

AEMO 2022 Draft ISP Consultation

IEEFA Submission

RE: AEMO 2022 Draft ISP Consultation

The Institute for Energy Economics and Financial Analysis (IEEFA) welcomes the opportunity to participate in the AEMO 2022 Draft ISP Consultation and appreciates the huge amount of work that has gone into the ISP.

IEEFA's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. IEEFA examines issues related to energy market trends and policies.

Please reach out to discuss any of this submission in further detail. IEEFA supports the ISP process, continues to follow the consultation and discussions closely, and looks forward to contributing in any manner possible.

Kind regards,

Johanna Bowyer

Electricity Analyst – Australia Lead

Institute for Energy Economics and Financial Analysis (IEEFA)

IEEFA's Response to AEMO 2022 Draft ISP Consultation

The AEMO Integrated System Plan (ISP) effectively provides one cohesive plan for the National Energy Market (NEM), enabling coordinated infrastructure planning and development in a fast-moving industry. The 2022 Draft ISP shows the fast pace of change in energy transition.

IEEFA uses AEMO's draft ISP to understand trends in the NEM, complete analysis and develop policy recommendations related to the energy transition.

Overall, IEEFA's comments on the draft ISP include:

- a request for greater granularity of generation results data,
- a request for further information on decarbonisation pillars,
- a call for policy to be put in place to manage fast coal exit (though not in AEMO's remit)
- a request for the release of the coal power plant viability analysis results (if completed), and
- a suggestion to include a fast coal exit scenario (by mid 2030s) that does not rely on hydrogen (potentially more relevant for the 2024 ISP).

More granular release of results data

In the eventual ISP 2022 data release, including more detailed data – for example, 30-minute generation results (by technology and potentially also by state) for all future years or for as many time periods as possible – would boost energy industry understanding of the NEM's energy requirements on shorter timeframes, the likely operating regime of energy technologies, and the financial viability of various forms of generation and storage into the future.

It would enable all stakeholders to do their own, more detailed analysis using common ISP data, enabling more informed decision making and investor confidence.

Further information regarding the decarbonisation pillars

Page 28 and 29 of the draft ISP explain the emissions reduction targets and trajectories applied to each scenario, under four key pillars: electricity sector decarbonisation, fuel switching, energy efficiency and carbon offsets.

It would be helpful for stakeholders to have further information and data on how these emissions reduction targets and trajectories have been applied in each scenario. For example, in each scenario, what are the specific assumptions for carbon offsets and energy efficiency? To IEEFA's knowledge, this information has not been released.

A further breakdown on the emissions reduction targets and trajectories applied in each scenario would help policymakers, regulators and market analysts understand the necessary policies to enable each scenario. This would give clarity on which government policies are consistent with which scenarios, enabling more informed government action.

Policy needed to manage the accelerated coal retirement schedule

At present, the official generator retirement schedule indicates that 5GW of closures will occur in the NEM by 2030.¹ AEMO's step-change scenario indicates 14GW of coal could withdraw by 2030, leading to a two to three times faster retirement than anticipated. AEMO also notes "The Draft ISP forecasts faster withdrawals [than the current schedule] across all scenarios."

Federal Government Emissions Projections show that 11GW of coal will exit between now and 2030 (whole of Australia rather than just the NEM), in contrast to the 6GW of expected Australia-wide exits.²

Both AEMO's draft ISP and Federal Government projections alike show that coal will exit sooner than projected in the existing generator schedule.

¹ AEMO. [Generating unit expected closure year](#). January 2022.

² IEEFA. [Australian Government Emissions Projections Imply Early Coal Exit of 5GW by 2030](#). December 2021.

We note that policymaking is not within AEMO’s remit. However, the draft ISP makes it clear that government policy is required to coordinate the exit of coal generators and develop a new, realistic coal exit schedule with more enforceable exit dates. This is key to ensuring coal retirements occur in an orderly manner, and that communities are adequately warned about the transition and supported over a reasonable timeframe.

IEEFA recommends that a policy to manage the retirement of ageing coal generators be implemented. Our report “There’s a Better Way to Manage Coal Closures Than Paying to Delay Them”³ suggests various such mechanisms to manage coal exit and ensure a smooth transition to a low emissions grid, including a notice of closure bond, a legislated schedule of retirements based on entry of new capacity, a floor price underwriting mechanism to support new entrants, an emissions trading scheme and others.

Coal power plant viability analysis results

The step-change scenario indicates closure of coal generators two to three times faster than anticipated “to meet tighter carbon budgets for the sector.”⁴ However this prompts the question: were generator retirements in the draft ISP results driven by any other factors, apart from carbon budgets? A breakdown of the drivers leading to the faster than expected coal exit in the draft ISP results would be helpful.

