SolarCitizens

A community voice for cleaner energy and transport

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Solar Citizens' Submission:
Ausgrid Community Power Network Trial Waiver Application

Introduction

Solar Citizens is an independent, community-based organisation working to grow renewable energy and clean transport in Australia to bring down bills and reduce household emissions. Since our launch in 2013 we have grown to have more than 200,000 supporters across the nation - many of whom are early adopters of Consumer Energy Resources (CER) including rooftop solar, home batteries, virtual power plants (VPPs) and electric vehicles (EVs).

Rooftop solar remains the cheapest form of electricity generation in Australia and this is especially the case when paired with behind-the-meter battery storage. Australia's household solar uptake is a global success story–and has been enabled by government policy and incentives, healthy market competition and strong social license due to the substantial cost of living savings CER offers.

However not all Australians can access the benefits that solar provides. Private rentals and apartments together make up one-third of all households[1], representing a significant cohort of people who face barriers to installing rooftop solar and other CER. Solar Citizens is committed to advocating on behalf of these households, as well as the millions of solar-owning Australians whose rooftops are helping to power a cleaner, cheaper energy grid.

[1] Census Data (2021) ABS / 2024 Australasian Strata Insights Report (2025) UNSW

The Case for Urban Renewable Energy Zones

A 2024 report commissioned by Solar Citizens[2] identified that of Australia's 61 GW residential rooftop solar potential, 46 GW is unrealised–or about 75%. Rented houses make up 12 GW of the total solar potential, almost all of which is currently untapped due to the fact there is little to no incentive or policy mandate to encourage rooftop solar uptake within the private rental market. Solar Citizens advocates that–wherever possible–rooftop solar and battery storage is deployed on all residential and commercial buildings–including rented homes as a priority.

The same report found that nationally, apartments hold 3.3 GW rooftop solar potential–which is also largely untapped. A high proportion of renters and social housing tenants live in apartment buildings and therefore to ensure these cohorts can access clean, cheap energy, we must address the barriers to those living in apartments - including the lack of roof space. Apartments typically have a smaller rooftop surface area relative to the number of dwellings (i.e., they are often taller and narrower, especially high-rise apartments). Installing maximum rooftop solar coverage on a tall, narrow apartment development might only cover 5% of the building's energy needs.

On the other hand, commercial and industrial (C&I) buildings such as warehouses and storage facilities could meet 500% or even 1000% of their energy needs with on-site rooftop solar - representing a significant opportunity for neighbouring households to benefit from this excess supply of power[3]. A report by the Clean Energy Finance Corporation[4] estimates that 32 GW of Australia's 179 GW solar potential is on C&I, and on community/ public buildings. Nexa Advisory estimates that, as of September 2025, less than 20% of Australia's C&I solar potential has been realised[5].

This opportunity to meet local demand with local supply–while contributing to greater energy equity–could be realised through implementation of an Urban Renewable Energy Zone (UREZ). The 2025 '*Sydney as a Renewable Energy Zone*' report calculates that the 3 GW solar PV currently installed across metropolitan Sydney meets 10 to 12% of its total electricity demand - with 76% flowing from residential rooftops and another 20% from industrial installations across the city. But by maximising rooftop solar uptake within the C&I sector, as well as on public and residential buildings, Sydney could actually meet up to 75% of its annual energy needs[6].

To establish a successful UREZ pilot, C&I solar and storage capacity must firstly be unlocked. Industrial and logistics sites face significant challenges due to hosting capacity, curtailment, and

[2] Solar Potential report (2024) Solar Citizens
[3] Sydney as a Renewable Energy Zone (2025) Committee for Sydney
[4] How much Rooftop Solar can be Installed in Australia? (2019) Clean Energy Finance Corporation
[5] Untapped Potential of Commercial & Industrial Energy Resources in the NEM (2025) Nexa Advisory
[6] See [3]

zero-export rules restricting solar system sizing[7]. Therefore there is a lack of economic incentive for businesses to install large solar systems beyond their own electricity needs, as they are likely to be limited by how much they can export into the grid during the day, and feed-in-tarriffs are often unattractive. The return on investment may be higher with a battery, however this usually requires an excess of solar energy to be stored in the battery - which businesses may not have if the system is sized appropriately to meet their needs during the usual operating hours (e.g., 8am-6pm).

