

Pathways Call for Evidence Submission

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Submission to the Net Zero Commission's Call for Evidence – Decarbonisation Pathways for NSW

July 2026



CENTRAL NSW
JOINT ORGANISATION

Bathurst
Blayney
Cabonne
Cowra
Forbes
Lachlan
Lithgow
Oberon
Orange
Parkes
Weddin

31 July 2026

Net Zero Commission

Submission lodged via Net Zero Commission website

Dear Net Zero Commissioner,

Re: Call for Evidence – Decarbonisation Pathways for NSW

The Central NSW Joint Organisation (CNSWJO) represents the collective priorities of its member councils—Bathurst, Blayney, Cabonne, Cowra, Forbes, Lachlan, Lithgow, Oberon, Orange, Parkes and Weddin—covering more than 63,000 km² and serving over 182,000 residents. We work collaboratively to strengthen intergovernmental relationships, improve regional outcomes and elevate shared strategic priorities across Central NSW. The CNSWJO Strategic Plan can be found [here](#).

The CNSWJO welcomes the opportunity to provide input to the Net Zero Commission's 2026 consultation and calls for evidence on Decarbonisation Pathways for NSW. Our member councils are committed to supporting the transition to a low-emissions and a climate-resilient future. As a regional organisation representing multiple local government areas, we bring a place-based perspective grounded in lived experience.

CNSWJO acknowledges the critical role regional communities will play in achieving the NSW's legislated emissions reduction targets. However, the Commission's pathways must reflect the realities facing regional NSW and local government.

From the perspective of Central NSW councils, four issues are fundamental to the success of NSW's transition:

- recognising local government as a critical delivery partner,
- addressing landfill emissions as the largest local government emissions reduction opportunity,
- improving energy security through distributed energy resources (DER), and
- ensuring councils and regional communities have the financial capacity and policy support necessary to participate in the transition.

Importantly, Central NSW's evidence demonstrates that technology availability alone will not deliver emissions reductions at the pace required. Energy security constraints, funding limitations, workforce capacity and community acceptance must all be considered in pathway modelling.

Our member councils work together to strengthen regional strategic planning, economic development and collaborative sustainability outcomes. The region is characterised by a dispersed inland population, strong agricultural, mining and manufacturing sectors, and increasing exposure to climate-related risks including:

- increased frequency and severity of drought, bushfire and extreme heat events,
- flooding and storm damage affecting public infrastructure, roads and agricultural land,
- water security pressures affecting both urban supply and irrigation-dependent industries, and
- ongoing pressures on agriculture, biodiversity and regional economic resilience

While regional progress towards net zero is underway, it remains in its early stages and is limited by access to funding and technical capacity, poor climate-related resilience, and low community uptake.

This submission responds to the Net Zero Commission's consultation themes, including policies and market mechanisms, technology and behaviour change, economic impacts and a just transition, and evidence and other considerations. We welcome the opportunity to contribute to the development of NSW-specific decarbonisation pathways. We emphasise that achieving net zero in a way that is both effective and equitable will require a deliberate focus on regional realities, including infrastructure gaps, workforce constraints, and the need for place-based approaches.

This submission intentionally echoes those lodged by other Joint Organisations. For context, 8 Joint Organisations (JOs) and 1 Regional Organisation of Councils (ROC) have participated in the Joint Organisation Net Zero Acceleration (JONZA) program, funded by the NSW Dept of Climate Change, Energy, the Environment and Water (DCCEEW)'s Sustainable Councils Program for the last 3.5 years. This program embeds a dedicated resource within these collaborations to support their member councils to drive strategy and implement projects that reduce emissions.

Summary

The CNSWJO acknowledges the NSW Government's legislated emissions reduction targets, with this submission demonstrating that achieving them will depend on far more than technology deployment alone. Local government is both a critical implementation partner and a financially and operationally constrained participant in the transition, and the Commission's pathways must reflect this. Because councils operate across multiple sectors simultaneously — including transport, waste, energy and the built environment — a sector-siloed approach to funding risks leaving local government's own emissions profile unaddressed by any single program; this submission recommends a dedicated local government funding stream to close that gap.

For Central NSW, landfill gas is the single largest emissions reduction opportunity — accounting for around 70% of council operational emissions — yet current programs and regulatory thresholds leave many smaller, low-flow gas regional landfills without a clear abatement pathway. Energy security and decarbonisation are inseparable: constrained network capacity is already limiting both reliability and economic growth, while CNSWJO's own modelling¹ shows a strong economic case for accelerated investment in distributed energy resources. A fair and durable transition will also require genuine benefit-sharing with host communities, dedicated funding and financing mechanisms for regional councils, and a just transition framework that accounts for regional workforce and equity pressures.