The 2021 inputs assumptions and scenarios report (table copied below) indicated that the ISP step-change scenario (among other scenarios) would include generator retirements “earlier if economic”. This implies that a financial analysis was completed on generators leading to the generator exit results in the 2022 draft ISP.

Scenario	Slow Change	Steady Progress	Net Zero 2050	Step Change	Hydrogen Superpower
Climate change impacts based on assumed Representative Concentration Pathway (RCP) (mean temperature rise by 2100) ⁵	RCP7.0 (~4°C)	RCP4.5 (~2.6°C)	RCP4.5 (~2.6°C)	RCP2.6 (~1.8°C)	RCP1.9 (<1.5°C)
Decarbonisation target	26-28% reduction by 2030 No explicit decarbonisation target beyond 2030	26-28% reduction by 2030 Further decarbonisation influenced by technology and economic improvements	26-28% reduction by 2030 Economy-wide net zero target by 2050	Economy-wide net zero before 2050, exceeding 26-28% reduction by 2030 Pace of decarbonisation consistent with limiting temperature rise to 2 degrees, in line with global activities	Economy-wide net zero by early 2040s, exceeding 26-28% reduction by 2030 Pace of decarbonisation consistent with limiting temperature rise to 1.5 degrees, in line with global activities
Generator and storage build costs	CSIRO GenCost Central	CSIRO GenCost Central	CSIRO GenCost Central	CSIRO GenCost High VRE	CSIRO GenCost High VRE†
Generator retirements	In line with expected closure years, or earlier if economic to do so.	In line with expected closure years, or earlier if economic.	In line with expected closure years, or earlier if economic or driven by decarbonisation objectives beyond 2030.	In line with expected closure year, or earlier if economic or driven by decarbonisation objectives.	In line with expected closure year, or earlier if economic or driven by decarbonisation objectives.

Source: AEMO⁵

³ IEEFA. [There’s a Better Way To Manage Coal Closures Than Paying To Delay Them](#). September 2021.

⁴ AEMO. [Draft 2022 ISP](#) - page 45. December 2021.

⁵ AEMO. [2021 Inputs, Assumptions and Scenarios Report](#).

To IEEFA's knowledge this financial analysis was not released nor discussed in the draft 2022 ISP. This analysis would be helpful to inform policy conversations. If this analysis was indeed completed and influenced the results of the draft ISP, we request it be released in the 2022 Final ISP.

Additional fast coal closure scenario

Step Change and Hydrogen Superpower deliver the fastest coal exits. Step change indicates coal exit by 2042-43. Hydrogen Superpower indicates coal exit by 2030-31. However, the latter scenario includes widespread adoption of hydrogen technologies, though the pace of adoption is still uncertain. Dr Kerry Schott stated that all coal could be gone from the system by the mid-2030s.⁶ It is critical to plan for the likely faster-than-expected closure of coal generators.

Given the likely fast closure of coal and the uncertain pace of hydrogen adoption, a useful planning strategy would be to test fast coal closures in both high and low hydrogen adoption scenarios. Therefore, it would be helpful to add a scenario with a fast coal exit, say by 2035 or earlier, that does not depend on fast hydrogen adoption. As scenarios have all been finalised some time ago, this comment could be noted for the 2024 ISP.

⁶ AFR. [Coal power likely gone by 2035: Schott](#). 11 October 2021.

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

About the Author

Johanna Bowyer

Lead Research Analyst for Australian Electricity, Johanna Bowyer has previously worked for CSIRO, Solar Analytics and Suntechand as a management consultant at Kearney. Johanna has research experience in microgrids, energy tariffs and distribution networks. She has a degree in Photovoltaics and Solar Energy Engineering from UNSW. jbowyer@ieefa.org

This report is for information and educational purposes only. The Institute for Energy Economics and Financial Analysis ("IEEFA") does not provide tax, legal, investment, financial product or accounting advice. This report is not intended to provide, and should not be relied on for, tax, legal, investment, financial product or accounting advice. Nothing in this report is intended as investment or financial product advice, as an offer or solicitation of an offer to buy or sell, or as a recommendation, opinion, endorsement, or sponsorship of any financial product, class of financial products, security, company, or fund. IEEFA is not responsible for any investment or other decision made by you. You are responsible for your own investment research and investment decisions. This report is not meant as a general guide to investing, nor as a source of any specific or general recommendation or opinion in relation to any financial products. Unless attributed to others, any opinions expressed are our current opinions only. Certain information presented may have been provided by third-parties. IEEFA believes that such third-party information is reliable, and has checked public records to verify it where possible, but does not guarantee its accuracy, timeliness or completeness; and it is subject to change without notice.