

Net Zero Plan

Energy Security Safeguard

Department of Climate Change,
Energy, the Environment and Water

Peak Demand Reduction Scheme

Rule change 2 update
September 2024

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Acknowledgment of Country

The Department of Climate Change, Energy, the Environment and Water acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past, present and emerging through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.

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Introduction

The Peak Demand Reduction Scheme (PDRS) is a certificate scheme that aims to reduce peak electricity demand in NSW. Under the PDRS, scheme participants are required to purchase and surrender Peak Reduction Certificates (PRCs) to the NSW Government. PRCs are created when Accredited Certificate Providers (ACPs) complete eligible activities that help households and businesses reduce their peak energy consumption.

The NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) has now made 2 changes to the *Peak Demand Reduction Scheme Rule 2024* (the Rule) in 2024.

The first change, published on 24 May 2024, introduced new activities for batteries (BESS 1 and BESS 2), updated the calculation methodology for Pool Pumps and Commercial Heat Pump Hot Water systems, and removed some inactive activities. The [Peak Demand Reduction Scheme Rule change 2 – May 2024](#) position paper details those changes.¹

The second change, published 6 September 2024, incorporates all those changes and includes additional changes detailed in this Rule change 2 update – September 2024. The new [Peak Demand Reduction Scheme \(Amendment No. 2\) Rule 2024](#) is effective from 13 September 2024 with battery activities commencing on 1 November 2024. It replaces all previous versions of the Rule.

Purpose of this paper

This paper highlights additions and amendments to the Rule following additional consultation. It responds to the additional feedback on the new battery activities by outlining:

- industry feedback and how we have responded
- changes to new activities in the Rule
- minor amendments to activities in the Rule.

The paper covers:

- stakeholder concerns over the start date for battery activities, the maximum size of permitted battery installations and the ability to add a second battery
- changes to warranty requirements for both battery activities, BESS1 and BESS2, with additional context relating to energy throughput and temperature range

¹ https://www.energy.nsw.gov.au/sites/default/files/2024-05/202405_NSW_Peak_Demand_Reduction_Scheme_Position_Paper_rule_change_2.pdf

DCCEEW received additional feedback after public consultation

On 24 May 2024, Minister Sharpe announced 2 new battery activities in the PDRS. This led to an influx of media coverage that resulted in a second wave of stakeholder feedback from organisations that did not lodge a submission during public consultation in November 2023.

Commencement date for batteries remains as 1 November 2024

The strongest stakeholder feedback received after 24 May relates to the commencement date of the battery incentives and its impacts on industry.

The start date of 1 November 2024 was set to ensure all administrative, regulatory and technical processes are in place for a smooth implementation. It gives the Independent Pricing and Regulatory Tribunal (IPART) time to accredit new entrants to the scheme in its role as Scheme Administrator. DCCEEW is working closely with IPART, the Building Commission NSW and Fire and Rescue NSW to establish adequate consumer and safety protection mechanisms before battery installations can start under the scheme.

The NSW Government acknowledges the challenges faced by the renewable energy industry and understands the importance of stable and predictable policies to support business operations and employment. We understand the urgent need for batteries to manage power demands and support the grid. However, a structured rollout is necessary to ensure that safety requirements are in place and that certificate providers and their installer networks have time to understand the PDRS and ensure high rates of compliance from the start.

This will safeguard consumers and maximise the program's long-term effectiveness – leading to growth of the industry that outweighs the short-term impacts.

Battery capacity remains capped at 28 kWh

Some stakeholder feedback called for the expansion of the eligibility criteria to include batteries with more than 28 kWh of usable capacity. The calculations for these activities are derived from the Next Gen Energy Storage Program, a rebate program that incentivised the installation of 5,000 batteries ranging from 2 to 30 kWh in capacity, in the Australian Capital Territory.

Because the average daily electricity consumption for a household is 14.5 kWh but may be double for a large household in summer, a range of 2 to 28 kWh for a battery system is appropriate for most homes in NSW.² Through the Energy Savings Scheme (ESS), homes with high energy consumption can pursue energy efficiency upgrades to lower their consumption.

Until we have robust data that informs the peak reduction potential of larger batteries, we have retained a limit of 28 kWh for these new activities.

² <https://www.ausgrid.com.au/Industry/Our-Research/Data-to-share/Average-electricity-use>

Incentive remains targeted at new battery installations

Stakeholders also requested that the PDRS provide incentives for additional batteries, where one already exists onsite. In setting up the new battery incentives, our intention is to target homes and small businesses that do not have a battery, including those that may utilise these incentives to pursue a combined rooftop solar and battery installation. We also expect the network impact of these new installs to be greater than adding capacity to locations that already have solar and a battery.

In future Rule changes, we will reconsider sizing requirements and expanding eligibility to homes and businesses that already have a battery installed.

Operating temperature range between -10°C and 50°C

NSW experiences a high variance in temperature across the state, with some regions experiencing both sub-zero winter temperatures and high summer temperatures. This makes it necessary to ensure that warranties remain valid under a broad range of conditions and increasingly erratic weather patterns. Stakeholders questioned the temperature range.

