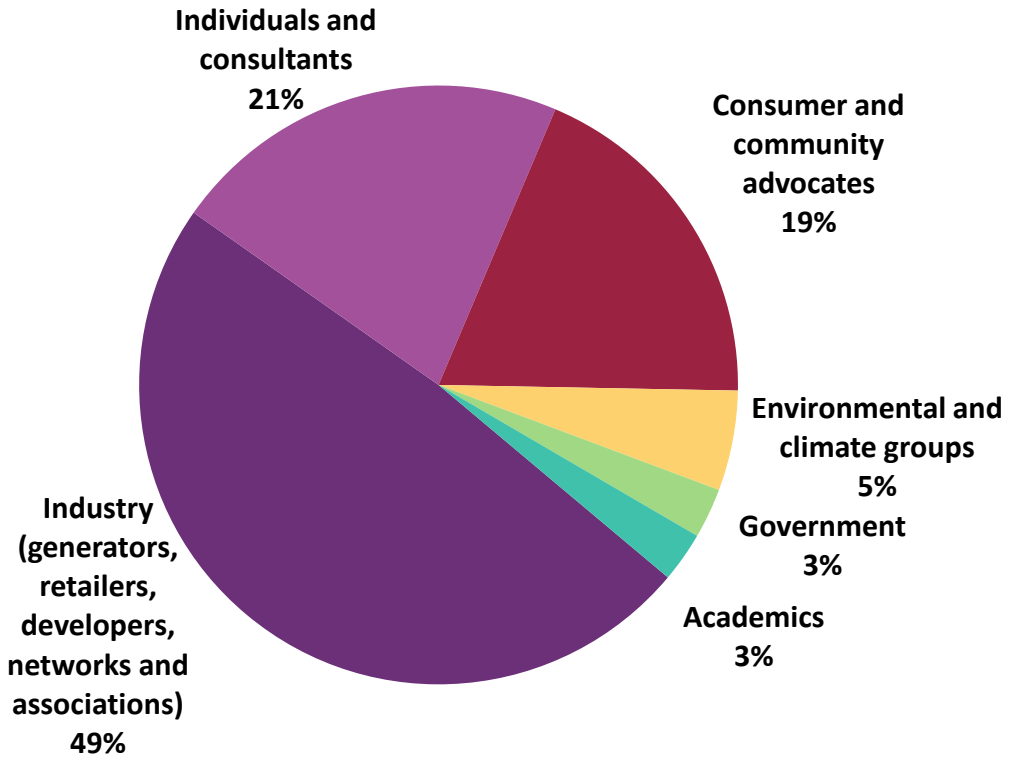
Stakeholder feedback so far

ISP Methodology issues paper consultation

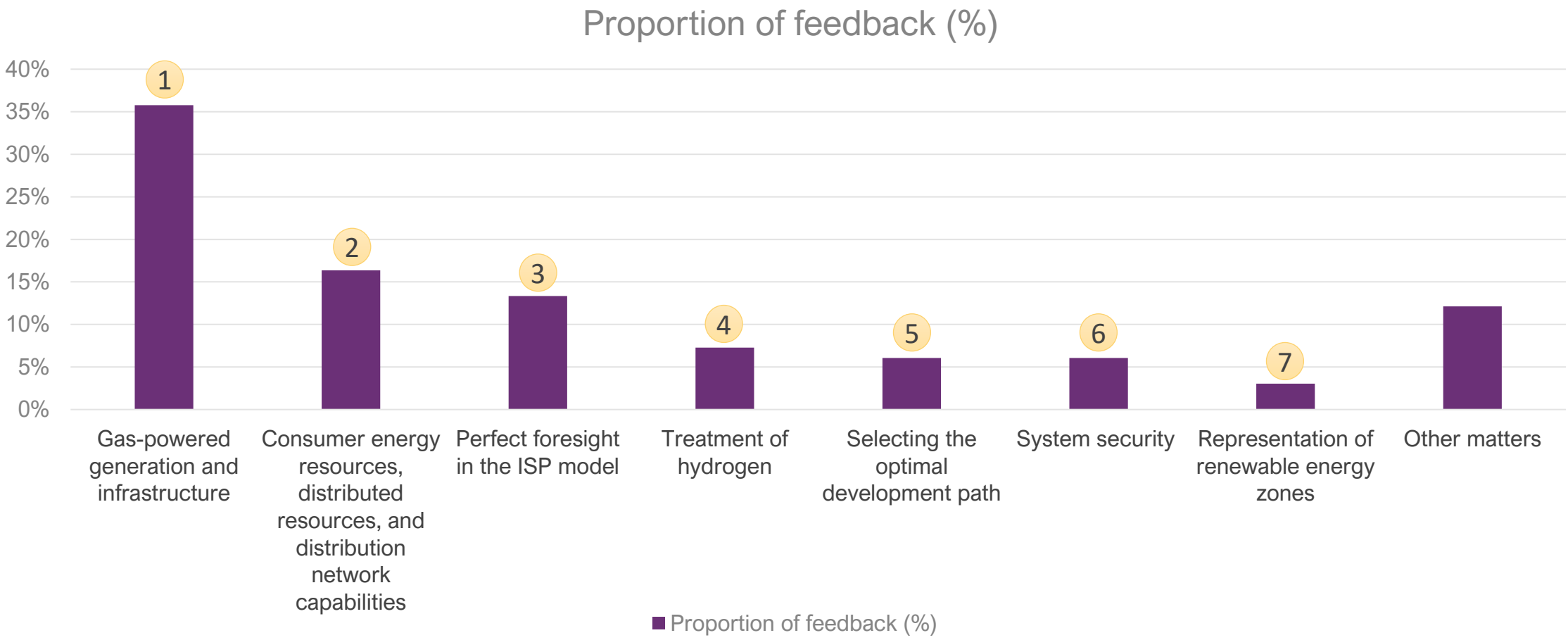
ISP methodology issues paper consultation update