This submission responds directly to the Commission's specific consultation questions and sets out fifteen recommendations addressing local government's role, landfill emissions, energy security and community benefit-sharing, supported by evidence drawn from CNSWJO's own regional modelling and reporting.

Local Government Is a Critical Delivery Partner

Local government occupies a unique position in the net zero transition. Councils operate across multiple sectors identified by the Commission including transport, waste, wastewater, electricity use and the built environment.

Regional councils are responsible for:

- waste and landfill management,
- water and wastewater services,
- community buildings and public infrastructure,
- streetlighting and public facilities,
- civil construction and road maintenance,
- large vehicle and plant fleets, and
- local planning and development functions.

As a result, councils influence emissions outcomes across multiple sectors simultaneously.

However, local government is often overlooked in decarbonisation discussions despite being responsible for delivering many practical emissions reduction initiatives on the ground. Councils play a critical role not only through their own operations, but also through their ability to facilitate community action, support infrastructure delivery and influence development outcomes.

The Commission's pathways should explicitly recognise local government as an implementation partner whose actions will materially influence emissions outcomes across NSW.

¹ [CNSWJO – Business Case on the Nexus Between Energy Security and Emissions Reduction, 2023](#)

A Sector-Based Funding Approach Risks Leaving Local Government Behind

As outlined above, councils do not operate within a single sector: a regional council's own operations span waste, wastewater, transport (through its vehicle and plant fleet and road network), energy use across community buildings and public infrastructure, and civil construction. However, much of the pathway development and funding architecture emerging at both state and Commonwealth level is organised around discrete industry sectors — transport, industrial, waste, energy and the like — each typically assessed and funded separately.

This creates a real risk that local government's own operational emissions fall through the gaps between sector-based programs. A transport decarbonisation fund is unlikely to be designed with a council's mixed fleet of light vehicles, heavy plant and civil construction equipment in mind. An industrial decarbonisation program is unlikely to consider council-operated landfills, water and wastewater treatment plants, or depots at all, despite these assets sharing many of the same abatement challenges as industrial emitters. A waste-sector program, in turn, may not extend to the energy, transport or built-environment dimensions of a council's operations. The consequence is that no single sector-based program is responsible for — or well suited to — addressing local government's emissions profile as a whole, even though councils are collectively a significant emitter and a critical delivery partner in every one of these sectors.

CNSWJO considers that the Commission should recommend a dedicated local government funding stream, structured around councils' cross-sectoral operating model rather than requiring councils to compete separately, and often unsuccessfully, for funding designed for single-sector industrial, transport or waste operators. Such a stream should sit alongside — not replace — existing sector-based programs, and should be designed to address the barriers already outlined in this submission: limited scale, constrained financial capacity, and the need for coordinated, multi-sector implementation support.

Regional Local Government Cannot Fund the Transition Alone

Regional councils are committed to reducing emissions and supporting NSW's transition to net zero.

Across Central NSW, councils have participated in renewable electricity procurement, emissions reduction planning, EV transition planning, energy efficiency initiatives and collaborative regional programs such as the JONZA Program. CNSWJO councils already source approximately over 80% of their electricity consumption from renewable energy arrangements.

However, there is a growing disconnect between expectations placed on local government and councils' ability to fund delivery.

Regional councils operate within a constrained financial environment characterised by:

- rate pegging and limited revenue growth,
- increasing infrastructure renewal requirements,
- rising operating costs,
- workforce shortages,
- disaster recovery expenditure, and
- increasing community service expectations.

CNSWJO's *Emission Reduction Regional Opportunities Report (2024)*² found that while councils recognise the importance of emissions reduction, smaller regional councils frequently lack the resources, technical capacity and economies of scale required to implement projects such as FOGO, methane capture systems, waste-to-energy initiatives and other emissions reduction technologies. Workshop participants specifically identified a need for increased government funding to support implementation, infrastructure and capability building.

Many of the most significant emissions reduction opportunities available to local government require substantial upfront investment, including:

- landfill gas capture infrastructure,
- organics processing facilities,
- EV charging infrastructure,
- renewable energy and battery systems,
- wastewater treatment upgrades,
- electrification of community facilities, and
- fleet transition programs.

² [CNSWJO Emissions Reduction Plan – Regional Opportunities Report, 2024](#)

CNSWJO's experience suggests that alongside direct grant funding, innovative financing mechanisms will be required to accelerate emissions reduction projects in regional local government. The Regional Opportunities Report identified Revolving Energy Funds (REFs) as a practical mechanism for councils to reinvest savings from energy efficiency and renewable energy projects into future emissions reduction initiatives. These approaches can help overcome capital barriers and increase the scale of implementation, particularly where councils are unable to fund projects upfront through existing budgets.

