**Submission No 78**

# INFRASTRUCTURE FOR ELECTRIC AND ALTERNATIVE ENERGY SOURCE VEHICLES IN NSW

**Organisation:** Solar Citizens

**Date Received:** 7 May 2025

SolarCitizens

A community voice for cleaner energy and transport

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Tuesday 6th May 2025

Legislative Assembly Committee on Transport and Infrastructure, NSW Parliament

**Solar Citizens' Submission: Inquiry into infrastructure for electric and alternative energy source vehicles in NSW**

## 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 gathered support from over 200,000 Australians, many of whom are early adopters of rooftop solar, electric vehicles (EVs) and other Consumer Energy Resources (CER). While our primary remit is advocating for residential consumers, our overarching vision is for an Australia powered entirely by renewable energy and clean transport - including businesses and commercial buildings as well as homes.

In recent years we have seen increasing evidence of renewable energy and electric transport driving substantial cost-of-living benefits for households, and broader inflation-busting and productivity-enhancing benefits for the wider economy. However many NSW households - such as renters, apartment and strata residents, and lower-income households - continue to face barriers to accessing CER and remain reliant on increasingly expensive fossil fuels including coal-fired electricity, petrol and gas. Urgent action is required from all areas of Government to ensure that everyone can access the benefits of cleaner, more affordable energy and transport, as soon as possible.

Noting the Terms of Reference provided by the Committee for this inquiry, this submission will address a) as it relates to "*funding and location of electric vehicle chargers*" [1] as well as e) *"any other related matters".*

[1] The latter part of 'a) "*infrastructure for other potential energy fuel sources*" will not be addressed.

The introduction of a New Vehicle Efficiency Standard (NVES) and legislation of Vehicle-to-Grid (V2G) technology in Australia will accelerate the shift toward electric vehicles across all price brackets, and proactive planning is essential to manage this transition effectively in relation to charging infrastructure to support these EVs.

Furthermore, we recognise the progress made so far by the NSW Government towards managing this transition and accelerating EV uptake - including the $209 million investment committed over the next four years under the Electric Vehicle Strategy. The programs funded under this strategy include: EV fast charging grants ($149 million); Regional EV destination charging ($20 million); kerbside charging grants ($10 million); and EV-ready Apartment Buildings ($10 million).

## Recommendations for EV-ready Apartment Buildings

Many NSW households are already benefiting from bill-savings by charging their EVs at home during the day using the free solar energy generated on their rooftop. But not everyone owns a roof that they can install solar on, nor a driveway to park their EV in while they charge it.

For people living in strata-titled apartment buildings, the barriers to charging at home present a major disincentive to purchasing an EV in the first place, meaning that Internal Combustion Engine (ICE) Vehicles, which come with higher running costs, are often seen as a more viable option. Simultaneously, apartment residents who own an EV typically spend more time and more money to charge their vehicle out in public and therefore don't enjoy the same cost-of-living benefits as EV owners who can charge at home (especially those who can charge up for free from their rooftop solar). Removing these barriers will encourage more strata and apartment residents to purchase an EV and reduce their transport emissions, fuel bills and maintenance costs. Furthermore, enabling more consumers to charge at home will alleviate some of the need for public charging infrastructure, allowing supply to catch up with demand, reserving the use of public chargers for drivers who need to top up while away from home.

### Retrofitting Existing Apartment Buildings

Solar Citizens welcomed the NSW government's $10 million commitment to retrofitting apartment buildings with EV charging infrastructure via the popular 'Electric Vehicle Ready Buildings' program in the last financial year. Out of NSW's 89,049 strata schemes, approximately 125 (less than 1%) were able to benefit from this initial round of funding, with the vast majority missing out[2]. We therefore recommend that future funding rounds of the EV-Ready Buildings Program are committed in the 2056-26 & following NSW Annual Budgets, in order to provide more apartment residents with the ability to charge at home.