ISP Methodology Issues paper submissions	
Formal written submissions	32
2026 ISP Consumer Panel report	1
Consumer advocates verbal session	4
Public submissions	**37**

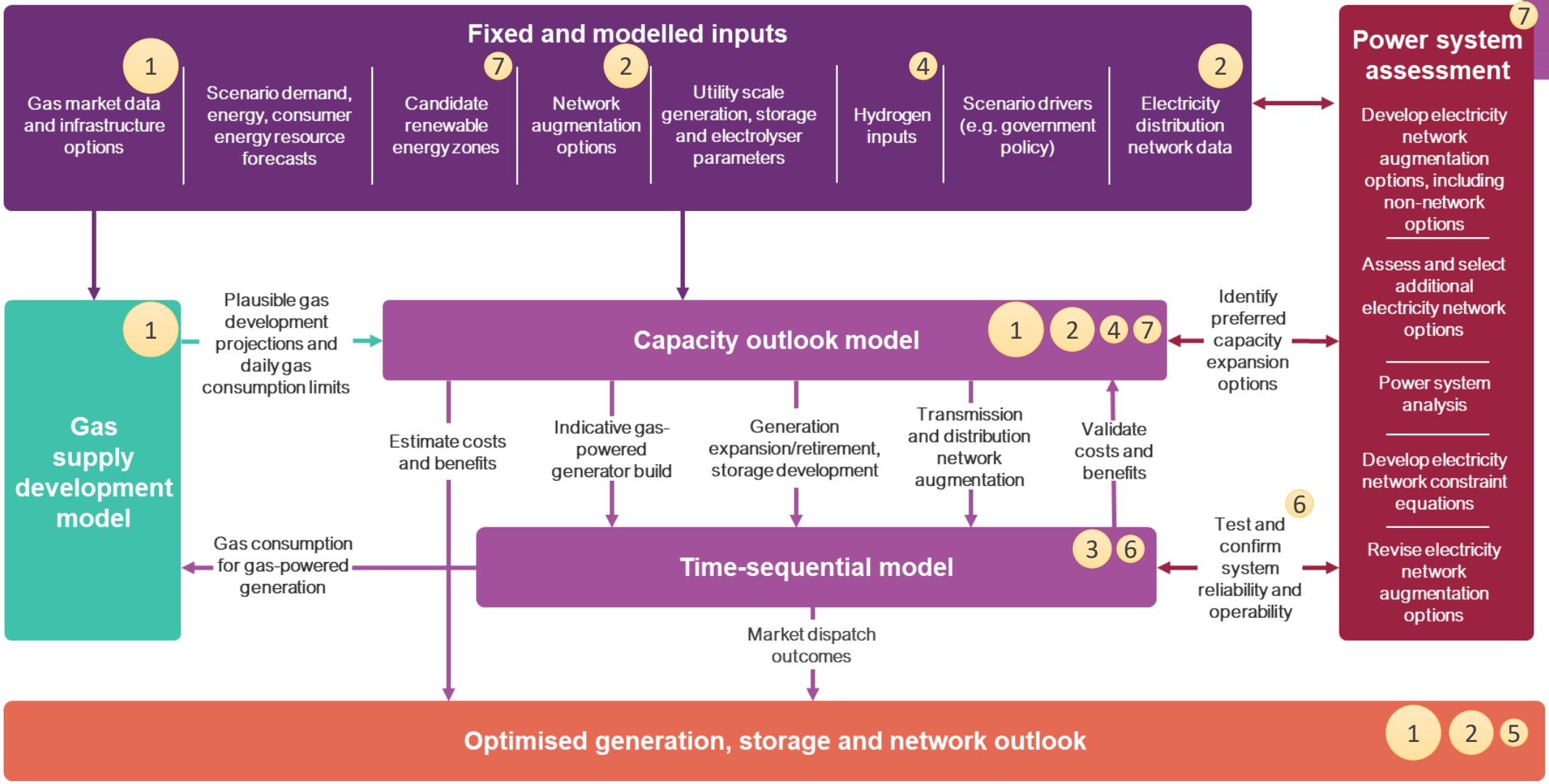
Consultation submissions per stakeholder cohort