The Commission should consider the role of implementation funding, Revolving Energy Funds and other enabling mechanisms when assessing the pace at which local government emissions reductions can realistically be delivered.

The Commission's pathways should recognise that the pace of emissions reduction achieved by local government is likely to vary significantly depending on the availability of implementation funding, concessional finance and ongoing capability support.

Technology readiness does not necessarily equal deployment.

Without targeted support, pathways may overestimate the capacity of regional councils to deliver emissions reductions within the required timeframes. This is particularly relevant given regional modelling undertaken by CNSWJO indicates that current actions alone will not achieve the emissions reduction trajectory required to align with NSW's legislated targets.

Landfill Emissions Are the Largest Opportunity for Regional Councils

For Central NSW councils, landfill emissions represent the most significant emissions reduction opportunity available.

Member councils consistently request updates on programs and initiatives related to landfill emissions; an ongoing 'Matter In Progress' from CNSWJO's General Managers Advisory Committee (GMAC) meetings is "approve scoping to be undertaken to identify potential activities and projects that would assist councils in reducing their landfill emissions, including where possible, working collaboratively with other JOs, organisations, and State Agencies".

CNSWJO's *Emissions Reduction Plan Regional Opportunities Report (2024)* found that council operational emissions total approximately 285,000 tonnes of CO₂-e annually across the region, with landfill emissions accounting for approximately 205,000 tonnes of CO₂-e, or around 70% of total council operational emissions. Individual councils reported landfill contributing between 57% and 83% of their total operational emissions profiles. This percentage increases as councils adopt other emissions reduction programs, including the purchasing of Large-scale Generation Certificates (LGCs) to offset their electricity emissions.

This finding is significant.

While decarbonisation discussions often focus on buildings and fleet electrification, the evidence from Central NSW demonstrates that landfill gas reduction offers substantially greater emissions reduction potential for many regional councils.

The Commission's pathways should therefore place greater emphasis on:

- landfill gas capture,
- methane destruction technologies,
- organics diversion,
- FOGO expansion,
- resource recovery infrastructure,
- circular economy initiatives, and
- regional waste collaboration models.

Notably, CNSWJO's *Emissions Reduction Plan Regional Opportunities Report (2024)* concluded that councils have limited capacity to address landfill emissions independently and that state-level and regional responses are required. Workshop discussions identified a particular need for government investment in methane capture, flaring projects, converting rural landfills to Waste Transfer Stations, waste innovation pilots and education initiatives.

The report also found that smaller councils face particular difficulties implementing FOGO and other waste initiatives due to a lack of scale and limited financial resources. Participants noted that existing incentives are often insufficient to make these projects viable in smaller regional communities.

The evidence from Central NSW suggests that landfill gas abatement is currently under-recognised as a regional decarbonisation opportunity. Given landfill accounts for approximately 70% of total council operational emissions across the region, dedicated support mechanisms for methane capture, flaring, converting rural landfills to Waste Transfer Stations and organics diversion are likely to deliver greater emissions reductions than many other local government interventions. Current policy and funding settings do not adequately reflect the scale of this opportunity for regional councils.

Wastewater treatment also presents an important opportunity for future emissions reduction. Councils operate extensive wastewater infrastructure across the region and opportunities exist to reduce emissions through improved technologies, renewable energy integration and biogas capture. However, many of these upgrades remain financially challenging without external support.

Further detail on the program design and regulatory barriers affecting landfill gas abatement specifically is set out below.

Landfill Gas Abatement: Program Design and Regulatory Barriers

CNSWJO delivers the Landfill Emissions Abatement Knowledge Sharing (LEAKS) Program, funded by the NSW EPA as part of the Round 3 JONZA Program. LEAKS sits within the broader NSW EPA Landfill Emissions Abatement Program (LEAP)³ and focuses on landfill gas capture and combustion technologies supported by the Clean Energy Regulator's Australian Carbon Credit Unit (ACCU) Scheme.

It was envisioned that LEAP would also encompass 'emissions modelling and technology scan' and 'market readiness' for low flow landfill gas abatement options. To this end, CNSWJO is of the understanding that EPA has partnered with a cooperative research centre to investigate low flow landfill gas abatement technologies. However, the status of EPA's overarching LEAP is unknown at this stage, following recent EPA restructuring and machinery of government changes.

Analysis of 52 NSW landfills undertaken for LEAP in 2024–25 found that financial and technological viability for active landfill gas capture is generally contingent on a landfill depositing more than 15,000 tonnes of waste annually, holding at least 200,000 tonnes in situ, and generating more than 12,000 tonnes CO₂-e per annum. Most of the sites identified as viable are regional, council-operated facilities, and at least four of the thirteen highest-priority sites have since commenced gas capture investigations or installation. However, these thresholds must be tempered against site-specific realities — topography, liner condition, waste composition and leachate management can all materially affect actual gas volumes — and viability is further tied to the volatility of ACCU prices over the minimum 12-year period needed to recover capital and operating costs.

