



SolarCitizens

A community voice for cleaner energy and transport

15 November 2023

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NSW Government Office of Energy & Climate Change

Solar Citizens' Submission on 'NSW Peak Demand Reduction Scheme: Rule Change 2 Consultation Paper'

Solar Citizens is grateful to the NSW Government Office of Energy & Climate Change for the opportunity to make comments on the issue of the proposed changes to the Peak Demand Reduction Scheme (PDRS) through this submission process.

About Solar Citizens

Solar Citizens is an independent, community-based organisation working to grow renewable energy and clean electric transport in Australia. We speak as a voice for consumers of household clean energy technology, with a focus on rooftop solar, battery storage, efficient electric appliances, and clean transport for all. Since our launch in 2013, we have gathered support from over 180,000 Australians across the country from all walks of life.

Many of our supporters have installed rooftop solar and home battery systems in order to slash their electricity bills whilst doing their bit to cut Australia's carbon emissions. Their personal investment in clean energy technology has helped lower the wholesale price of electricity, reduced network costs, and provided health benefits to the community by lowering pollution. Our supporters express interest in the broader transition to renewable energy, the development of an energy grid that supports and encourages distributed energy resources, and support for communities involved in energy transition. Much of the Solar Citizens' traditional supporter base would be recognised as 'early adopters'. We know from our annual surveys that they are generally budget-conscious and keen to electrify further but face financial barriers.

Submission Overview

SolarCitizens.org.au

Solar Citizens understands the PDRS to be a potentially pivotal policy to enable the rapid deployment of behind-the-meter battery installations across New South Wales - provided the financial assistance is adequate to support consumer decision-making. Following on from the success of the Small Technology Certificate (STC) scheme in incentivising the uptake of rooftop solar to households across the country, there should be no reason why the Peak Reduction Certificates (PRCs) can't deliver the same results for residential battery energy storage system (BESS) installations.

According to the Australian Energy Market Operator's (AEMO) Integrated System Plan, Australia will need to double the rate of installed rooftop solar over the next decade,¹ which will require a significant increase in the capacity of behind-the-meter storage to manage the implications for the energy grid. The AEMO also reports that currently there are 517,622 solar units installed in NSW but only 8,702 household batteries. This highlights the need to make residential BESS installations a priority for the next five to ten years, whereby the relevant policies address barriers such as upfront costs, thus creating a more financially viable solution for everyday Australians to access affordable storage.

This submission will provide a unique perspective of the consumer voice, presenting the findings from Solar Citizens' supporter surveys to highlight the main barriers faced by our audience when it comes to accessing home batteries.

Solar Citizens' Annual Supporter Survey Findings

The 2023 Solar Citizens annual supporter survey generated a total of 1640 responses, 30% of which were from New South Wales residents. We would like to draw your attention to a number of key findings from this survey - which give context to some of the barriers consumers face in accessing home batteries - and to the solutions that consumers perceive to be potentially most effective in overcoming these barriers.

83% of survey respondents had solar panels installed, higher than the national average. In comparison, 22% indicated that they have a home battery installed at their property, with 61% of the remaining respondents expressing that they would like to have a home battery, or are interested in getting one. Of those who don't have a battery, 58% said the upfront cost is the main barrier towards purchasing one, with a further 11% stating that living in rental and/or strata-managed housing has prevented them from accessing a home battery system.

When asked what type of support would encourage respondents to consider buying a battery, 60% said a direct government subsidy or rebate would be most effective; 25% said a no-interest loan; and 15% selected a low-interest, subsidised loan. When these respondents were asked how much the government subsidy or rebate should cover, these were the results:

¹ Integrated System Plan (2022) AEMO

- 8% of respondents said between \$1,000 and \$2,000
- 22% said between \$3,000 and \$4,000
- 18% said between \$5,000 and \$6,000
- 8% said between \$7,000 and \$8,000
- 9% said between \$9,000 and \$10,000
- 15% said they would like to see the whole cost of the battery covered

Lastly, we asked supporters their view on a variety of issues, and access to affordable household battery storage was stated as one of the most important issues currently, with 91% of respondents rating this as “important” or “very important” to them.