AEMO received feedback on 7 key areas

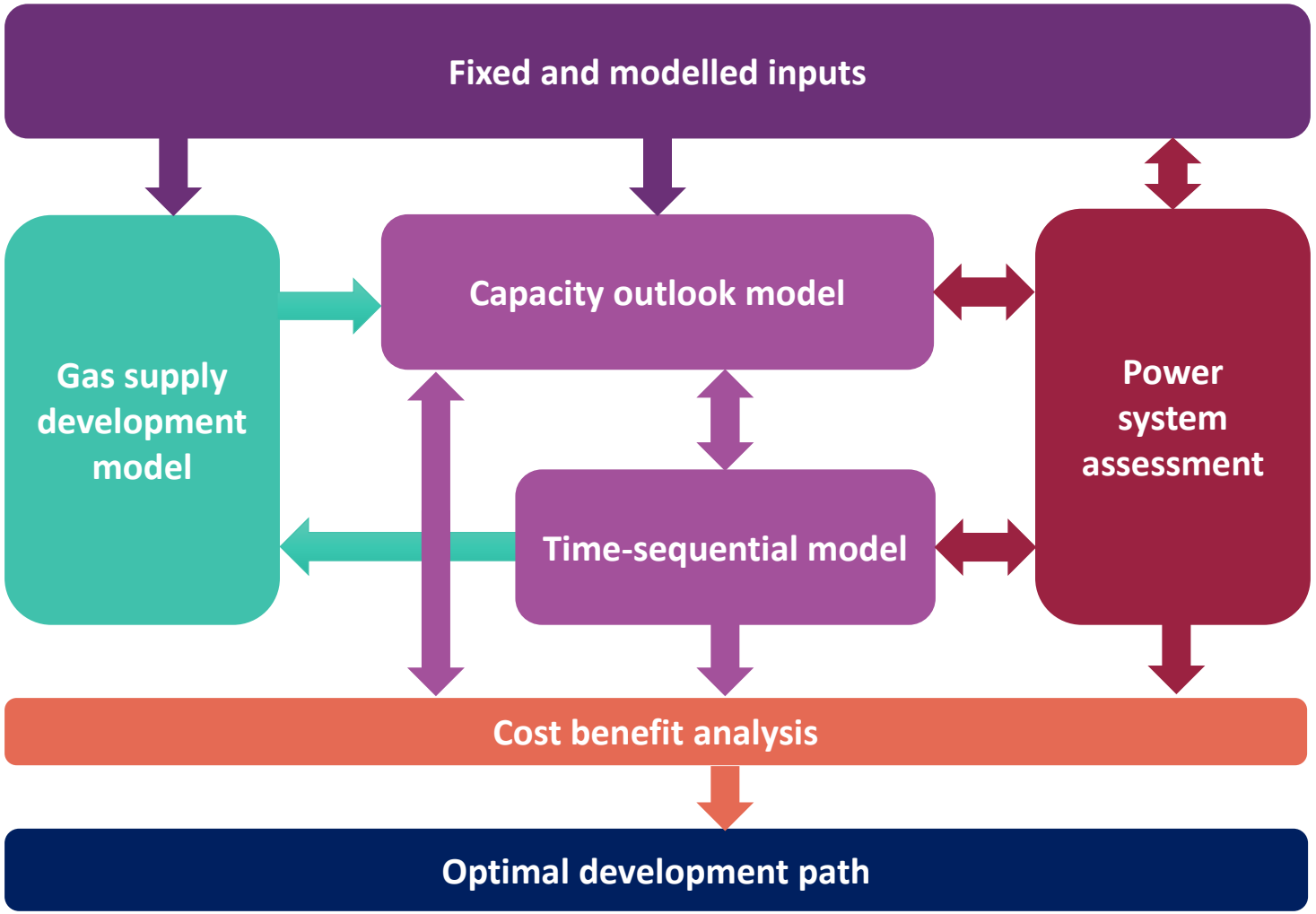


Feedback was related to all aspects of the methodology



Updates proposed in Draft ISP Methodology

Overview of ISP modelling methodology



1. Expanding the gas supply model and introducing gas development projections

Issues paper proposal

- Develop at least one gas development projection per scenario to account for realistic gas supply limitations