A significant and under-recognised tension exists between generating revenue from landfill gas abatement and councils' own Net Zero goals: ACCUs sold to other entities as carbon offsets cannot also be counted toward a council's own scope 1 emissions reduction, under guidance developed for DCCEEW's Cassora⁴ greenhouse gas accounting tool in consultation with the Clean Energy Regulator. This creates a genuine decision point for councils between selling ACCUs for revenue now, retiring them against their own targets, or directing income to reinvestment mechanisms such as a Revolving Energy Fund.

Many CNSWJO landfills fall below the flow-rate and methane-content thresholds needed for viable gas capture and combustion for energy generation, or even simple flaring, placing them out of scope of the LEAKS Program and current state abatement policy. There is currently no agreed statewide framework for categorising 'small', 'medium' and 'large' landfills, or a corresponding 'ready reckoner' guidance for matching abatement technology to landfill size — a gap that leaves smaller regional landfills without a clear abatement pathway.

NSW EPA's landfill gas abatement policy focus currently appears concentrated on licensed facilities landfilling more than 5,000 tonnes per annum, which excludes many rural landfills entirely — none of Cabonne Council's landfills hold an Environmental Protection Licence, for example, despite solid waste landfilling accounting for more than 70% of the council's scope 1 and 2 emissions. Organics diversion measures such as FOGO are valuable but do not address this gap: they have no impact on the legacy emissions already locked into existing landfill cells, with around half of all landfill gas typically generated in the first 30 years after a landfill or cell closes.

CNSWJO's member councils have already demonstrated a willingness to act — Bathurst Regional and Lithgow City Councils have installed landfill gas flaring systems registered for ACCUs, and Orange City Council has installed

³ <https://www.epa.nsw.gov.au/Your-environment/Recycling-and-reuse/Strategic-direction-for-waste-in-NSW/Carbon-recycling-and-abatement/Landfill-emissions-abatement-program>

⁴ [Cassora – climate reporting built for local governments.](#)

biofiltration in its Cell 1 cap at the Euchareena Road Resource Recovery facility — but what remains missing is policy leadership and dedicated financial support for low-flow, small landfill sites that fall outside current abatement programs.

Energy Security Must Be Considered Alongside Decarbonisation

For Central NSW, energy security and decarbonisation are inseparable.

The Net Zero Commission's pathways should recognise that emissions reduction cannot be considered in isolation from regional energy reliability, affordability and network capacity.

CNSWJO's *Business Case on the Nexus Between Emissions Reduction and Energy Security (2023)* (Business Case) found that 10 of the region's 30 distribution zone substations are currently experiencing network constraints, reliability issues or both. Three additional substations are forecast to become constrained as electricity demand increases.

These issues are already affecting regional growth.

As part of the *Business Case* development, stakeholders identified examples where economic development opportunities were constrained by network limitations. In one case, a proposed \$10–15 million industrial investment near Condobolin was abandoned because of prohibitive electricity connection costs and delays associated with upgrading local infrastructure. Similar concerns have been reported elsewhere across the region.

Stakeholders also reported that unreliable electricity supply imposes direct costs on regional businesses through equipment damage, production downtime, lost productivity and reduced competitiveness.

Importantly, energy demand in Central NSW is expected to increase due to population growth, electrification, electric vehicle uptake and industrial development. At the same time, network constraints and ageing infrastructure continue to limit growth opportunities.

For this reason, CNSWJO strongly supports accelerated investment in distributed energy resources, including:

- rooftop solar,
- household batteries,
- community batteries,
- microgrids,
- virtual power plants, and
- vehicle-to-grid technologies.

The CNSWJO *Business Case* found that a coordinated DER program would generate an estimated regional net economic benefit of \$71.9 million and achieve a benefit-cost ratio of 1.27. The analysis concluded that DER can simultaneously improve reliability, reduce emissions, lower costs and support regional growth.

Beyond reducing emissions, distributed energy resources provide an important pathway towards greater regional energy independence. Central NSW communities are increasingly hosting energy generation infrastructure while continuing to experience local reliability and capacity constraints. Expanding local generation, storage and energy sharing arrangements would allow more communities to meet a greater proportion of their own energy needs, improve resilience during outages and reduce reliance on distant generation sources. This aligns with CNSWJO's view that net zero pathways should improve both emissions outcomes and regional energy security.

The Commission should therefore test pathway scenarios involving substantially higher levels of DER uptake than currently assumed in many planning processes.

