2025 consultation

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REROC

RIVERINA EASTERN REGIONAL ORGANISATION OF COUNCILS

Riverina Eastern Regional Organisation of Councils (REROC) response to the NSW Net Zero Commission consultation (2025)

The Riverina Eastern Regional Organisation of Councils ("REROC") encompasses 8 Local Government entities located in the eastern Riverina region of NSW. REROC's Member Councils are Bland, Coolamon, Cootamundra-Gundagai, Greater Hume, Junee, Lockhart, Temora and Goldenfields Water County Councils.

We thank the Net Zero Commission for its 2024 Report with its initial assessment of progress towards the net zero targets, including the areas in which the Commission indicates that it will need to investigate in more detail for future reports.

We are glad to see the report's recognition of the importance of "developing and progressing initiatives to make greater use of consumer energy resources" (p. 11). We also acknowledge the good, detailed work that has gone into the NSW Consumer Energy Strategy, and the importance of the Strategy and its actions to the Commission's work.

We appreciate the opportunity to contribute to the Commission's consultation. Our comments highlight five areas of focus:

- the complement between emission reduction and solutions to energy reliability problems;
- the importance of prioritising the deployment of flexible exports of electricity;
- the need for the Commission to consider and advocate for improvements in the electricity market;
- encouraging emission reduction by recognising that the emission intensity of the grid varies by time of day;
- the importance of councils as stakeholders in the Commission's initiatives and considerations.

These areas of focus have a bearing on a number of the consultation questions, but particularly:

- Question 5
  What additional information and evidence should the commission consider when assessing progress towards NSW's targets for reducing net greenhouse gas emissions? and

- Question 6:
  The speed of deployment of electricity generation and infrastructure is a key risk to emissions reduction targets. What more could be done to fast-track deployment?

We ask the Commission also to consider the implications of the points made in relation to other questions in the consultation.

Recognising the complement of emission reduction with energy security

The deployment of consumer energy resources in the regions can be accelerated by recognising the complement between such deployment and needed solutions to energy security issues in many areas. A comprehensive set of reports on interruptions and brownouts in electricity supply, and the negative impact this has on business viability and growth, and residents' lives, was prepared by Ernst & Young on behalf of the Central NSW Joint Organisation (CNSWJO). The 'Business Case' set of reports was aptly titled "The Nexus between energy security and emissions reduction". The reports focussed on their region but are representative of many NSW regional councils.

The Business Case found that of the region's 30 distribution zone substations, one-third and their surrounding areas are currently experiencing:

- Network constraints – where electricity demand exceeds the rated infrastructure capacity; and
- Reliability issues – where supply interruptions in minutes are unacceptably high.

The Business case set of reports can be accessed at:
https://www.centraljo.nsw.gov.au/business-case/

Key solutions to the energy security issues, as pointed out in the CNSWJO reports, include the deployment by consumers of local generation (mostly solar) and battery storage. The DNSP in such areas will share in the benefits of these consumer energy resources, as the DNSP will avoid or defer costs to upgrade the network to raise reliability to an acceptable standard.

The Net Zero Commission should consider the obligations of the DNSPs, in areas where such electricity supply problems exist, to contribute financially to the deployment of consumer energy resources (CER), particularly to battery systems, and other local scale solutions. This would reflect the benefits of these systems in meeting the DNSP's obligations.

To put it in another way, mechanisms need to be put in place targeting **additional funding assistance for consumer energy resources** (both generation and storage) **in areas where there are ongoing energy reliability problems**, which can be debilitating (as the CNSWJO Business Case report has shown). **Other local solutions that provide both security/reliability benefits and emissions reductions, need to be pursued**; for example, the 4.9MW two-hour battery located at the zone substation with a co-located 4.9MW solar farm proposed in the CNSWJO Business case**.**

Addressing the reliability of supply is also important to the engagement of regional communities and to their acceptance of "shifts needed for the net zero transition" (Question 2).

Flexible Export Limits ("dynamic exports")

The amount of solar generation that a site is allowed to export makes a big difference to the business case for investing in solar and batteries and hence the rate of deployment of these emission reducing resources. The NSW Consumer Energy Strategy recognises the importance of flexible export limits and working with DNSPs (Action 34). The Net Zero Commission can emphasis that NSW needs to have its regional DNSP **prioritise the acceleration of the roll-out of flexible exports**. Other DNSPs in NSW have started or on the verge of doing so, and networks in South Australia have done so for years.

The cost of arranging dynamic exports for a SME customer needs to be decreased. Facilities with dynamic export limits serve a wider community good, with an emission benefit. They supply more energy during peak demand (and peak prices), putting downward pressures on costs for all consumers. The architecture for dynamic exports will have to be set up for all parts of the grid as part of the backstop mechanism, so it seems that the cost for a DNSP to coordinate an additional customer inverter with the DNSP server should be low; in the hundreds rather than in the thousands of dollars.