[2] NSW Government, Electric vehicle ready buildings grant

**Policies for New Apartment Buildings**

The next installment of the National Construction Code (NCC)[3] is expected to be adopted by the NSW Government (either in full or in part/ with adaptations) within the next 1-2 years. Part J9D4 of the Draft 2025 NCC outlines the facilities required for EV charging equipment in apartment (Class 2) buildings. These facilities include "*electrical distribution boards dedicated to electric vehicle charging*" (in each storey of the carparks of Class 2 buildings) with "*capacity for each circuit to support an electric vehicle charger able to deliver a minimum of 12 kWh from 11:00 pm to 7:00 am daily*". The NCC also recommends that electrical distribution boards must "*be sized to support the future installation of a 7 kW (32 A) type 2 electric vehicle charger in 100% of the car parking spaces associated with a Class 2 building*".

We recommend that the Committee takes an active role in ensuring that the NSW Government immediately adopts the electric vehicle charging requirements relating to Class 2 buildings as laid out in the NCC. We recommend that these requirements are enforced under the Building Sustainability Index (BASIX) or other suitable planning tool as soon as possible to ensure new apartment buildings are EV-ready.

**Transport Oriented Development Program**

We also bring to the Committee's attention the role that the NSW Government must play in ensuring housing policies - including the Transport Oriented Development (TOD) Program - deliver not only affordable and livable new homes, but also EV-ready homes. Under Part 1 of the TOD program, the NSW Planning Department will approve up to 60,000 new apartments before November 2027. However under current building codes in NSW there is no requirement for apartment buildings to be constructed with on-site renewable energy generation and storage, nor for them to provide EV charging infrastructure for residents.

This short time frame means that Development Applications submitted under Part 1 of the TOD Program will likely be approved before the next installment of the NCC is adopted in NSW and therefore developers will not be required to provide EV charging facilities. Without urgent action, the TOD program risks a missed opportunity to deliver greater energy equity and incentivise EV uptake among apartment residents by providing them with the ability to charge at home.

To mediate this risk, the Committee should make an urgent recommendation to the NSW Planning Minister, requesting that action is taken to ensure that all multi-dwelling buildings approved under Part 1 of the TOD Program are EV-ready, with charging infrastructure provided from the time of construction.

[3] ABCB, NCC 2025 PCD - Volume One

## Recommendations for Harnessing V2G Capabilities

The Commonwealth Government has recently rolled out Vehicle-to-Grid (V2G) technology legislation and predicts that Australia will have 300,000 V2G capable EVs by 2030[4]. By population estimates NSW's share could be up to 100,000. This represents an opportunity to harness an additional 5,000,000 kWh[5] of storage capacity in NSW that can be utilised when needed such as during periods of peak demand or to provide emergency power to communities during blackouts.

V2G technology enables EV batteries to be used as mobile energy storage units, storing energy from the grid when excess occurs (i.e., in the middle of the day when rooftop solar generation peaks), and discharging energy back to the grid during peak demand periods. Consumers can be paid by Distributed Network Service Providers (DNSPs) for providing these services, which could save consumers many billions of dollars. In addition to providing financial incentives to EV owners, V2G technology can help to reduce energy bills for all consumers by distributing cheap, clean energy at the household level.

The NSW Electric Vehicle Strategy, released in February 2025, contains no mention of V2G technology, and only one mention of bidirectional charging. We therefore recommend a supplementary report that specifically outlines the NSW Government's V2G strategy.

### Incentives to Accelerate V2G Uptake

Currently, the Australian bidirectional charging technology market is in its infancy and as a result prices are typically high. In order to encourage early uptake in NSW while ensuring the benefits of V2G are spread equitably, financial incentives are needed. Given the significant storage potential of their batteries, V2G-enabled EVs could play an important role in helping to reach the state-wide target of one million batteries by 2035[6], and therefore it is in the Government's best interest to leverage this technology in the most effective way.

One way of incentivising uptake would be to make V2G chargers eligible for the financial discounts offered under the Peak Demand Reduction Scheme, like the discounts offered for household batteries. An alternative option is for dedicated funding to be committed in the 2056-26 & following NSW Annual Budgets to provide a subsidy, no-interest loan or other financial incentive for EV owners to purchase bidirectional charging equipment at a more affordable price.