The C&I sector needs better investment certainty especially when it comes to installing oversized systems. This may be guaranteed by a third-party energy management company (or commercial VPP provider), or could be delivered in the form of a Power Purchase Agreement (PPA) or a specific tariff structure offering more competitive rewards for larger solar and battery installations.

Overview of Solar Citizens' Position

Solar Citizens advocates for a fairer, more affordable, inclusive energy system that puts consumers first and rewards households and small businesses for supporting the grid with cheap, clean energy via rooftop solar, battery storage, and demand-side participation (efficient homes and appliances such as heat pumps that can help reduce peak demand). We are highly supportive of the impact that CER is having on the democratisation of the energy system.

Australia's world-leading rooftop success to date has been achieved through a) government policy (incentives, subsidies, consumer protections, minimum standards etc); b) a competitive CER private market, and; c) strong social license and private investment from consumers. Ausgrid's sandbox trial must contribute to–rather than hinder– the continued development of these three crucial features of Australia's energy system.

The Australian Energy Regulator's Sandbox trials present opportunities to test how distributed energy resources (DER) can be better planned and orchestrated to support local grid stability, create energy sustainability in urban areas, reduce network costs, and enhance consumer benefits.

However, careful regulatory design is essential to ensure Sandbox trials deliver genuine community outcomes, protect competition, and maintain confidence in consumer-led investment.

Key considerations and concerns held by Solar Citizens for the Ausgrid Community Power Network (CPN) Trial:

- Financial impacts on consumers: The trial must demonstrate that orchestration

[7] See [3] and [5]

participation does not undermine the financial viability of households or businesses who have already invested in their own batteries. Orchestration should enhance, not erode, consumer value.

- Complementarity with private investment: There must be room for individual home and commercial batteries to operate independently, with orchestration providing additional optional benefits rather than crowding out private investment.

- Regulated monopoly risks: The AER should guard against distribution network businesses using the UREZ framework to expand their monopoly role into competitive markets for energy services. Clear ring-fencing and market-neutral safeguards are required.

- Evaluation metrics: Transparent criteria must be established to measure outcomes, including consumer savings, emissions reductions, network efficiency, and equity impacts (e.g. access for renters and small businesses).

- Building social license: The Community Power Network trial must build social licence within the trial communities, and must deliver on regular, meaningful engagement to build trust and participation and improve energy literacy.

Solar Citizens supports the establishment of a UREZ pilot in Sydney, however we have a number of concerns about the Community Power Network as it is currently proposed. As part of our submission we are proposing a series of recommendations that directly address these concerns.

Key Recommendations:

1. Sharing of Local Spatial Energy Plans

Australian Local Government Councils regularly undertake land-use and transport masterplanning, but do not currently include energy demand and generation data as an overlay. Without this, new development risks straining existing grid capacity or missing opportunities for local renewable integration.

Mapping current and projected household, commercial, and industrial energy use would allow Australian Councils to anticipate where demand will rise and how to align that with local generation (rooftop solar, batteries, EV charging). It would enable smarter siting of substations, storage hubs, and DER, while enabling local governments to play a role in helping to establish Urban Renewable Energy Zones.

The United Kingdom is already embedding spatial energy mapping into urban masterplans.

Councils and regional authorities in the United Kingdom can access open energy datasets to overlay with planning schemes. This supports decarbonisation strategies, electric vehicle rollout, and equitable access to renewables by aligning infrastructure upgrades with growth areas.

By contrast in Australia, Councils are not provided with equivalent spatial energy mapping data. Detailed grid and hosting capacity information is held by Distribution Network Service Providers (DNSPs) and the Australian Energy Market Operator (AEMO), who use it for Integrated System Planning (ISP) and Distribution Annual Planning Reports (DAPR). While these reports release some aggregated and technical data, it is not provided in a spatially resolved or accessible format suitable for local government use. As a result, Councils are unable to integrate energy system constraints and opportunities into urban masterplanning, delaying upgrades, increasing costs, and missing opportunities to ensure equitable access to clean energy.