These findings are consistent with the results from our 2022 supporter survey. The 2022 Solar Citizens annual survey found that 85% of our supporters had rooftop solar installed, and 20% had a home battery. 48% of our supporters reported being interested in buying a battery in the next three years with the biggest current barrier being cost (75%). The survey asked the size of the rebate that would be required to positively influence purchasing decisions, which yielded the following results:

- 26% responded that a rebate of \$3,000 - \$4,000 would be required
- 20% responded that a rebate of \$5,000 - \$6,000 would be required
- 10% responded that the entire cost should be covered by the rebate

Backed by the findings from both the 2022 and 2023 annual supporter survey, Solar Citizens advocates for a subsidy, rebate or financial incentive, alongside the provision of no interest loans to encourage the rapid and equitable uptake of residential batteries in New South Wales.

Acknowledgement of existing solutions

We acknowledge the Commonwealth’s Household Energy Upgrades Fund (HEUF), which is currently in development and will provide cheaper finance for energy upgrades, including batteries, for many households. When taken together, the stack of rebates and subsidies available for household batteries must be sufficient to incentivise household investment at different levels of household wealth and income, which should include additional programs for lower-income and lower-wealth households.

Solar Citizens acknowledges the early-stage success of the Capacity Investment Scheme in attracting investment in large-scale battery storage. However, there remains a significant gap in incentivising household investment in residential-scale energy storage at the state and federal levels (with the Northern Territory’s Home and Business Battery Scheme being the only active rebate at present). As has been highlighted in the survey results, the upfront costs involved with

battery installation have been identified as a major barrier for many households, and therefore, the savings offered by the PDRS must be ample to secure rapid uptake.

Recommendations for additional requirements for BESS 1

This section will address the following consultation question as outlined on page 26 of the “NSW Peak Demand Reduction Scheme: Rule Change 2 Consultation Paper”:

“Are there additional requirements you recommend we add to ensure consumers get the best outcomes?”

Using the example from page 25 of the consultation paper, the installation of a 14 kWh battery would generate 577 PRCs over 8 years². The value of one PRC has varied from between \$1.30 up to \$2.50 in the past year³, meaning that the potential savings could be between \$750.10 and \$1,442.50, not taking into account the \$200 minimum co-payment, nor the Accredited Service Provider’s (ACP) decision on what savings they would offer to customers. With a 14kWh battery costing \$12,100 at a minimum (not including inverters, chargers and installation costs), these savings are unlikely to create the right level of incentive needed to encourage widespread uptake even when paired with discounted financing options.

Therefore, Solar Citizens strongly recommends that the potential savings made available under the PDRS are increased to deliver a more attractive incentive to the consumer. One suggestion for how this could be done is to increase the number of certificates granted upon battery installation, in the form of a certain number of additional certificates granted per kWh of battery capacity purchased. The \$200 co-payment should also be removed at the consumer level as this will decrease the potential savings for the household.

Solar Citizens also recommends that affordable financing options are offered in conjunction with the PDRS, specifically a 0% interest loan to households not already eligible for an existing zero-interest loan. This loan would be repaid over the course of up to ten years, similar to the ACT’s Sustainable Household Scheme, Tasmania’s Energy Saver Loan Scheme, or the now expired ‘Empowering Homes’ solar battery loan in NSW. The loan should be accessible to all households who purchase a battery under the PDRS, regardless of household income or other measures, to encourage widespread uptake.

In addition, there should be an additional rebate or subsidy offered to those on low incomes, for whom discounted finance products are often not appropriate, to be used in conjunction with the PDRS financial incentive. 55% of 2023 Solar Citizens supporter survey respondents indicated their annual household income was less than \$80,000, with 29% earning \$80,000 or more (the

² Peak Demand Reduction Scheme: Rule change 2 consultation paper (2023) Office of Energy and Climate Change, NSW Treasury

³ Certificate prices (2023) Demand Manager

remainder did not wish to disclose this information). The survey findings would no doubt have been influenced by this demographic, with many of these respondents impacted by the rising cost-of-living and concerned about the cost of installing a BESS. It is crucial that any financial incentive scheme offered by the federal or state government provides the right help to those who need it - in this instance, those on low incomes who are most vulnerable to the current cost-of-living crisis and increased energy bills.

Low-income households would benefit significantly from having a battery installed alongside their solar system, to avoid needing to tap into the grid during peak hours, and to protect themselves from future energy bill increases. This also benefits other energy consumers by stabilising the energy grid in peak times. Consumers should be able to use other existing and new financial incentives in conjunction with the PDRS to maximise their savings.

A third priority is to ensure that renters and strata associations are eligible for PRCs under the PDRS. 2021 Census data tells us that 33% of NSW households were renting⁴, and that 17% of residents were living in a Strata-managed property.⁵ This is a significant proportion of the NSW housing stock and should be taken into consideration by this consultation. Increasingly strata associations are taking steps to electrify their buildings with renewable, distributed energy, often supported by local government programs. However, little has been done to ensure those in rental accommodation can access the benefits of rooftop solar and battery storage.