The benefit of dynamic exports is a shared good, enabling more renewables in the system and lowering emissions. We want to lessen financial and other obstacles that customers face in implementing dynamic exports.

Needed energy market changes

Additional information and evidence that the Commission should consider when assessing progress towards NSW's targets for reducing net greenhouse gas emissions relates to the suitability of the energy market to facilitate the energy transition and to do so in an equitable way. There is widespread recognition that fundamental changes are required to the structure of the energy market. The Commission can consider options for changes to market structure that are built around the growing importance of local generation and storage, and the possibilities available with new technologies. The Commission should advocate for such solutions.

One sign of the lack of suitability of the current market structure is the increase in electricity costs due in part to the concentration of market power. The Australian Energy Regulator, in its December 2024 Wholesale electricity market performance report 2024[1] (and other reports) points out the pace of change can "create new opportunities for the exercise of market power" (p. 2). The report highlights that the ownership of the dispatchable generation needed to meet demand outside of solar hours (or during unplanned outages) is highly concentrated, which

[1] https://www.aer.gov.au/system/files/2024-12/Wholesale%20electrcity%20market%20performance%20report%20-%20December%202024.pdf

increases the scope for the exercise of market power. A result is higher prices for electricity. This has a detrimental effect on the finances of our councils and the services they can provide in our communities. High electricity prices can also slow the energy decarbonisation transition, as some parts of our communities blame high prices on the transition to renewable energy. High electricity prices put at risk the general social license for, and trust in, the energy transition.

High electricity prices resulting from the exercise of market power, and the lack of balance of supply and demand, are an equity issue and an adaptation issue. High prices are a deterrent to achieving Objective 1 (well adapted economy…) and Objective 3 (well adapted society…families and individuals) of the NSW Climate Change Adaptation Strategy.

Climate change risks are often categorised as physical risks or transition risks. High electricity prices can be regarded as a transition risk. Households or businesses struggling with high prices are a sign that, for our Adaptation objectives, more needs to be done. Advocating for well-considered changes to the electricity market structure is one way that the Commission can contribute to our Adaptation objectives (Question 24).

Encouraging emission reduction by recognising that the emission intensity of the grid varies by time of day

Since the grid often has a surplus of solar generation in the middle of the day, the grid is often 50-70% renewable generation at that time. This varies by seasons, in relation to the amount of wind generation, etc. In the evening and nighttime, the renewable percentage is often only 6-20%.

This means that for hours in the middle of the day (when the fossil fuel percentage may be only 40%, or less, of the grid), the emission intensity of electricity used is often half that of the evening peak and night (when the fossil fuel percentage is often 80%+ of the grid).

One MWh of export at 11am-3pm is not the same (in terms of abatement) as one MWh of export at 5-8pm. The export of solar generation in the solar peak can actually result in large scale solar plants curtailing their production, as the wholesale prices are pushed increasingly negative at that time.

Storing solar generation to export or load-shift in the evening has an emission reduction benefit. But this is poorly recognised in our emission accounting protocols.

The fact that our emission protocols do not recognise this means that we are missing some of the motivation that could drive battery storage and increased emission abatement (and other benefits such as lower wholesale prices).

We ask the Net Zero Commission to explore the differing emission intensity of the grid by time of use, raise awareness about it and advocate for revisions to emission accounting protocols to reflect it.

Doing so could be a factor in building momentum for the rollout of battery storage, so important to the transition to a less emission intensive grid.

(Some sources exploring the "Hourly accounting of carbon emissions"[2] and "High resolution carbon accounting"[3] are provided in the footnotes.)

The importance of Local Government as a stakeholder and for engagement

While the Commission's 2024 Annual Report did note a role for local government to the securing of community support and for councils in relation to adaptation, we would like to emphasise the importance of local government as a stakeholder for the Commission. Local government is in a pivotal position between State (and Federal) Governments and communities and businesses.

Council awareness of their community's views and hopes is important for the Commission to tap into when considering our status with net zero objectives and with new initiatives. Councils (individually or through Joint Organisations or Regional Organisations of Councils) can guide program leads on successful implementation of their objectives.

The importance of councils, JOs and ROCs should be noted not only in relation to Questions 5 & 6 but also in relation to other Questions, particularly:

- Question 2 What actions can the commission take to engage across the community to help drive the shifts needed for the net zero transition and for effective climate change mitigation and adaptation?

Thank you for the opportunity for REROC to contribute to the Net Zero Commission's consultation.

Regards,
William

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[2] https://iopscience.iop.org/article/10.1088/1748-9326/ac6147/meta

[3] A series of posts exploring high resolution carbon accounting:

- https://wattwatchers.com.au/hourly-carbon-accounting-for-greater-accuracy/
- https://wattwatchers.com.au/high-resolution-carbon-accounting-modelling-better-emissions-estimates/
- https://wattwatchers.com.au/high-resolution-carbon-accounting-higher-accuracy-for-better-outcomes/
- https://wattwatchers.com.au/high-resolution-carbon-accounting-from-energy-efficiency-to-carbon-efficiency/