We are advocating for Ausgrid to support Australian local government councils within its distribution network by providing local spatial energy mapping data, for the purposes of integrating this information into local masterplans and other planning frameworks, and to serve as a resource that could guide local development decisions. Councils should be empowered (and resourced) to be provided with local energy spatial mapping from Ausgrid as part of masterplanning. Making these datasets public, ensuring they are updated regularly, and kept accurate supports evidence-based planning, community trust, and avoids costly over-investment in transmission.

Additionally, we are advocating for Ausgrid to make this data available publicly more widely, to encourage market competition. We also ask that Ausgrid make this data available for the CPN trial area at least six months before the CPN trial is established and active, to reduce the risks to market competition. As previously mentioned, Australia' competitive CER market has helped to deliver on world-leading solar uptake followed by a rapid rate of home battery uptake in recent months.

The CPN trial must be delivered in partnership and collaboration with all of society - including federal, state and local governments, households and businesses, market and industry players, energy distributors and retailers. The trial must seek to: encourage healthy market competition, promote transparency, contribute to knowledge sharing and build collaboration between all stakeholders.

Recommendations:
Ausgrid must ensure the Local Spatial Energy Plans (LSEP) are:

a) Made transparent and publicly available
b) CPN trial area LSEP published at least six months before the CPN is initiated;
c) CPN trial area LSEP updated at least quarterly or monthly.

2. Empower and Engage with Consumers

We advocate for a fairer, more affordable, inclusive energy system that rewards households for supporting the grid with clean energy in the form of rooftop solar, battery storage, and demand-side participation (efficient homes and appliances e.g. heat pumps that can help reduce peak demand).

We are supportive of the impact that CER is having on the democratisation of the energy system–including cost of living benefits to solar and battery owners who are rewarded for actively participating in the energy transition; increased energy literacy; and ensuring strong consumer rights and securing freedom of choice when it comes to a household's energy.

The CPN trial must seek to prioritise and uphold consumer benefits, and not restrict consumer choice. It must ensure that consumers (households, businesses and owners corporations) continue to be empowered and rewarded fairly as active participants of the national electricity market.

The role of networks in ownership of CER assets including rooftop solar and behind the meter batteries must be carefully considered by the AER in light of the potential harms to consumers from the improper exercise of monopoly power.

To build energy literacy, local knowledge and empowerment, and participation in the energy grid among host communities, Ausgrid must foster regular, continuous and meaningful engagement with local communities in the trial areas by actively partnering with trusted community organisations who possess demonstrated expertise in community outreach. These organisations are well-placed to reach diverse communities, including renters, culturally and linguistically diverse households, and those who are often excluded from formal consultation processes.

Such partnerships would:

- Expand the breadth and inclusivity of consultation processes;
- Build trust and legitimacy in Ausgrid's decision-making;
- Surface practical, community-based insights into barriers and opportunities that may otherwise be overlooked; and
- Strengthen the social licence necessary to deliver network reforms and consumer energy resource integration.
- By embedding this approach, Ausgrid can ensure its engagement is not only compliant with regulatory requirements but also genuinely responsive to the needs and aspirations of the communities it serves.

Recommendations: During the CPN sandbox trial, Ausgrid must:

a) Support and enable commercial and residential ownership of consumer energy resources;
b) Provide more clarity on the conditions that would require Ausgrid to own a consumer energy resource including solar pv or behind-the-meter battery storage as opposed to a consumer or a competitive commercial operator owning this asset;
c) Demonstrate that orchestration participation does not undermine the financial viability of households or businesses who have already invested in their own solar and batteries, or reduce the rate of private investment in CER within the trial areas;
d) Allow residential and commercial consumers the freedom to select a VPP provider and/or third party energy management provider of their choosing or to operate their solar and battery system independently if they wish;
e) Foster regular, continuous and meaningful engagement with local communities;
f) Partner with trusted community organisations who are active within the trial areas.

3. Improve Network Utilisation and Resilience

Network charges are one of the largest parts of household energy bills. If distribution networks make better use of existing infrastructure, those costs can come down for everyone. The opportunity presented by Ausgrid from the CPN is that they could increase network utilisation/productivity by up to 40% through smarter integration of rooftop solar and batteries. The question remains why they aren't doing this already.

To increase network utilisation, Ausgrid should remove export limits so that solar owners can share more clean power with their communities. By fully using the distribution network, we can offset or delay expensive future transmission builds, reducing costs for all energy users.

