

# 2020 ISP Appendix 1. Stakeholder Engagement

July 2020

# Important notice

## PURPOSE

This is Appendix 1 to the Final 2020 Integrated System Plan (ISP), available at <https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp>.

AEMO publishes this 2020 ISP pursuant to its functions under section 49(2) of the National Electricity Law (which defines AEMO's functions as National Transmission Planner) and its broader functions under the National Electricity Rules to maintain and improve power system security. In addition, AEMO has had regard to the National Electricity Amendment (Integrated System Planning) Rule 2020 which commenced on 1 July 2020 during the development of the 2020 ISP.

## DISCLAIMER

This document or the information in it may be subsequently updated or amended. This document does not constitute legal or business advice, and should not be relied on as a substitute for obtaining detailed advice about the National Electricity Law, the National Electricity Rules, or any other applicable laws, procedures or policies. AEMO has made every effort to ensure the quality of the information in this document but cannot guarantee its accuracy or completeness.

Accordingly, to the maximum extent permitted by law, AEMO and its officers, employees and consultants involved in the preparation of this document:

- make no representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of the information in this document; and
- are not liable (whether by reason of negligence or otherwise) for any statements or representations in this document, or any omissions from it, or for any use or reliance on the information in it.

## VERSION CONTROL

Version	Release date	Changes
1.0	30/7/2020	Initial release

© 2020 Australian Energy Market Operator Limited. The material in this publication may be used in accordance with the [copyright permissions on AEMO's website](#).

# Contents

<b>Summary</b>	<b>5</b>
<b>A1.1. Stakeholder engagement program and timelines</b>	<b>6</b>
A1.1.1 Consultations	7
A1.1.2 Workshops	7
A1.1.3 Webinars	7
A1.1.4 Other engagements	7
<b>A1.2. Consultation on Draft 2020 ISP</b>	<b>8</b>
A1.2.1 Summary of feedback	8
A1.2.2 Consultation outcomes	9

## Tables

Table 1	Summary of key themes from Draft ISP Consultation submissions	8
---------	---	---

## Figures

Figure 1	Stakeholder engagement and consultations in 2019	6
Figure 2	Stakeholder engagement and consultations in 2020	6

# 2020 ISP Appendices

## Appendix 1. Stakeholder Engagement

Stakeholder engagement program and timelines  
Consultation on Draft 2020 ISP

## Appendix 2. Cost Benefit Analysis

Understanding the cost benefit analysis  
Determining the least-cost development path for each scenario  
Assessing benefits of candidate development paths under each scenario  
Testing the resilience of candidate development paths to events that may occur

## Appendix 3. Network Investments

Network investments in the optimal development path  
Committed ISP projects  
Actionable ISP projects  
Future ISP projects recommended with preparatory activities  
Other future ISP projects  
Addressing network congestion  
Alternatives considered

## Appendix 4. Energy Outlook

Future energy supplies for a resilient power system  
Unlocking VRE through REZs  
Managing variable energy supplies through energy storages and firming technologies  
Development outlooks across scenarios  
NEM emission intensity with the least-cost development paths

## Appendix 5. Renewable Energy Zones

Integrating large volumes of VRE  
REZ framework and design principles  
ISP REZ development  
REZ scorecards

## Appendix 6. Future Power System Operability

Power system operability models and input  
NEM-wide operability outlook  
Regional risks and insights

## Appendix 7. Future Power System Security

Renewable Integration Study  
System strength outlook  
Inertia outlook  
REZ opportunities  
South Australia in transition

## Appendix 8. Resilience and Climate Change

Resilience in the 2020 ISP  
Forecasting climate impacts on energy systems  
Planning for a climate-resilient network  
Next steps

## Appendix 9. ISP Methodology

Overview of ISP methodology  
Inputs  
Engineering assessment  
Market modelling  
Model outputs

## Appendix 10. Sector Coupling

Hydrogen  
EVs  
Gas  
Energy efficiency  
Bioenergy

# Summary

This Stakeholder Engagement appendix provides an overview of the stakeholder engagement program and consultations that were undertaken as part of the 2020 ISP.