Large-scale renewable generation alone will not resolve regional energy security challenges. Localised energy solutions will be essential to ensuring communities hosting energy infrastructure also receive tangible benefits through improved reliability, resilience and affordability.

Regional Communities Must Share in the Benefits of the Transition

Central NSW communities broadly support the transition to renewable energy. However, maintaining social licence will depend on ensuring host communities receive meaningful and lasting benefits.

Stakeholder engagement undertaken through CNSWJO's energy security work identified growing community concern regarding the perceived imbalance between the impacts of renewable energy development and the benefits received by local communities. Issues raised included land use impacts, visual amenity, uncertainty regarding the transition and a lack of direct community benefit.

This tension is clearly evident in Central NSW today. The proposed establishment of renewable energy wind developments across softwood plantations in State forests south of Oberon would involve more than 250 turbines within the plantation estate, together with potential additional turbines on adjacent private land and a separate proposal for a further 47 turbines currently on hold with the State Government. Estimates suggest these developments could collectively supply more than 10% of NSW's electricity demand. However, the proposals have been met with sustained and highly organised community opposition, led by the Oberon Against Wind Towers group. Key concerns include visual impacts extending into the Greater Blue Mountains UNESCO World Heritage Area, potential risks to the local timber, agricultural and tourism economies, bushfire risks associated with turbine infrastructure in softwood plantations, and the cumulative effects of heavy vehicle movements on local road networks.

Community groups have also highlighted the significant financial and volunteer burden of participating in the assessment process, including the need to commission independent heritage and environmental impact assessments. Despite proponent-led consultation initiatives, including community information sessions and neighbour benefit programs for host properties and nearby landholders, opposition has remained strong. This demonstrates how quickly community trust can be undermined when engagement is not supported by genuinely independent, transparent and trusted sources of information.

The Oberon experience highlights the critical importance of robust social licence assessment during both the planning and pre-planning phases of major renewable energy developments. Given that these assets will operate within communities for decades, understanding and quantifying the costs associated with securing, maintaining and, where necessary, rebuilding social licence is essential. Social licence should not be viewed as an intangible concept or assumed outcome of statutory consultation; rather, it is a fundamental project input that directly influences project timelines, approval risks, community acceptance and long-term operational success. This becomes particularly important when designing and monetising benefit-sharing arrangements, as the effectiveness of these programs is ultimately dependent on the level of trust and legitimacy established between proponents and affected communities.

A similar dynamic is evident in Parkes, where a proposed large-scale energy-from-waste facility within the Parkes Special Activation Precinct would process several hundred thousand tonnes of Sydney's waste annually. Community opposition has been strong and sustained: local polling and the large majority of submissions to the related parliamentary inquiry have opposed the proposal, and Parkes Shire Council voted unanimously to formally object. Concerns raised include potential impacts on air and water quality, agricultural land and public health, alongside a broader sense that regional communities are being asked to carry a burden — and the associated risk — that would not be accepted closer to where the waste is actually generated.

Both examples point to the same underlying lesson: technical merit and proponent-led consultation are not sufficient on their own. Clear, independent and trusted public information — genuine community education, not just proponent messaging — delivered early and consistently, is as important a companion to benefit-sharing as the financial arrangements themselves if regional communities are to support the infrastructure the transition requires.

The Commission should recognise that social licence is a critical enabler of the transition.

Regional communities hosting renewable energy infrastructure should experience tangible benefits, including:

- improved local energy reliability,
- reduced energy costs,
- workforce development opportunities,
- investment in community infrastructure,
- local procurement opportunities,
- employment growth, and
- economic diversification.

Community benefit-sharing arrangements, with dollars per MW capacity rates in the *Benefit Sharing Guideline*⁵ set as a floor rather than a ceiling for payment to local government, will be critical to maintaining support for future renewable energy infrastructure and associated investment.

⁵ NSW Government – Department of Planning, Housing and Infrastructure. (November 2024). *Benefit Sharing Guideline*. Retrieved from <https://www.planning.nsw.gov.au/sites/default/files/2024-11/benefit-sharing-guideline.pdf>

The transition also presents an opportunity to strengthen regional economies through renewable energy manufacturing, processing, circular economy industries and associated supply chains. Central NSW's existing strengths in manufacturing, freight, logistics and industrial development position the region to play a larger role in the net zero economy. The Commission's pathways should consider how decarbonisation investment can support regional industrial development and economic diversification alongside emissions reduction outcomes.

Consistent with CNSWJO's Strategic Priority 7, regional communities should be beneficiaries of the transition rather than simply locations where infrastructure is constructed.

Response to the Commission's questions

Policies and Market Mechanisms

Question 1: What opportunities or barriers could improve the effectiveness of NSW's transition to net zero?