- Incorporate gas infrastructure development options informed by industry engagements

Stakeholder feedback

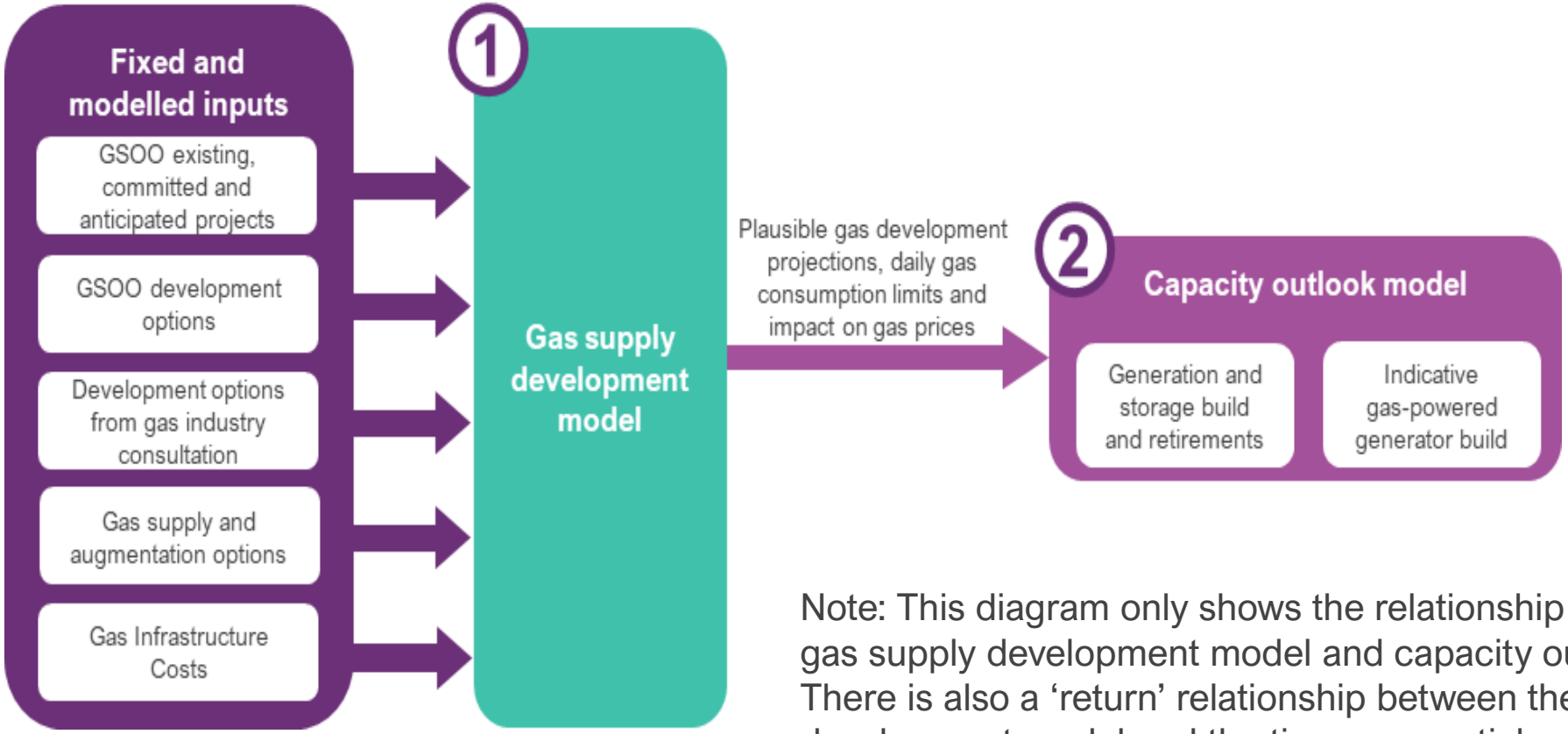
- Assess a range of gas development projections
- Consult widely and transparently on any gas information to be incorporated in the ISP
- Consider whether gas price treatment should vary across different gas development projections