Temperature range is typically detailed in the warranty documents under what is defined as the 'normal operating or normal use conditions'. This is the temperature range within which a battery will remain under warranty and may not necessarily align with the optimal temperature range for the battery. We have set and will keep this requirement at -10°C to 50°C.

Summary of changes to the PDRS Rule

Changes in the 6 September 2024 version of the Rule are outlined in Table 1.

Table 1 Summary of new activities

Activity	Changes
BESS1 – Install a new behind-the-meter battery energy storage system	Introducing a transitional approach to warranted cumulative energy throughput, where the requirement will be equivalent to: <ul style="list-style-type: none"> • 2.8 MWh of energy throughput per kWh of usable capacity for implementations prior to 1 April 2026 • 3.65 MWh of energy throughput per kWh of usable capacity for implementations after 1 April 2026.
BESS2 – Sign a behind-the-meter battery energy storage system up to a demand response contract	Introducing a transitional approach to warranted cumulative energy throughput, where the requirement will be equivalent to: <ul style="list-style-type: none"> • 2.8 MWh of energy throughput per kWh of usable capacity for implementations prior to 1 April 2026 • 3.65 MWh of energy throughput per kWh of usable capacity for implementations after 1 April 2026.
Changes to existing activities	Minor numbering and phrasing issues have been rectified.

Installation of a battery: BESS1

Performance warranties and capacity retention

Warranties will need to cover the system for 10 years and guarantee that 70% of the usable capacity will remain at the end of this period. Considering the expected 15-year lifetime of the battery installation activity, this requirement will ensure that degradation at the 10-year point does not exceed the standard degradation for lithium iron phosphate and similar-performing battery chemistries. It also incentivises manufacturers to stand by their products for a reasonable length of time, considering the high cost and serviceable lifetime of batteries.

For hybrid batteries that also contain an inverter, the warranty must cover the battery and inverter components for 10 years. A warranty that covers the main components is needed to give consumers certainty of their investment and the system's ability to contribute to demand reduction. Where consumers adding a battery need to replace their existing standalone inverter, careful consideration of compatibility and future interoperability requirements will be crucial.

Warranted cumulative energy throughput

Ongoing battery performance is crucial for good consumer outcomes. Cumulative energy throughput is a measure of the amount of energy that a battery can discharge until it is no longer covered under warranty. For both PDRS battery activities, this throughput is represented as megawatt-hours (MWh) of electricity throughput per kilowatt-hour (kWh) of usable battery capacity (MWh/kWh). Where throughput is expressed in cycles, or other units, IPART may consider equivalent metrics.

At 3.65 MWh/kWh a battery can be cycled once per day for 10 years and remain covered by the warranty. Including this value in the PDRS Rule signals a required uplift in warranty coverage across the battery market, especially for batteries used in Virtual Power Plants (VPPs). It is a threshold already met by many battery manufacturers and is a feasible warranty for the future market.

However, DCCEEW accepts that time is required before this level of performance is business as usual. To give time for that transition to occur, and to signal the intention to require increased performance in future:

- For installations that occur before 1 April 2026, batteries must be warranted to a cumulative energy throughput equivalent to 2.8 MWh/kWh. This value accepts the conservative approach used by some market-leading manufacturers and allows for a high degree of consumer choice when it comes to selecting a brand and model of battery.
- From 1 April 2026, the throughput warranty requirement will increase to 3.65 MWh/kWh.

We note industry concerns that a value of 3.65 MWh/kWh does not reflect a battery's degradation capacity. However, with multiple manufacturers already passing the threshold and the constant improvements in manufacturing quality, battery chemistry, cooling systems and internal optimisation and protection, we believe that this future-focused requirement is readily achievable.

This threshold gives consumers confidence that whether their battery is un-orchestrated or orchestrated (participates in a Virtual Power Plant) it has coverage for 10 years.

Demand response from a battery: BESS2

Warranty requirements for batteries used in a Virtual Power Plant (VPP)

The criteria for BESS2 mirror those in BESS1 and require warranties to cover batteries for:

- at least 10 years, with a guarantee that at least 70% of usable capacity remains at the end of this period
- normal use conditions (as it relates to warranty coverage) that are defined as being not less than an ambient temperature range of -10°C to 50°C
- at least 2.8 MWh of cumulative energy throughput per kWh of usable battery capacity for implementations before 1 April 2026
- at least 3.65 MWh of cumulative energy throughput per kWh of usable battery capacity for implementations after 1 April 2026.

The updated Rule clarifies that manufacturers must not reduce warranties below the minimum thresholds for batteries that participate in a VPP. This is designed to ensure that battery owners are not penalised for making full use of their assets and bringing down the payback time for costly equipment.

Appendix

Appendix A: Acronyms

Acronym	Definition
ACP	Accredited Certificate Provider
AEMO	Australian Energy Market Operator
ESS	Energy Savings Scheme
IPART	Independent Pricing and Regulatory Tribunal
NMI	National Meter Identifier
NSW	New South Wales
PDRS	Peak Demand Reduction Scheme
PRC	Peak Reduction Certificate
Safeguard	Energy Security Safeguard
VPP	Virtual Power Plant

Energy Security Safeguard



For more information

To learn more about the Peak Demand Reduction Scheme or Energy Security Safeguard, please visit or contact:

www.energy.nsw.gov.au | sustainability@environment.nsw.gov.au