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NSW Energy Saving Scheme & Peak Demand Reduction Scheme statutory review 2025

Overview

Rewiring Australia welcomes the review of the schemes' ongoing potential and performance and the opportunity to provide a submission. We advocate for Australia to rapidly “electrify everything”. We must replace all fossil-fuel-powered machines—from the large ones in power stations to the small ones in homes—with efficient, flexible, electric alternatives. This will reduce carbon emissions and buy the time we need to completely decarbonise our economy. It will also save households and the Australian economy billions of dollars.

Rewiring Australia supports the ongoing operation of the Energy Saving Scheme (ESS) and Peak Demand Reduction Scheme (PDRS). We congratulate the NSW government on its achievements in unlocking the benefits of electrification and consumer energy resources (CER). Our submission focuses on the growing need for new household electric machines to offer load flexibility to the grid.

Rewiring Australia recommends that the schemes' objectives should explicitly and actively prioritise flexible energy usage and electrification of replacement appliances. Placing greater value on flexibility will improve government value for money, futureproof the transition, and enhance the complementarity of the ESS with broader energy system electrification, as well as government energy and climate policy and commitments.

About Rewiring Australia

Rewiring Australia is a non-profit research and advocacy organisation dedicated to representing the people, households and communities in the energy system. We deliver practical climate progress by working with government, industry, and communities to electrify everything. Co-founded in 2021 by Dr Saul Griffith and Dan Cass, Rewiring Australia highlights the positive climate and economic outcomes possible for Australia, and the world, with electrification of fossil fuel machines. www.rewiringaustralia.org

In addition to co-founding Rewiring Australia, Saul Griffith is also the co-founder and Chief Scientist of Rewiring America. [Rewiring America](#) and Saul worked closely with the Biden Administration in the drafting of the Inflation Reduction Act to drive investment in clean, electric machines and in supporting households and the larger U.S. economy to electrify.

Context

As Australia's energy transition accelerates and our energy system becomes dominated by variable renewables, we must build demand flexibility into the electricity system. Reforms to the PDRS and ESS are needed to improve levels of flexibility.

The ESS' focus on efficiency improvements contributes to the reduction of energy related emissions. However, this narrow focus is a missed opportunity to build greater demand flexibility within homes. The PDRS is the only scheme with a pathway for scaling that includes a target, support mechanism, and process for increasing the volume and types of activities over time¹. The PDRS is critical for incentivising flexibility in NSW's future electricity system, but a key opportunity exists for the two schemes to work towards common objectives of increased flexibility and reducing emissions in our electricity system.

The ESS and PDRS aim to complement government policy's broader carbon reduction objectives. However, the Government agenda and energy system have changed since 2020 (when the last review was conducted and the PDRS was introduced) with respect to rapid electrification and impending gas shortfalls.

Specifically, the:

- Energy and Climate Ministers' endorsed National Consumer Energy Resources Roadmap underlined the need for enhanced flexibility to achieve the full potential of the rapid shift to a new energy system.
- In the Gas Statement of Opportunities, AEMO signalled that gas supply shortfalls threaten New South Wales and the East Coast as soon as 2025.

In the context of the above, the ESS and PDRS could better complement the government priorities of enhancing electricity system flexibility and gas replacement.

¹ Briggs, Roche & Ibrahim (2024, July). Shape, shift, and shimmy: EVs and hot water can boost flexible demand, but need policy pathway. [Online]. <https://reneweconomy.com.au/shape-shift-and-shimmy-evs-and-hot-water-can-boost-flexible-demand-but-need-policy-pathway/>

The ESS and PDRS incentivise upgrading a range of appliances, from lights and A/C to pool pumps. Hot water offers enormous consumer demand flexibility opportunities and, therefore, deserves greater recognition and eligibility under the PDRS in particular². The University of Technology of Sydney and the Institute of Energy Economics and Financial Analysis have produced two compelling reports on the value of hot water that Rewiring Australia recommends the Review consider³.