Draft proposal

- Gas infrastructure costs to inform selection of gas development projections
- Gas development projections will influence uptake and operation of GPG, including risks and benefits of the ODP
- Treatment to be enhanced over successive ISPs as analysis and data evolve

GPG: Gas powered generation, ODP: Optimal development path

Interaction between electricity and gas supply development models



Note: This diagram only shows the relationship between the gas supply development model and capacity outlook model. There is also a 'return' relationship between the gas supply development model and the time-sequential model.

2. Introducing representation of distribution network capacity

Issues paper proposal

- Engaging with DNSPs for distribution network data
- Implement distribution capabilities and augmentations at sub-regional level
- Comparing trade-offs with utility-scale generation, storage and transmission augmentations

Stakeholder feedback

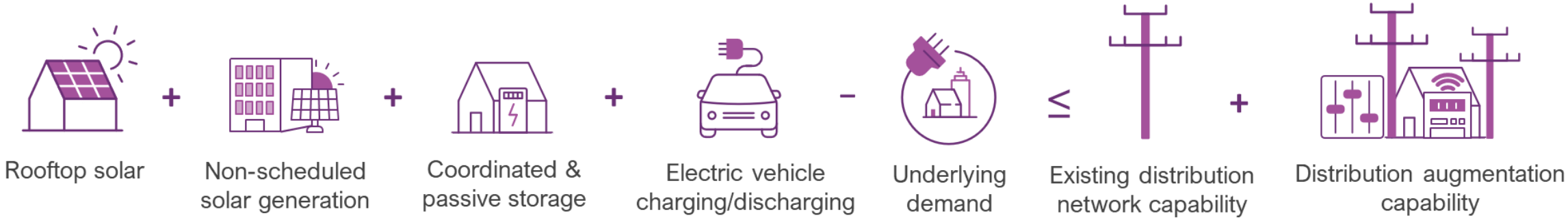
- Provide locational signals for distribution network augmentations to support CER.
- Concern about CER uptake considered a fixed input.
- Risk of potential increasing impact of CER curtailment.
- Co-optimise distribution investments with other technologies.

Draft proposal

- Proposal includes locational data and augmentation costs
- CER uptake is fixed, but distribution augmentations to support increased CER operation would be assessed, with potential capacity to support assessment of additional distributed resource developments as well
- Treatment to be enhanced over successive ISPs as analysis and data evolve

DNSP: Distribution network service provider, CER: Consumer energy resources

Implementing distribution network capacity for consumer energy resources and other distributed resources



Note: This image shows consumer energy resources only. AEMO is continuing to explore how other distributed resources can be incorporated, as discussed in the Draft ISP Methodology consultation paper.

3. Modelling future hydrogen electrolysers

Issues paper proposal

- Disaggregating hydrogen demand for green commodity production from hydrogen demand for export
- Applying minimum utilisation factors for electrolysers
- Adjusting timeframe of hydrogen production targets from ‘monthly’ to ‘daily’

Stakeholder feedback

- Mixed views on applying utilisation factors for electrolyser operation
- Regard for hydrogen as a source of energy supply as well as electricity demand to reduce spilled solar or curtailed load
- Include hydrogen storage costs in the single-stage long-term model

Draft proposal

- Model hydrogen electrolysers within renewable energy zones (REZs) rather than at ports
- Model ‘weekly’ balancing hydrogen production target to balance between production and storage costs, and electricity infrastructure costs
- Electrolyser capital and operating costs in the capacity outlook model include a component for assumed hydrogen storage and pipeline costs where relevant.