- (a) **What policies or market mechanisms could accelerate emissions reductions in specific sectors or communities? What barriers or opportunities exist for their adoption, including any evidence from businesses, industry and/or comparable jurisdictions?**

For the waste sector — Central NSW's largest single opportunity — dedicated support mechanisms for methane capture, methane conversion to carbon dioxide technologies, flaring, converting rural landfills to Waste Transfer Stations, and organics diversion are needed, as existing incentives are insufficient for smaller councils that lack the scale to implement these alone.

For energy- standardised carbon accounting for local government, incentives for distributed energy systems, coordinated electric vehicle infrastructure programs and aligned government procurement would support more consistent uptake. The main barriers are fragmented, short-term funding programs, regulatory complexity and lengthy approval processes. As evidence from a comparable program, DCCEEW's JONZA initiative — covering 8 Joint Organisations and 1 Regional Organisation of Councils — demonstrates that a formally funded regional coordination model measurably improves delivery, and should be replicated and expanded.

Current guidance also does not adequately resolve the tension between selling landfill gas carbon credits (ACCUs) and councils' own Net Zero targets, since sold credits cannot be double-counted toward a council's own emissions reduction.

- (b) **How could the NSW Government better stimulate private finance at the scale and pace needed for the net zero transition?**

Stimulating private finance at the scale and pace required will depend on reducing investment risk and improving project certainty, including through co-investment models, underwriting demand for low-emissions technologies, and aggregating regional project pipelines. There is also strong potential to expand community co-investment models for renewable energy assets so that local economic benefit is retained within regions. Alongside direct grant funding, Revolving Energy Funds (REFs) are a practical mechanism identified in CNSWJO's *Emissions Reduction Plan Regional Opportunities Report*, allowing councils to reinvest savings from energy efficiency and renewable projects into further abatement work and overcome upfront capital barriers.

- (c) **What are the drivers and risks to reaching NSW's interim targets in 2030 and 2035, and net zero by 2050?**

Drivers include strong existing renewable procurement — CNSWJO councils already source approximately 80% of electricity from renewable arrangements — a substantial, well-evidenced landfill gas opportunity, and a distributed energy resource (DER) investment case with a benefit-cost ratio of 1.27 and an estimated \$71.9 million in net regional economic benefit.

The principal risks are that CNSWJO's own regional modelling indicates current actions alone will not achieve the emissions reduction trajectory required to meet NSW's legislated targets; that network constraints (10 of the region's 30 distribution zone substations are already constrained, with three more forecast) will limit the pace of deployment; and that local government's limited financial capacity means technology readiness will not translate into timely deployment without dedicated funding and capability support.

(d) What are the opportunities or barriers for collaboration across sectors to support the transition?

Opportunities exist to strengthen partnerships between local government, energy providers, industry and the agricultural sector, particularly around carbon markets and circular economy initiatives. The principal barrier is that this kind of collaboration currently relies on time-limited programs such as JONZA rather than being formally and consistently resourced; embedding and funding regional coordination mechanisms more broadly would address this.

Technology and Behaviour Change

Question 2: What are the opportunities and barriers to technology development and deployment for each sector?

(a) What technologies are available or emerging in your sector, and what is their current state of readiness?

Rooftop solar is mature and widely deployed, though increasingly constrained by network export limits.

Battery storage and electric vehicle uptake are both growing but remain constrained by cost and, for EVs, gaps in charging infrastructure for heavy and long-distance transport.

Landfill gas capture and methane destruction technologies are available and proven but under-deployed relative to the scale of the opportunity.

Many smaller regional landfills fall below the flow-rate and methane-content thresholds needed for viable gas capture for energy generation (generally above 600m³/h and 50% methane) or even simple flaring (above 100m³/h and 30% methane), placing them outside current abatement pathways altogether. Other CH₄ to CO₂ conversion technologies are relatively unknown and unquantified in regional NSW settings.

Organics processing and FOGO technologies are available, but smaller councils face genuine barriers of scale and cost.

Low-emissions agricultural practices and waste-to-energy solutions are emerging and particularly relevant given the region's primary production and waste management profile, though not yet meaningfully deployed.

Wastewater treatment upgrades, including biogas capture and renewable integration, represent a future opportunity that remains financially challenging without external support.

(b) What constraints exist around technology uptake and deployment?

Constraints are consistent across these technologies: upfront capital costs remain a barrier for households, businesses and councils, particularly in lower-income and regional communities; grid connection delays are increasingly problematic; and there is a shortage of technical expertise to support planning, installation and maintenance. Smaller councils also lack the economies of scale needed to implement complex projects such as FOGO or methane capture independently.