To further highlight the issue at hand, the 2023 Solar Citizens survey found that 99% of respondents who indicated that they live in a rented home stated this to be the main barrier to installing a home battery. One recommendation to address this problem would be to offer a tax concession, in addition to the PDRS financial incentive, to landlords who would be willing to install battery storage and rooftop solar on their rental property. The landlord would then save on the costs involved with upgrading their property's energy efficiency and in turn, add value to the property, while the tenant would benefit from the electricity savings of having solar PV and battery storage installed.

Finally, the PDRS will need to address the advancement of vehicle-to-grid (V2G) technology through bi-directional charging infrastructure and hence the potential of electric vehicles (EVs) in reducing peak demand through storage. This technology is already being rolled out in South Australia, so the PDRS should anticipate the considerable impact EVs will have on reducing peak demand. NSW residents who purchase an EV with V2G capability should have the opportunity to access the same financial benefits of the PDRS as those who purchase and install a battery under the scheme. Solar Citizens understands this particular issue to be beyond the scope of this specific rule change, but maintains that it will need to be factored into the next consultation and subsequent amendments.

⁴ Population: Census (2021) Australian Bureau of Statistics

⁵ 2022 Australasian Strata Insights Report (2023) City Futures Research Centre

Recommendations for additional requirements to reduce fire and other safety risks

Building on the above, this section will briefly address the following consultation question as outlined on page 26 of the “NSW Peak Demand Reduction Scheme: Rule Change 2 Consultation Paper”:

“What additional steps can we take to mitigate fire and other safety risks from batteries supported through the scheme?”

In accordance with advice from Fire and Rescue NSW,⁶ Residential Battery Energy Storage Systems should be installed by an authorised and accredited technician in order to avoid the risk of improper installation and therefore increased risk of fire. One reason that a consumer would choose not to purchase a BESS through an accredited installer (i.e., an ACP in the case of the PDRS) would be to secure a cheaper deal and save on costs. To combat this - and in turn reduce fire risk and improve the safety of battery installations in NSW households - the PDRS must be effective in incentivising the purchase of a BESS from the Clean Energy Council's (CEC) approved battery list, installed only by an ACP.

In order to drive rapid uptake of high-quality battery installations (over cheaper and potentially unsafe alternatives), the savings offered by the PDRS must be greater than what has been suggested in the consultation paper. In doing so, the scheme will ensure that safe batteries are accessible to those on lower household incomes, resulting in a more equitable solution at the consumer level.

Furthermore, a requirement of the PDRS must be that consumers purchase approved batteries from the CEC's list and that these are installed by an ACP. It was noted that this requirement was not specifically listed in the consultation paper, however it should be. The list of ACPs should be monitored and reviewed periodically (e.g. every two or three years) to ensure these businesses continue to adhere to best practice. The CEC's approved battery list should also be monitored, reviewed and updated if required. A further requirement to enhance safety and reduce fire risk should be that chargers and inverters purchased under the scheme must bear the Regulatory Compliance Mark, to show that the device in question has met the relevant Australian Standards under the Electrical Equipment Safety System.

Summary and recommendations

This submission outlines the recommended changes required to ensure as many NSW households as possible can benefit from the PDRS as it relates to BESS installations and in turn, encourage rapid uptake of high-quality, properly installed batteries; reduce peak demand; and improve safety.

⁶ Battery Energy Storage Systems (2023) Fire and Rescue NSW

In summary, Solar Citizens recommends the following in response to the Rule Change 2 Consultation Paper:

- Increase the potential savings associated with purchasing a battery under the PDRS, so that the financial incentive covers a higher portion of the upfront cost faced by consumers
- Ensure low income households are able to access ample rebates, subsidies and financing options to enable their participation in the PDRS
- Offer a 0% interest loan to those who purchase a BESS through the scheme
- Ensure that landlords and their tenants, and those living in strata-managed housing are able to access the financial incentives associated with the PDRS
- Specifically outline the requirement of the PDRS to purchase an approved battery from the CEC's list, and that this must be installed by an ACP
- Implement measures to periodically monitor both ACPs and the approved battery list, to improve residential battery safety for consumers
- Require chargers and inverters purchased under the scheme to bear the Regulatory Compliance Mark

Thank you again for the opportunity to make this submission.

A handwritten signature in black ink, appearing to read "Heidi Douglas", with a stylized flourish at the end.

Heidi Lee Douglas, National Director