

Written record of verbal comments by energy consumer advocates on the Draft 2021 Inputs, Assumptions and Scenario Report

1. Purpose of the feedback session and this document

On 11 December 2020 AEMO published a draft Inputs, Assumptions and Scenarios Report (IASR) for public comment. Once finalised, these inputs, assumptions and scenarios will be used in AEMO's 2021-22 forecasting and planning activities, including the development of the 2022 Integrated System Plan (ISP).

Submissions in response to the Draft 2021 IASR were due on 1 February 2021.

In response to a request, AEMO held a session with energy consumer advocates on 4 February 2021 to allow verbal submissions on the draft IASR to be provided. In scheduling the session, AEMO expressed its preference that verbal comments would generally supplement rather than replace written submissions.

AEMO staff did not give attendees new or additional information, but rather provided and sought clarifications from participants to ensure verbal submissions had been properly understood.

AEMO produced this written record of stakeholder comments, which has been agreed with attendees. AEMO will consider the issues raised in the session, as recorded below, along with all other submissions to the draft IASR process.

2. Attendees

NAME	ORGANISATION
Chris Alexander	Energy Consumer Australia (ECA)
Kellie Caught	Australian Council of Social Service (ACOSS)
Jarrold Lenne	Victorian Council of Social Service (VCOSS)
Jennifer Brownie	Queensland Electricity Users Network (QEUN)
Anna Livsey	Public Interest Advocacy Centre (PIAC)
Emma Chessell	Brotherhood of St Laurence
Lyndal Bubke	Energy and Water Ombudsman Queensland (EWOQ)
Tennant Reed	Australian Industry Group (AI Group)
Stephen Durney	Tasmanian Council of Social Service (TasCOSS)
David Havyatt	Havyatt Associates
David Headberry	Major Energy Users (MEU)
Andrew Nance	ISP Consumer Panel Chair
Gavin Dufty	ISP Consumer Panel
Mark Grenning	ISP Consumer Panel
Antara Mascarenhas (AEMO)	AEMO

Andrew Turley (AEMO)	AEMO
Alicia Webb (AEMO)	AEMO
Chetna Mishra (AEMO)	AEMO
Elijah Pack (AEMO)	AEMO
Marteena McKenzie (AEMO)	AEMO
Oliver Derum (AEMO)	AEMO

3. Comments on the draft IASR

At the start of the session, all attendees were given the opportunity to nominate any aspect of the draft IASR about which they wished to provide comment. All attendees were then given the opportunity to comment on each topic. The four topics identified were:

- Emissions reduction trajectories within the ISP scenarios
- Assumptions about the growth of hydrogen production in the National Electricity Market (NEM)
- Consumer value needs and expectations, including distributed energy resources (DER)
- The number and relative weightings of different scenarios.

4. Comments on emissions reduction in the ISP Scenarios

Havyatt Associates:

- The Central Scenario must include the achievement of net-zero greenhouse gas emissions by 2050, consistent with Australia’s international commitments through the Paris Agreement and the legislated commitments of Australian State and Territory governments.
- Due to these commitments, AEMO must not include emissions from the energy sector beyond 2050. The current Central Scenario is not acceptable. Any scenario that is not net-zero by 2050 is inconsistent with the Paris Agreement.
- The Central Scenario must also have a lower-emissions outcome than the Diversified Technology Scenario.
- AEMO should use modelling from the Electricity Sector Climate Information Project¹.

ACOSS:

- Agree with comments from Havyatt Associates on this issue.
- The 2050 net zero target is economy wide, including agriculture, transport and other industries. The electricity sector should be faster than other sectors to achieve net zero emissions, to support the economy-wide objective.

¹ More information on the ESCI project is available here:

<https://www.climatechangeinaustralia.gov.au/en/climate-projections/future-climate/esci/>

- Achieving net-zero by 2050 is not ideological, it is informed by the best scientific knowledge and our obligations under the Paris Agreement, in particular the temperature goal and the principle of common but differentiated responsibility.

MEU:

- The Prime Minister's (PM) stated 'preference' for achieving net zero emissions by 2050 is a professed intention, not a legislated commitment.
- There will be an ongoing need to burn some fossil fuels for energy production and system security. We must recognise the engineering challenges of achieving a net-zero emissions power system.
- The challenges and costs of a net-zero emissions power system are non-trivial.

QEUN:

- The scenarios are supposed to represent what plausibly could happen in the NEM.
- The Prime Minister just expressed a preference for when Australia reaches net-zero emissions, which shouldn't be given much weight.
- The realities of private investment must be considered, especially where this investment is not forthcoming (signalling that these investments are not viable without government support).

4.1 Comments on hydrogen production assumptions

QEUN:

- The scenarios assume that domestic consumption (by mining/industry) will stimulate investment before exports start to materially grow (by 2030). But the industry is most likely to be export-focussed.
- Many large users have natural gas contracts for the period to 2025, so assumptions of a domestic transition should be moderated. We don't know enough about the intentions of large users to use hydrogen rather than natural gas.
- Fresh water is a major issue with hydrogen production and export. We will be moving electrons to ports, not extracted gas to ports (as with natural gas). While ports are located at existing water storages (in ISP scenarios) we can't assume that water will be available. Townsville nearly ran out of water in 2020, for example.

