Energy Security Safeguard
Energy

Hot Water Systems and customer co-payments

Energy Savings Scheme Rule Change Consultation – Part 1

19 September 2023

NSW GOVERNMENT

Agenda

10:00am - Welcome and Introduction

10:10am – Presentation of Issues:

- hot water systems
- customer co-payments
- other related topics

10:35am – Q&A

10:55am – Final thoughts and wrap Up

11:00am – Close

Acknowledgement of Country

We acknowledge that today we meet on many Aboriginal lands.

We acknowledge the traditional custodians of the lands and we show our respect for elders past, present and emerging through thoughtful and collaborative approaches to our work.

Nikita Ridgeway

The Energy Security Safeguard

The Energy Security Safeguard is part of the *NSW Electricity Strategy*, the government's plan for a reliable, affordable and sustainable electricity system. The Safeguard includes three schemes:

- The existing **Energy Savings Scheme (ESS)** creates a market and financial incentives to save energy and reduce energy bills. It runs to 2050, with targets increasing to 13% by 2030
- A new **Peak Demand Reduction Scheme (PDRS)** supporting activities that provide the capacity to reduce demand at peak times
- A new **Renewable Fuels Scheme (RFS)** to encourage the production of green hydrogen

The Energy Savings Scheme

NSW's largest energy efficiency program

44,000 GWh

Energy savings till 2030

$6.1 Billion

Energy bill savings till 2029

39.6 Million

ESCs created from 2009 to July 2021

Avoided 19 megatonnes

GHG emissions between 2009 and 2021

Why update the ESS Rule?

- Update existing methods to align with changes to GEMS Determinations, standards and the underlying programs
- Incorporate stakeholder feedback and evaluation results
- Maintain the effectiveness of the ESS Rule through updates to savings factors, changes to the Rule requirements and adding activity schedules for new technologies
- Make other enhancements to the ESS Rule to maintain its integrity and/or reduce transaction costs

2023 Rule change issues: Part 1 and Part 2

Part 1: Things we are consulting on now

- Co-payment for residential and commercial
- Hot water for residential and small business

Part 2: Upcoming issues for later this year

- Lighting (preliminary consultation this Thursday!)
- Commercial hot water in the ESS and PDRS
- Pool pumps and pool pump frequency inverters
- PIAM&V Measurement & Verification Professional
- Data uploads to TESSA

ESS Rule Part 1

Hot water systems and customer co-payments

Hot water energy savings

- To improve the accuracy of energy savings calculations
  - energy savings calculations not aligned with energy savings in practice
  - reduced baselines for residential and small business hot water systems

- Activity Definitions for hot water in Schedule D of the ESS Rule:
  - D17 Replace an existing electric water heater with an air source heat pump water heater
  - D18 Replace an existing electric water heater with a solar (electric boosted) water heater
  - D19 Replace an existing gas water heater with an air source heat pump water heater
  - D20 Replace an existing gas water heater with a solar (electric boosted) water heater
  - D21 Replace an existing gas water heater with a solar (gas boosted) water heater

Question 1: What are your views on amending the baselines for calculating energy savings from residential and small business hot water upgrades?

Current status

- Current rule requirements
  - reference water heater energy consumption from AS/NZS 4234:2008 used for baselines
  - based on 60L per person per day
  - products are rated in heat pump climate zones, but calculations only consider one zone
- Position paper flagged an update based on the results of a measurement and verification study on hot water energy use
  - for use in updating the Australian Standards
  - study is now cancelled due to delivery issues
- Real world energy use demonstrates use of the reference water heater energy consumption directly from the standard is not appropriate for continued use as the baselines

Question 1: What are your views on amending the baselines for calculating energy savings from residential and small business hot water upgrades?

Reconstructing the baselines

- Public consultation on the ESS Rule in 2020
  - used modelling based on average water consumption of 45 litres per person per day (L/day)
  - inputs from AS/NZS 4234:2008 build the energy savings calculation
- Refinement of this approach is used for the proposed baselines and savings calculations
  - align baselines, product registry and calculations to the heat pump climate zones
  - update to AS/NZS 4234:2021 and most recent census
  - higher baselines in cold zones
  - update reference gas system to 4 stars

Question 1: What are your views on amending the baselines for calculating energy savings from residential and small business hot water upgrades?

Reconstructing the baselines

Table 2 – Comparison of current and previous baseline energy consumption values for standard hot water systems.

Activity Description (Existing)	2020-21 Public Consultation Baseline (MWh)	2020-2021 Published Rule Baseline (MWh)
D17 Replace an existing electric water heater with an air source heat pump water heater	Small system: 23.40 Medium system: 35.51	Small system: 30.78 Medium system: 50.76

Table 3 – Activity Definition D17 Replace an existing electric water heater with an air source heat pump water heater. Baseline energy consumption by system size:

System Size	AS/NZS 4234 climate zone HP3-AU		AS/NZS 4234 climate zone HP5-AU	
	Baseline A (MWh)	adjustment coefficient (a)	Baseline A (MWh)	adjustment coefficient (a)
Small	23.18	2.291	25.43	2.310
Medium	35.14	2.291	38.49	2.310

Co-payments for hot water

- To increase customer engagement by updating co-payments
  - No or low co-payment risks low engagement and poor outcomes for customers
  - Help ensure active engagement with the upgrade to receive fit for purpose products.
- A co-payment of $200 (ex GST) is proposed across all hot water activities.
  - Residential, small business and commercial upgrades
- Choosing the right hot water system is complex and customers deserve choice
  - switching from gas? technology and system type? space, system size and noise levels?
  - electricity tariff and impact on customer bills? ability to stay on controlled load?
- $30 co-payment for residential, and none for commercial, risks low customer engagement with the specifics and is driving poor outcomes.