## Key insights

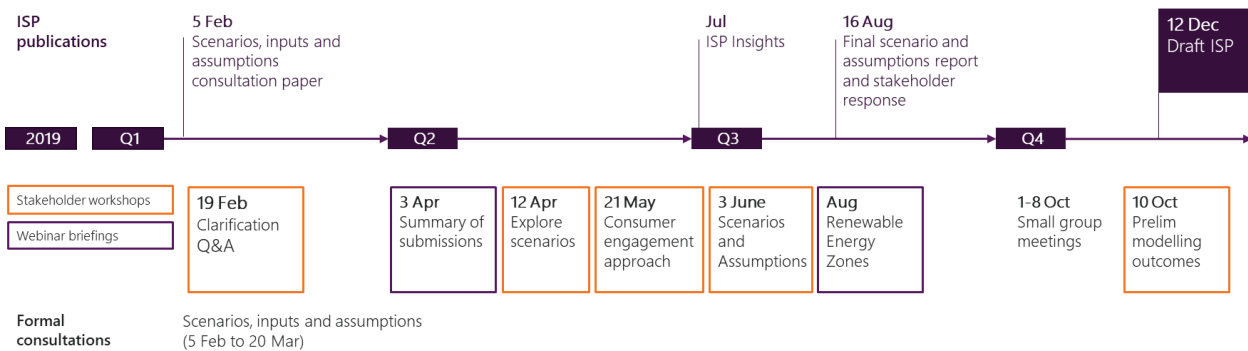
- A comprehensive stakeholder engagement program has been undertaken for the 2020 ISP, including multiple public stakeholder workshops, webinars and two formal written consultations.
- In conjunction with the public engagements, AEMO has consulted with state and federal jurisdictions, TNSPs (as part of the joint planning process), other market bodies, and the Energy Security Board.
- A summary of submissions to the Draft 2020 ISP consultation is included in this appendix; the detailed review of submissions, AEMO's responses and resulting outcomes are included in a separate Consultation Summary Report, published alongside this ISP.
- Stakeholders were generally positive about the engagement process that was undertaken for the 2020 ISP, with many noting improvements on the 2018 ISP consultation process. Consumers expressed a need for further support in providing feedback to future ISPs, noting their current lack of resources.
- The ISP Consumer Panel that AEMO is establishing, in accordance with the actionable ISP rules that came into effect on 1 July, will provide deeper and more facilitated engagements with the consumer sector for the 2022 ISP.

# A1.1. Stakeholder engagement program and timelines

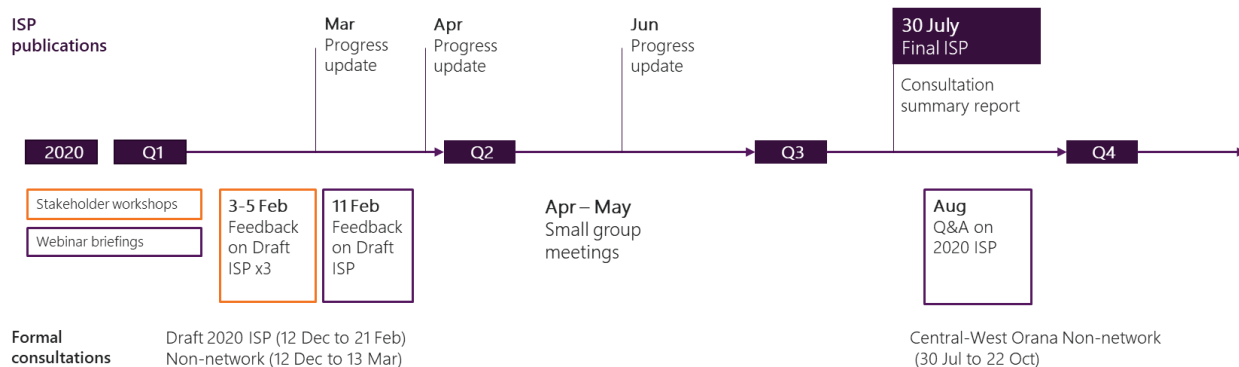
A comprehensive stakeholder engagement program has been undertaken for the 2020 ISP, with workshops scheduled at various stages throughout the ISP process, and two formal consultations included.

The timeline of public engagements and consultations is summarised in the figures below.

**Figure 1 Stakeholder engagement and consultations in 2019**



**Figure 2 Stakeholder engagement and consultations in 2020**



Opportunities for stakeholders to collaborate with the ISP team and provide input to the process have been provided across a range of different platforms including webinars, in-person workshops, and formal written consultations. Additional communications have included Energy Live articles on the AEMO website, direct emails to the ISP distribution list, and progress updates following the Draft 2020 ISP.

## A1.1.1 Consultations

The forecasting and planning consultation on the scenarios, inputs, assumptions, and methodologies ran from February to March 2019, with the final report published in August 2019<sup>1</sup> after a series of workshops.