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[4] ARENA (2025) National Roadmap for Bidirectional EV Charging
[5] This number was calculated assuming an average storage capacity of 50kWh per EV
[6] NSW Government, Consumer Energy Strategy

## Recommendations for the EV Charging Network

### Resilient Charging Stations

We recommend that all new charging infrastructure with government involvement be built with a minimum of at least two charging bays per EV charging station, capable of being used simultaneously. The issues identified with chargers being out of order, being blocked by inconsiderate drivers, or just busy, arise primarily at locations where there is just a single charging station (sometimes with one Type 2 cable and one CHAdeMO cable, but only one of which can be used at a time). In regional areas, the next available charger might be 20 or 30 km away, posing a problem especially if the EV's battery is already low.

With demand for EV charging increasing exponentially as sales increase, building more redundancy into our charging network is the best way to build resiliency. If something goes wrong, whether a charger fault or an inconsiderate driver, you can simply use the charger next to it. But even if all is going well, you get the benefit of additional capacity for more vehicles to charge at the same time.

### Effective Repairs

With reports of long queues for chargers at long weekends and holidays causing frustration, it is essential to ensure there is sufficient operational charging capacity at each location. We therefore recommend investigating a "duty of service" for charging companies, requiring them to fix faults within a certain time window or maintain a high percentage of up-time annually.

Additionally, we suggest investigating a "right to repair" for chargers, such that charger owners like local councils could hire any qualified electrician to make repairs, rather than forcing them to use overstretched technicians from a specific company.

### Solar-Powered Charging

We recommend that, wherever practical, EV charging stations be built with a) roofs covered in solar panels and b) battery storage. It's common for EV charging stations to be placed at the far edge of a car park, completely exposed to the elements, even at petrol stations where the bowsers are situated under a large roof.

Installing solar panels on the roof of a standalone EV charging station or on an existing petrol station roof will help to provide shade to users, protecting them from the hot sun or the pouring rain whilst they charge. This is especially important during hot summers when older/ elderly adults, children and pets might need to wait in high temperatures for a car to charge.

Furthermore, installing solar panels and battery storage at charging stations will also allow EV drivers to charge up with cheaper, cleaner energy, no matter the time of day. Batteries are required to be installed out of direct sunlight and protected from the elements, as they can pose a fire risk, and therefore the solar canopy must be sufficient to provide enough shade and protection. For bushfire-prone regional areas, installing batteries may need to be avoided completely.

**Interim Solutions**

We draw the Committee's attention to the need to explore interim solutions to address the current shortfall in EV charging availability. One example is the 'Footpath Occupation License' solution provided by the Inner West Council to enable residents with no off-street parking to charge their EV from their home. Residents can apply for this license and once approved, are permitted to run a charging cable from their home (through a window, under a door or from external power socket) to their vehicle parked on the street outside.

We recommend that the Committee investigate the feasibility and need for interim solutions such as the Footpath Occupation License, and any other potential solutions to enable locked out households such as strata and apartment residents, renters, and EV owners with no off-street parking to charge their vehicle in the most convenient and affordable way, especially during the ongoing construction and expansion of NSW's EV charging network.

## Summary of Recommendations

Solar Citizens is urging the NSW Government to deliver on the following as soon as possible:

1. Commit future rounds of funding to the Electric Vehicle Ready Buildings program to help make charging at home affordable for more apartment residents.

2. Ensure new apartment buildings are EV-ready by adopting the requirements under the 2025 National Construction Code as soon as possible.

3. Deliver EV-ready apartment buildings via Part 1 of the Transport Oriented Development Program by mandating the installation of EV charging facilities at the time of construction.

4. Harness the potential of Vehicle-to-Grid technology in NSW by providing EV owners with a discount, rebate or loan to purchase bidirectional charging equipment.

5. Build resilient EV charging stations with at least two bays per location.

6. Investigate and implement policies that enable fast and effective repairs, such as a “duty of service” for charging companies; and a “right to repair” policy for councils.

7. Install a solar roof backed up by battery storage to provide shade and clean energy for EV charging stations.

8. Investigate interim EV charging solutions to address the current shortfall in EV charging availability, such as the Inner West Council’s Footpath Occupation License.

Solar Citizens thanks the Committee on Transport and Infrastructure for the opportunity to make a submission to this inquiry, 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 this submission, or wish to discuss these issues further.

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