The findings of the UTS team's recent research into domestic hot water and flexibility found that⁴:

- A Business as usual scenario would represent a major missed opportunity to use domestic water heaters as a significant source of flexible demand equal to 15–31 GWh/day.
- The phasing out of gas water heaters in homes would provide Australian consumers with combined annual savings of \$4.7–6.7 billion by 2040.
- More aggressive electrification of water heating could reduce emissions three to five times more than remaining on the current trajectory.
- Many barriers remain to the uptake of electric water heating in homes and activating their flexible demand capacity, including a need for easier solutions and a compelling customer proposition.
- Electrifying water heating achieves both increased energy efficiency and flexibility - but only with the right policy mix.

The ESS needs to be expanded to fully capture the potential benefits of DERs and facilitate their integration into the electricity grid in a way that supports power system reliability and security.

Not only does the ESS need to be prescriptive regarding technology capability, but it also needs to model where and when these DER services are available. Such modelling would be valuable in understanding changes in demand, demand flexibility capacity and potential for non-network services.

² Briggs, Roche & Ibrahim (2024, July). Shape, shift, and shimmy: EVs and hot water can boost flexible demand, but need policy pathway. [Online].
<https://reneweconomy.com.au/shape-shift-and-shimmy-evs-and-hot-water-can-boost-flexible-demand-but-need-policy-pathway/>

³ Roche, D., Dwyer, S., Rispler, J., Chatterjee, A., Fane, S. & White, S. (2023). Domestic Hot Water and Flexibility. Report prepared for ARENA by UTS Institute for Sustainable Futures. Available from: <https://www.uts.edu.au/isf/explore-research/projects/domestic-hot-water-and-flexibility>; Kuiper, K., (2024). Australia needs more efficient, smarter home hot water systems. [Online] <https://ieefa.org/resources/australia-needs-more-efficient-smarter-home-hot-water-systems>

⁴ ibid.

Recommendations

Scheme Objectives

1. A primary objective of the NSW ESS and PDRS should be to enhance the flexible use of energy.
2. The electrification of appliances should be an objective of the scheme. Fossil fuel-powered machines are not compatible with net zero future energy systems.

Scheme Eligibility and Activities

3. All new subsidised electric water heaters (and other relevant appliances) should be required to have a timer, controls and, once standards allow, dynamic management controls for demand response. This can be delivered via an eligible products list, a notice to market and compliance audits.
4. Subsidies should apply to configuring or retrofitting existing electric water heaters to be flexible (i.e. the addition and configuration of timers or controls). This could be achieved through creating certificates for retrofitting or adding to a load control service.
5. As well as mandating flexible controls, support for removing gas hot water and replacement with a flexible heat pump system should be increased. This could be achieved through the creation of certificates under the PDRS for new heat pump installations which meet demand shifting requirements (e.g. VPP participation or smart controls) or outside the PDRS through a grant subsidy. This will better reflect the high cost of retrofitting these systems, the value of efficient, flexible electrification, and the high future cost of gas supply.
6. The review should consider broadening the PDRS Shifting and Demand Response activities to include flexible hot water and EV chargers.

Scheme Operation and Communication

7. The government should promote the ESS and PDRS more strongly and visibly; distinctive branding and online presence could increase public trust.
8. In addition, proactive marketing of the scheme and the discounts available would increase consumer awareness. Government advertising should advise consumers to seek appliance quotes that include the scheme rebates. This is important to help ensure that consumers replacing broken appliances in a hurry get quotes for replacements that reflect the rebates and incentives of the scheme. We note, by way of example, that Solar Victoria has conducted effective and popular campaigns for its programs.
9. Reforms and installer-focused communications should be increased to ensure that more installers are registered to offer the scheme.

10. The transparency of the certificate scheme value to consumers should be improved through requirements of Accredited Certificate Providers within the schemes to highlight this in advertising, sales and invoicing.
11. The Government should explore options to fund and partner with trusted community and advocacy organisations to promote the scheme.

Conclusion

The strengthened and expanded ESS and PDRS are essential in delivering an affordable, rapid transformation. The opportunity is to unlock the benefits of electrifying our homes in the short term and at scale. Benefits include reducing energy consumption, consumer bills, carbon emissions, and electricity system costs. Complementary measures and incentives to support and promote the ESS are needed. Within our domestic infrastructure, hot water generation stands out as a critical element which the ESS and PDRS should seek to rapidly electrify with flexibility capabilities. Priority enhancements are required to deliver low-cost appliances that offer a range of demand flexibility services, such as hot water systems.