To unlock the rooftop solar and storage potential within the trial areas and enable more capacity to be used when the grid can handle it, Ausgrid should establish Dynamic Operating Envelopes (DOEs). This would improve equity by spreading available hosting capacity more fairly across customers; support orchestration by enabling aggregators and VPPs to optimise fleets of solar and storage for both customer benefit and grid stability; and help future-proof the grid by avoiding over-investment in poles and wires while still integrating more renewables.

To ensure blackout resilience we recommend that the CPN includes an islanding component that enables participating batteries to be able to operate offline, as well as online.

Recommendations: Ausgrid should:

a) Remove export limits for solar owners within the trial areas, so that solar owners can be

rewarded for sharing more clean power with their communities and to improve network utilisation;

b) Establish Dynamic Operating Envelopes within the trial areas;
c) Ensure the CPN trial includes an islanding component that enables participating batteries to be able to operate offline, as well as online.

4. Establish Stringent Data Transparency Requirements with Regular Reporting

We are concerned that the sandbox trial application does not clearly define what success would look like for this project, and how it will be measured and reported on. We therefore recommend that Ausgrid defines these criteria in advance of the trial being formally established or going live, and that these criteria and metrics are made publicly available as part of the trial.

We recommend that reporting is done at least annually, with all reporting information shared publicly so that governments, communities and other stakeholders can benefit from the trial's learnings–contributing to knowledge sharing to help fast track the energy transition and establishment of more, successful UREZ pilots.

Recommendations: Throughout the trial period, Ausgrid must report on the following information at least annually:

a) Disclosure of program costs and cost recovery mechanisms, with justification provided
b) Analysis of rates of rooftop solar, home battery and virtual power plant uptake within the trial areas compared to national uptake rates - taking into account additional factors that may impact uptake rates such as housing type, tenancy type and income
c) An indication of the sandbox trial's performance based on pre-established success metrics – including consumer savings, emissions reductions, equity impacts (e.g. access for renters and small businesses), network efficiency and resilience,
d) Key learnings to foster collaboration and knowledge sharing with governments, regulatory bodies, businesses and commercial & industrial building owners
e) Records of community engagement and stakeholder feedback received
f) Independent assessment of the impact of the trial on market competition

5. Reduce Negative Risks to Market Competition

Solar Citizens is supportive of existing ring fencing policies that seek to prevent regulated monopolies (including energy distributors such as Ausgrid) from negatively and unfairly impacting market competition.

We recommend that the AER investigates the need for a separate ring fencing application to be

made alongside this proposal, especially as it relates to Ausgrid's proposal to own CER assets as a last resort option–as typically DNSP CER asset ownership is not permitted under current ring fencing policies.

Recommendations: To reduce any negative impact to market competition in the trial areas, Ausgrid must:

a) Continue to be subject to current ring fencing policies and agreements in place;
b) Apply for any necessary ring-fencing waivers via a separate application to the AER which must be subject to stakeholder consultation as per the usual process.

Conclusion

Solar Citizens is concerned that renewable energy–specifically rooftop solar–is being framed as a problem within Ausgrid's proposal, rather than a solution. The CPN must be designed in a way that puts consumers at the heart of the energy transition–rewarding existing solar and battery owners for supporting the electricity grid with cheap, clean energy; and encouraging high rates of CER uptake amongst locked out households by removing barriers.

Our purpose is to make energy consumers better off, now and in the future. We are advocating for a collaborative effort between governments, businesses, households, energy retailers and energy distributors to establish UREZs in all major cities and towns–with C&I solar and storage (>100kW) exports playing a central role in meeting the energy needs of the surrounding homes and businesses (as well as covering their own energy needs). The CPN's primary goal should be to develop innovative, scalable, low cost solutions to ensure all homes and businesses can access locally generated renewable energy–within a competitive, thriving market backed by government policies and strong leadership.

Solar Citizens thanks the Australian Energy Regulator for the opportunity to make a submission, and we look forward to further engagement and consultation opportunities in the near future. Please don't hesitate to reach out should you have any questions about the content of this submission, or wish to further discuss the above recommendations.

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National Campaigner, Solar Citizens
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