(c) What does the evidence say about current and future costs?

While underlying technology costs are generally declining, the total cost of deployment in regional areas is often higher due to distance, labour availability and infrastructure limitations. Despite this, the evidence supports a strong value case: CNSWJO's DER investment modelling found a benefit-cost ratio of 1.27 and an estimated \$71.9 million in net regional economic benefit, and landfill gas abatement offers a larger abatement opportunity per dollar than the buildings and fleet electrification measures more commonly prioritised elsewhere.

(d) What role could the NSW Government play in strengthening technology development and deployment?

NSW Government support should include implementation funding, concessional finance and Revolving Energy Funds; dedicated support mechanisms for landfill gas abatement; investment in grid modernisation, decentralised energy systems, regional demonstration projects and innovation hubs; and regionally accessible workforce training aligned to industry need, including continuing and expanding JONZA-style capability programs. A statewide framework for classifying landfill size (small, medium, large) and matching abatement technology to landfill gas flow characteristics would also help target support to where it is most needed.

Question 3: What are the opportunities to foster demand reduction and behaviour change?

Energy efficiency upgrades in homes and public buildings, paired with community awareness campaigns, could meaningfully reduce demand. Upfront cost assistance, accessible information and clear communication of short- and long-term benefits would support uptake, while also delivering cost-of-living benefits for regional households.

Economic Impacts and Just Transition

Question 4: What are the likely economic effects on NSW of different emissions pathways to net zero, relative to NSW's current level of ambition?

The transition offers genuine upside for Central NSW — diversifying the regional economy through clean energy jobs, construction, renewable manufacturing and circular economy industries, building on the region's existing strengths in manufacturing, freight, logistics and industrial development. However, without careful pacing, some communities risk increased costs or missed opportunity: network constraints have already cost the region investment, with a proposed \$10–15 million industrial project near Condobolin abandoned due to prohibitive electricity connection costs, and local government cannot fund delivery of its own emissions reduction obligations without external support.

(a) What are the most significant economic or workforce pressures the pathways should account for in your sector or community?

The most significant economic and workforce pressures the pathways should account for are skills shortages, an ageing workforce and limited access to training in regional areas, particularly acute in the electrical trades, engineering and planning roles that are critical to delivery. These sit alongside the broader financial constraints already facing regional councils, including rate pegging, disaster recovery costs and rising operating costs, which limit the pace at which the transition can realistically be delivered.

Question 5: What are the opportunities and barriers to addressing socioeconomic priorities for a just transition, including equitable outcomes for First Nations peoples and rural, regional and remote communities?

For rural and regional communities, the barriers include unequal access to funding, the risk of increased cost burdens falling on low-income households, and a lack of tailored programs for smaller communities.

There is also a live social licence risk: stakeholder engagement has identified a perceived imbalance between the impacts of hosting renewable energy infrastructure — land use, visual amenity — and the benefits communities actually receive.

CNSWJO supports place-based transition frameworks with local decision-making authority, dedicated funding and clear equity outcomes, and benefit-sharing arrangements covering reliability, cost, employment and local procurement, so that host communities are genuine beneficiaries of the transition rather than simply locations where infrastructure is built.

Evidence and Other Considerations

Question 6: What evidence can you provide to inform pathway inputs and assumptions?

The evidence underpinning CNSWJO's pathway assumptions — including council operational emissions, the landfill emissions share, network constraint data and the DER investment case — is set out in full in the Evidence Relevant to Pathway Assumptions section below.

Question 7: Beyond emissions reduction, what outcomes should be considered?

Regional economic resilience, housing affordability, energy costs, land-use impacts, water security — for both urban supply and irrigation-dependent industries — and biodiversity all warrant consideration. Mitigation and adaptation outcomes should be considered together, given the region is already experiencing drought, bushfire, flooding and extreme heat impacts.

Question 8: Do you have any other comments or information you would like to provide?

This submission intentionally echoes those lodged by other Joint Organisations. CNSWJO encourages the Commission to read that consistency across multiple regions as evidence that the barriers identified here —

funding, capacity and network constraints — are systemic rather than one-off, and that local government is both a critical delivery partner and a structurally constrained participant in the transition.