4. Testing previously actionable transmission projects

Issues paper proposal

- Test previously actionable projects at the project proponent's timing and at a 'restart timing' after end of the actionable window
- 'Restart timing' would represent the additional time required to re-start a project after it has been paused in a successive ISP

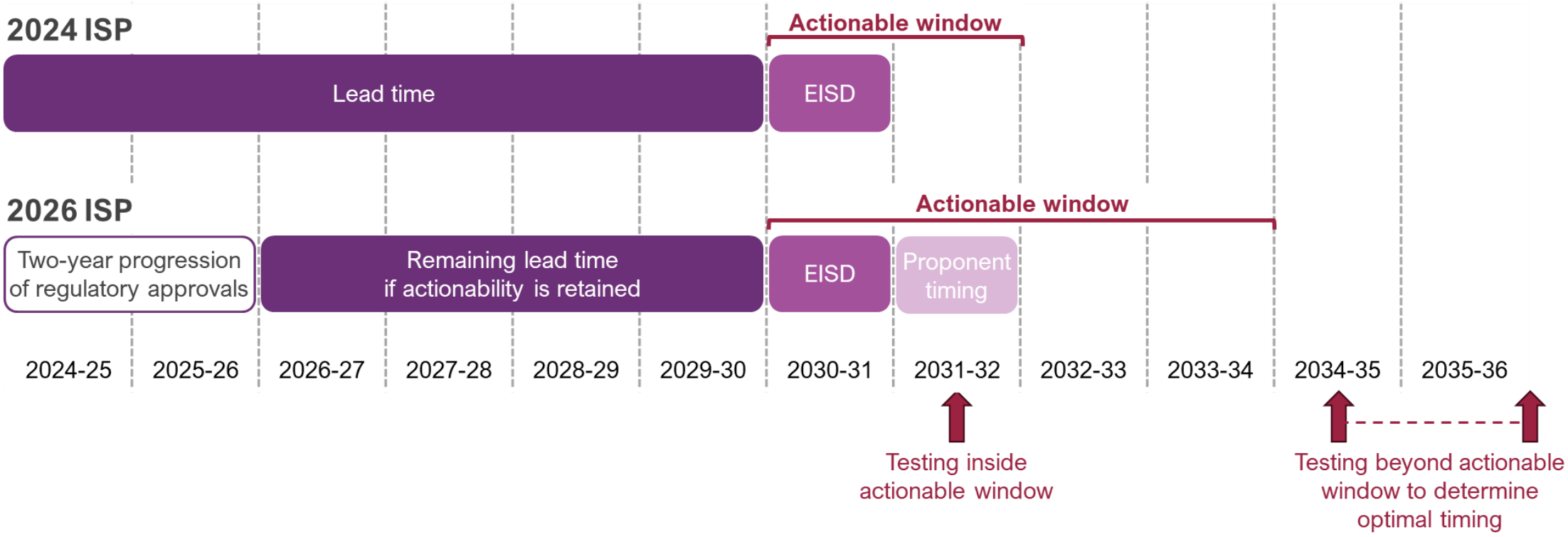
Stakeholder feedback

- 'Restart timing' along with actionable window introduces ambiguity around delays and time required to redo regulatory activities
- Revert to original two-year fixed actionable window

Draft proposal

- Proposal of 'restart timing' dropped
- Previously actionable projects to be tested at proponent timing and beyond the actionable window to determine the optimal timing of projects in development paths

Previously actionable projects to be tested at proponent timing and beyond the actionable window to determine the optimal timing



5. Enhancing system security

Issues paper proposal

- Revised system security constraint to include costs to meet minimum and efficient levels of system strength
- Reformulated constraint to reflect the build of synchronous condensers to replace the system security contributions from retiring thermal generation

Stakeholder feedback

- Support for revised constraint
- May skew results towards synchronous condensers while other technologies are viable
- Need to consider lead times for solutions
- Alternative technology suggestions for system strength and inertia

Draft proposal

- Apply a minimum synchronous unit constraint to reflect replacement asset lead times
- Apply a security remediation cost to both generator retirements and IBR/REZ capital investment decisions

IBR: Inverter based resources, REZ: Renewable energy zone

6. Representation of renewable energy zones (REZs)

Issues paper proposal

- Introduce a REZ import constraint to accommodate appropriate treatment of import limitations and augmentation options
- Including multiple wind traces in large REZs with diverse resources

Stakeholder feedback

- Include a Flowflowpath term in REZ import constraint where REZ loads could be fed from outside the REZ
- Validate building wind projects over developable resource footprints and capacity
- Support for multiple wind resource quality tranches

Draft proposal

- Include additional wind tranches in large REZs where the diversity of generation location can impact on the optimal development path
- Review and cap land use limit for REZs where the total developable land area is greater than the entire REZ area that has quality wind resources.