Question 2: What are your views on the addition of co-payments for hot water system installations and upgrades?

Co-payment for residential and commercial

- Existing $30 (ex GST) co-payment under the Home Energy Efficiency Retrofits method is based on the minimum viable contribution to a small halogen lighting upgrade
  - co-payment is for the whole implementation, allowing for the bundling of multiple lighting types and the calculation of ESCs from multiple Activity Definitions
  - too low for high-cost equipment, where equipment and installation costs often exceed $1,000
- Proposed co-payment of $200 is for:
  - each item of End-User Equipment listed on the product register for residential
  - each upgrade for commercial (covering the ESS and PDRS)
  - matching IPART's recent guidance on manifold systems

Question 2: What are your views on the addition of co-payments for hot water system installations and upgrades?

Transition Options: Option 1

Option 1

- The previous rule (meaning the current provisions) applies where an implementation date is within 3 months of the commencement date.
- Scheme Administrator may be able to consider special circumstances.

Why?

- 3-month transition for implementations, is administratively simplest
- sets a deadline for the completion of works that can be tracked in the scheme registry
- accounts for scheduling complexity and the completion of building works.

Question 3: What are your views on the transition options?

Transition Options: Option 2

Option 2:

- the previous rule (meaning the current provisions) applies where a contract to supply a hot water heater is in place prior to the commencement of the rule
- Scheme Administrator may be able to consider special circumstances

Why?

- using existing contracts provides more time to implement projects
- adds regulatory burden through the requirement to track and audit compliance on contracts
- requires uploading of implementations across different versions of the rule
- applies where evidence can be supplied of a contract existing prior to the rule commencement

Question 3: What are your views on the transition options?

ESS Rule Part 1

Other related topics

Product performance and safety

- Heat pump product testing - energy, safety, and quality
  - aligned with the Commonwealth and Victorian governments

- Installation audit with IPART and Building Commissioner

- Heat pump hot water system roadmap
  - focus on industry development and capacity building
  - NSW and Victorian government co-funded
  - delivered by Energy Efficiency Council

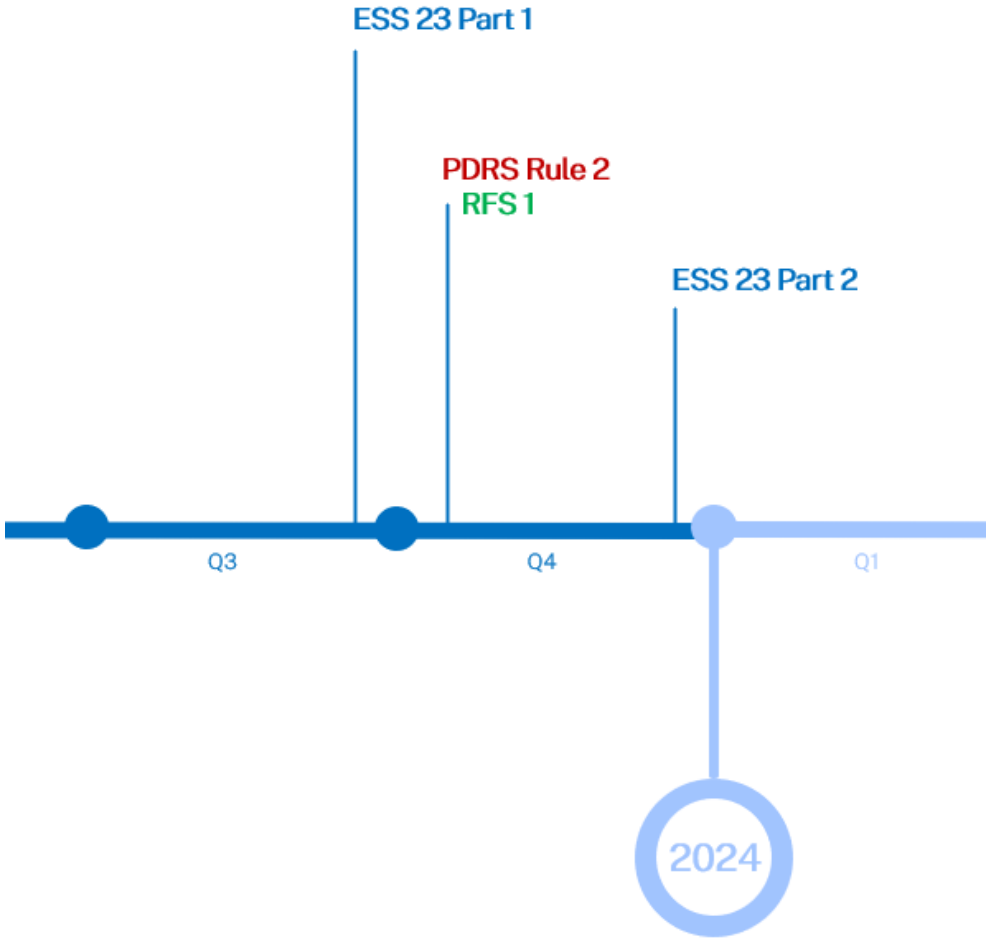
Administrative changes in Part 1

- Add electricity definition of Eligible Fuels
- Update of BCA climate zone to one postcode
- Clarification of some terms in the rule

ESS rule Part 2 – late November consultation

- Lighting
- Commercial heat pumps (ESS and PDRS)
- Heat pump refrigerants
- Pool pumps and pool pump frequency inverters
- M&V professional
- Improved data collection of installer and product details in TESSA
- Further clarifications where needed

Safeguard consultations in 2024



Submissions close 29 September 2023

How to provide a response:

- complete the online form
- email sustainability@environment.nsw.gov.au