Evidence Relevant to Pathway Assumptions

- Approximately 285,000 tonnes CO₂-e of council operational emissions are generated annually across the CNSWJO region.
- Landfill emissions account for approximately 205,000 tonnes CO₂-e annually and around 70% of total council operational emissions.
- Individual councils report landfill contributing between 57- 83% of operational emissions.
- Ten of the region's 30 distribution zone substations currently experience reliability or network capacity constraints.
- Three additional substations are forecast to become constrained in coming years.
- Existing actions alone are unlikely to achieve emissions reductions consistent with NSW's legislated targets.
- A CNSWJO DER investment model generated a regional net present value of approximately \$71.9 million and a benefit-cost ratio of 1.27.
- Regional councils consistently identified funding, capacity and scale limitations as barriers to delivering emissions reduction projects.
- Viable landfill gas capture and combustion for energy generation generally requires flow rates above 600m³/h and methane content above 50%; flaring requires flow rates above 100m³/h and methane content above 30% — thresholds many small regional landfills do not meet.
- Methane has approximately 28 times the global warming potential of CO₂ over 100 years, and around half of all landfill gas is generated within 30 years of landfill or cell closure.

Key Recommendations

In the context of this submission, the CNSWJO makes the following recommendations:

1. Recognise local government as a critical implementation partner across multiple sectors of the economy.
2. Explicitly incorporate local government funding and capacity constraints into pathway assumptions.
3. Include dedicated local government implementation funding as a key enabling measure within accelerated net zero pathways.
4. Continue and expand regional local government capability programs, including the Joint Organisation Net Zero Acceleration (JONZA) Program, to build local government capability, support collaboration and accelerate implementation of emissions reduction projects across regional NSW.
5. Support innovative financing models, including implementation funding, Revolving Energy Funds and other mechanisms that reduce upfront capital barriers for regional councils.
6. Establish dedicated support mechanisms for regional landfill gas abatement, recognising landfill emissions as the single largest source of operational emissions for many regional councils and one of the most significant near-term abatement opportunities available to local government
7. Recognise wastewater infrastructure as an important future emissions reduction opportunity requiring targeted support.
8. Incorporate regional energy security, network constraints and reliability challenges into decarbonisation modelling.
9. Accelerate deployment of distributed energy resources, including batteries, community energy systems, microgrids and virtual power plants, to improve emissions outcomes, regional energy security and local energy independence.
10. Ensure regional communities receive meaningful benefits from the transition through benefit-sharing arrangements, local economic development and improved energy outcomes.
11. Provide clear state guidance to resolve the tension between selling landfill gas carbon credits (ACCUs) and councils' own Net Zero targets, including guidance on ACCU ownership, retention versus sale, and reinvestment options such as Revolving Energy Funds.
12. Develop a statewide 'ready reckoner' and consistent landfill size classifications (small, medium, large) to match abatement technology and policy support to landfill gas flow and methane characteristics.
13. Extend landfill gas abatement funding and policy support beyond currently licensed facilities to include low-flow, small and unlicensed regional landfills, which are otherwise excluded from current programs.
14. Adequately resource the work envisaged in EPA LEAP for 'emissions modelling and technology scan' and 'market readiness' for low flow landfill gas abatement options.
15. Recognise that organics diversion measures such as FOGO do not address legacy landfill emissions already locked into existing cells and ensure pathway assumptions account for this.

16. Provide clarification to help councils manage landfill gas ACCU/flaring projects — covering financial/Net Zero tensions, ACCU compliance and revenue modelling support, council authority to hold ACCUs, proactive community messaging on flaring safety, and planning clarity (SP2 zoning and DA modification requirements for landfill gas infrastructure).
17. Establish a dedicated local government funding stream, structured around councils' cross-sectoral operating model, to ensure council-specific abatement needs do not fall through the gaps of sector-based funding programs for transport, industrial, waste and other sectors.

Conclusion

Central NSW councils are committed to supporting NSW's transition to net zero. However, the evidence from our region demonstrates that success will depend on more than technology deployment alone. Regional decarbonisation pathways must account for energy security constraints, funding limitations, implementation capacity and community expectations.

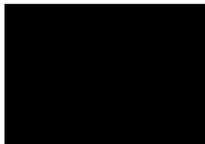
For Central NSW, the evidence highlights landfill gas reduction and distributed energy resources as two of the most significant opportunities to reduce emissions while also improving regional resilience and economic outcomes. Regional councils are already taking action through renewable energy procurement, emissions reduction planning, EV transition planning and collaborative regional initiatives. However, current policy and funding settings do not adequately support deployment at the scale required.

The Commission's pathways should recognise that local government is both a critical delivery partner and a constrained participant in the transition. Achieving NSW's emissions reduction targets will require targeted investment in landfill gas abatement, distributed energy resources, regional energy security, local government capability and innovative financing mechanisms that reduce barriers to implementation.

A successful pathway to net zero will not simply reduce emissions. It will also improve regional energy security, strengthen local economies, support community resilience and ensure the communities hosting the transition are genuine beneficiaries of it.

If you require further information on the contents of this submission, please reach out to our Executive Officer, Ms Kate Barker, on [REDACTED].

Yours sincerely,



Central NSW Joint Organisation (CNSWJO)