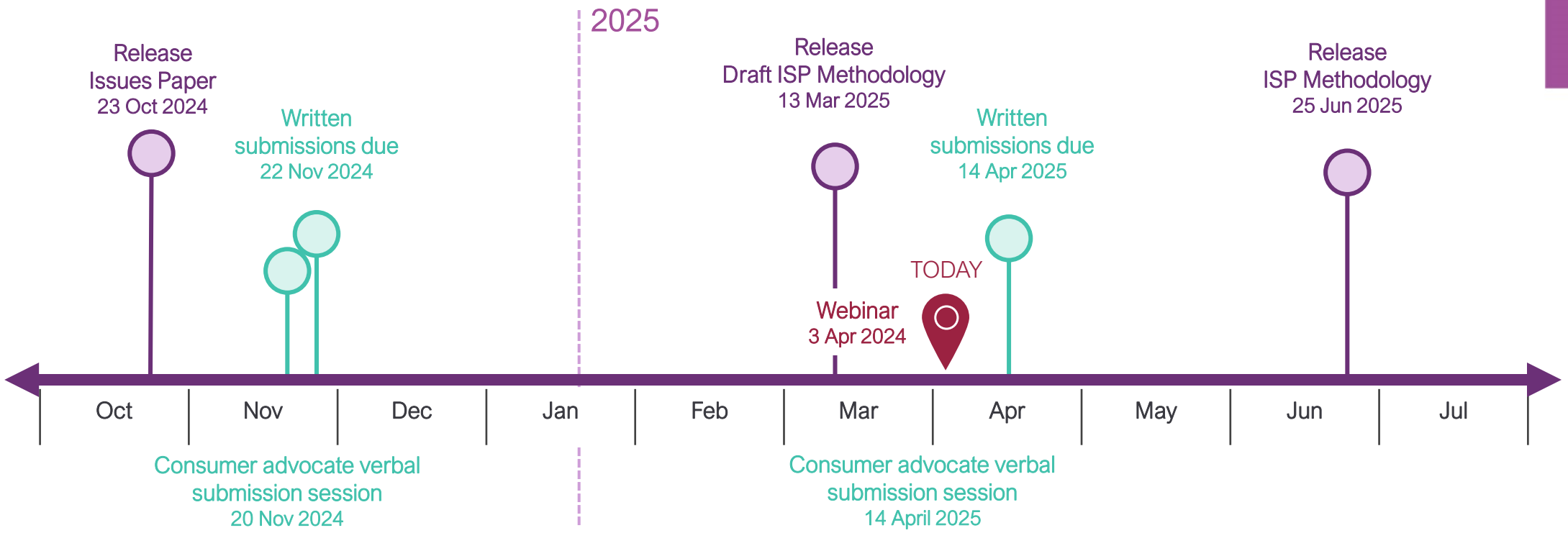
Other changes proposed

7. Aligning sub-regional topology and sub-regional electricity demand allocation approach with proposal in Draft 2024 Electricity Demand Forecasting Methodology.

8. Implementing 'imperfect foresight' in the time-sequential model for storage devices by:
   - limiting charge and discharge behaviours near the maximum and minimum state of charge,
   - applying operating strategies developed with alternative system conditions with imperfect visibility of upcoming weather patterns.

Next steps

Completing the ISP Methodology review



For more information

- Join the ISP mailing list to never miss an update
- The 2026 ISP stakeholder engagement strategy and past engagements including webinar recordings can be found on the 2026 ISP engagement webpage
- Questions? Please contact the AEMO ISP team: ISP@aemo.com.au

Questions & comments

www.sli.do
#AEMO
Sign in with your name

How did we go today?

Please complete the post event survey for the webinar at:
https://nam.dcv.ms/lk9q6OomJx

Please submit your Draft ISP Methodology submissions to ISP@aemo.com.au by 14 April 2025.

For future engagement opportunities, please refer to the 2026 ISP engagement webpage

For more information visit

aemo.com.au