Havyatt Associates:

- The scenarios don't need to be the most likely outcomes. The four scenarios (other than the Central Scenario) should be different.
- The treatment of hydrogen in the scenarios should be consistent with the Government's Hydrogen Strategy. That strategy says the growth of the industry will be domestically led.

4.2 Consumer value needs and distributed energy resources (DER)

ECA:

- There's been an underestimation of DER in previous ISPs. We look forward to being able to review the full workbook, once updated DER forecasts have been developed.
- DER modelling needs to consider social and business practices given COVID and working from home.
- Sensitivities should be used to apply a consumer or social practice view of the forecasts.
- The Energy Synapse work undertaken as part of the Energy Security Board's post-2025 market design program should be considered by AEMO in this process.
- AEMO must clearly explain how consumer input provided across the IASR development process tracks through to impacts (or not) in the final IASR. Don't assume stakeholders can easily maintain visibility throughout the process.

Havyatt Associates:

- The IASR is not compliant with the rules, because not all data has been updated. A second draft IASR must be released before a final version can be published.

QEUN:

- QEUN would welcome more information about DER, to create a basis for informed comment.
- Knowing how smart/controllable DER will be modelled is a key element of the scenarios and the forecasting process.

4.3 Comments on the number and weighting of scenarios

MEU:

- If there are too many scenarios, they lose traction. The scenario development process is conducted every two years, which reduces the pressure to make them perfect this time.
- MEU is not satisfied that AEMO has developed the best scenarios, partly due to the consultation process it used in the development of these but the MEU also recognises that to make further changes to these scenarios would not reflect the considerable effort stakeholders have already put into the scenario development
- MEU supports retaining the Diversified Technology Scenario.
- The Central Scenario will be the most used, but weightings are important.
- There is a lot of important and impactful information in the IASR workbook. MEU encourages stakeholders to examine and comment on the IASR workbook.

QEUN:

- Generation costs should be scrutinised.
- The Diversified Technology Scenario should be retained. If the heart of this scenario is lower gas prices, then that is useful to model.
- Hydrogen blending should be considered.

Havyatt Associates:

- Five is the right number of scenarios. It would be reasonable to have the Central Scenario, plus two for a faster transition of the power system and two for a slower transition.
- DER uptake should be higher in the Central Scenario (than what has been previously forecast).
- Scenario weightings are arguably a foolish concept, as the statistical likelihood of the actual outcome being the same as any of them is zero. We want to understand where the future might sit, relative to defined markers (scenarios).

PIAC:

- There is risk to AEMO's reputation, and limited value, in including the Diversified Technology Scenario as it is described. Elements, including emissions reduction pathways, don't reflect State or Territory Government policies. PIAC understands the scenario reflects current Commonwealth Government policy with respect to matters like carbon capture and storage, but questions whether any expert body of opinion believes this scenario is plausible.
- In PIAC's view the Diversified Technology Scenario should be replaced with another scenario that is more useful and likely to occur, such as one that models a trajectory of zero emissions from electricity in 2035 or 2040, as is required to limit global warming to less than 2 degrees, and/or one that models very high uptake of DER
- Further, it is not clear why DER uptake is lower under this scenario.
- There is no value in the Diversified Technology Scenario, which almost certainly won't happen. It doesn't reflect Government policy. Further, it is also not clear why DER uptake is lower under this scenario.
- PIAC questions whether there is any existing body of opinion (including outside AEMO) that this scenario is plausible.

ACOSS:

- The Diversified Technology Scenario should be removed.
- The impact of greater gas production and lower DER are distinct and should be examined separately.
- The various steps required to achieve carbon capture and storage (production, cleaning, transport, storage, maintenance) means the costs will never be competitive as other forms of clean energy. The costs compared to other technology go up every time CSIRO looks at it again. Carbon capture and storage is also not zero emissions.
- There is a danger in having a scenario where we waste investment when instead that investment could be spent in shifting the energy system in a fair and equitable way.
- AEMO should include a more ambitious scenario to contribute to limiting global warming to 1.5 degrees.

AI Group:

- Suggests splitting the Diversified technology Scenario into two – impact of gas and the impact of different technologies
- AI Group is concerned that tools available won't satisfactorily answer the important questions – because inputs on most relevant future technologies aren't mature.
- By picking the assumptions, we pick the outcomes, which might not be greatly informative without more sophisticated/global modelling.

4.4 Comments not related to the four identified topics

- The Australian Bureau of Statistics published useful rapid data, including on vulnerability and loneliness.
- Macroeconomic forecasts are dependent on historical data, which may be less dependable as a guide to future outcomes at a time of rapid change.
- There needs to be greater consideration of business confidence when forecasting - both residential and small business confidence.
- How the ISP captures resilience is not clear. It features much more strongly in AEMO's Engineering Framework process.
- Please consider doing a similar session on the ISP Methodology.