The second consultation on the Draft ISP outcomes ran from December 2019 to March 2020, and included a call for non-network options for QNI Medium and VNI West projects.

A third consultation will be held for 12 weeks from 30 July 2020 on non-network options for the Central-West Orana REZ Transmission Link, which has become an actionable ISP project since the Draft 2020 ISP.

## A1.1.2 Workshops

Four workshops were held as part of the inputs, assumptions and scenarios consultation process during 2019.

The preliminary outcomes workshop held in October 2019 provided insights into early modelling results for the Draft 2020 ISP, and was scheduled early enough to allow feedback to be incorporated into the remaining modelling ahead of the Draft 2020 ISP publication.

A further three workshops were held in early February 2020, ahead of the submission date for written consultations on the Draft 2020 ISP, to allow stakeholders the opportunity to ask questions of the ISP modelling team face-to-face, clarify understanding of the decision-making process, and provide direct input to shaping and prioritising the remaining modelling tasks for the Final 2020 ISP.

## A1.1.3 Webinars

The REZ webinar, held in August 2019, provided an overview of the REZ concept along with early definition of modifications to the REZs used in the 2018 ISP.

A second webinar was held as part of the consultation on the Draft 2020 ISP in February 2020, for those who were unable to access the in-person workshops. This was attended by over 70 people, and provided further opportunity to ask questions directly of the modelling team.

A final webinar will be held in August 2020, following publication of the Final 2020 ISP.

## A1.1.4 Other engagements

In addition to the public engagements outlined above, AEMO has held multiple engagements with state and federal jurisdictions, TNSPs (as part of the joint planning process), other market bodies, and the Energy Security Board.

---

<sup>1</sup> At <https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/scenarios-inputs-assumptions-methodologies-and-guidelines>.

# A1.2. Consultation on Draft 2020 ISP

A separate Consultation Summary Report<sup>2</sup> has been released along with the Final 2020 ISP. The report includes a detailed review of the submissions that were received to the Draft 2020 ISP consultation and non-network consultation, and AEMO's responses to the submissions.

A summary of the feedback on the Draft 2020 ISP is provided below.

## A1.2.1 Summary of feedback

The feedback received on the Draft 2020 ISP can be broken into 10 themes, listed in Table 1 in order of frequency of mentions and stakeholder consensus.

**Table 1 Summary of key themes from Draft ISP Consultation submissions**

Themes	Frequency	Consensus
Strategic roll-out of transmission and interconnection, to unlock renewable energy generation development, is widely supported	23 stakeholders	High
There is general support for the role of the ISP in the transition underway in the NEM	22 stakeholders	High
REZs are an effective way of coordinating strategic renewables development	17 stakeholders	High
There needs to be a greater acknowledgement of the climate change challenge	13 stakeholders	High
A more agnostic approach to storage technologies is desired	13 stakeholders	High
Costing of the scenarios is complex, and further clarity is required on cost estimates for ISP projects	6 stakeholders	High
The engagement process has improved; however, it can be further strengthened	18 stakeholders	Medium
Technological solutions can support system security through the transition	15 stakeholders	Medium
There are concerns about generation intermittency and the level of dispatchable capacity in the NEM	13 stakeholders	Medium
The future role of DER is widely contested	14 stakeholders	Low

<sup>2</sup> AEMO, 2020 ISP Consultation Summary Report, July 2020, at <https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2020-integrated-system-plan-isp>.



Stakeholders were generally positive about the engagement process that was undertaken for the 2020 ISP, with many noting improvements on the 2018 ISP consultation process.

Given the scale and value of future development that is proposed in the ISP, many stakeholders emphasised the importance of ongoing engagement to ensure that any plan is robust and fit for purpose, and there was in general a desire for even more extended and comprehensive engagements in the development of the future ISP, as well as post ISP on the outcomes.

Consumers as a sector emphasised the need for AEMO to focus on consumer organisations even further, providing more facilitated engagements and supporting them to obtain their feedback, noting their current lack of resources and depth of technical expertise. The ISP Consumer Panel that AEMO is establishing, in accordance with the actionable ISP rules that came into effect on 1 July, will provide a formal means to address these needs.

## A1.2.2 Consultation outcomes

Outcomes from the consultation on the Draft 2020 ISP and the non-network options are detailed in full in the Consultation Summary Report<sup>3</sup>.

---

<sup>3</sup> AEMO, 2020 ISP Consultation Summary Report. July 2020, at <https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2020-integrated-system-plan-isp>.