

13th May 2022

Stephen Procter
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Dear Mr. Procter,

Evergen Pty Limited (Evergen) welcomes the opportunity to provide you with feedback on the NSW Peak Demand Reduction Scheme (PDRS).

At Evergen we firmly believe that our focus as an industry should be on developing a flexible and resilient energy system that can support accelerated decarbonisation and widespread electrification.

Today Evergen controls ~2,500 residential batteries in NSW representing 10.98 MW of capacity.

This fleet of batteries could be used to reduce NSW's demand between the hours of 2:30PM and 8:30PM (The **Summer Peak Demand Reduction Duration**) just as well as the activities involving replacing an old fridge/freezer/air conditioner/pool pump with a new one.

Evergen believes that batteries should be included in the PDRS, as long as they have an approved control method (such as Evergen's remote API control), as an additional approved activity.

We also believe that when someone buys a new pool pump/heat pump to replace their old appliances, a method of control should also be mandated to provide DRM1, 2, and 3 capabilities under AS/NZS 4755, and avoid demand between 2:30 and 8:30PM. This control method could either come in the form of a "hard code" (i.e. a timer to prevent operation during this period), or through remote API control.

If DRM1, 2, and 3 capabilities are not mandatory, someone who buys a new pool pump / heat pump who has a method of control, or demand response capabilities should be rewarded with the creation of more certificates.

Our response to the question in the Consultation Paper for rule 1 are below.

Yours sincerely,



Daniel Killalea
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Questions:

1. What administrative processes could be improved by implementing better digital systems? How would that impact your organisation?

No answer provided

2. Do you use systems managed by other organisations to deliver the ESS rules and/or would you use them for the PDRS? If so, which ones, and how do you use them?

No answer provided

3. Are there any digital tools, or specific software applications that could improve the PDRS customer experience or understanding of the PDRS? If so, what are they and how could they be used?

We believe that monitoring and a reliable data feed will produce more accurate figures for the **Baseline Input Power** and **Input Power** values as required in the **Activity Peak Demand Reduction Capacity** calculation.

This applies to all approved activities excluding **RF1**, and would replace the existing calculation methods specified in the **draft-pdrs-rule** document.

4. Would you use an open calculation API if it is made available? Why/why not?

No answer provided

5. Do you support the draft calculation approach and requirements for each of the technologies in the RDUE method? Please highlight positives and negatives, including any specific barriers to uptake of this activity. Space is provided in our online form for you to provide answers on each activity.

No answer provided

6. Should the PDRS have a requirement for the installed End-User Equipment under HVAC1, HVAC2, WH1, WH2 and SYS2 to have DRM 1, 2 and 3 capability under AS/NZS 4755? What are the alternatives?

Yes. There are existing software platforms that can manage appliance operation remotely to provide DRM1 at the very least.

If DRM 1, 2 and 3 capability are not made mandatory for the above mentioned activities, then consumers who **do** choose appliances with DRM1, 2, and 3 capabilities, and also have a control method in place to reduce operation within the **Summer Peak Demand Reduction Duration** as much as possible, should be eligible to create more certificates.

The **FR1** approved activity specifies “Input Power is 0kW”, when calculating **Peak Demand Reduction Capacity** for the removal of an appliance. Appliances with DRM1, 2, and 3 capability should have their **Peak Demand Reduction Capacity** calculated in the same fashion.

7. Should the PDRS incentivise the replacement of continuous tariff hot water systems that are on off-peak or controlled load tariffs?

Yes, but only if they have a control method in place, so that they have DRM1, 2, and 3 capabilities.

8. What aspects of the PDRS would you like to know more about, and what's the best way to provide this information to you?

1. The equipment manufacturers, and model numbers that are approved, and to be notified as they're added to the list.
Similarly, to be notified if any activity is added to the approved list. This information could be communicated through a regular subscription newsletter, or a live list on the PDRS's website.
2. Could activities **HVAC1**, **HVAC2**, **RF1**, **RF2**, or **SYS1** apply to a tenant's behaviour in a rental property?
3. Will controlled home batteries be considered as an approved activity in future?

Activity RF1 outlines the removal of a fridge from a property (rather than reducing the capacity of the fridge, or replacing it with a more efficient unit). This, in a way, is demand response (albeit not very dynamic).

If the removal of loads permanently from a residence is an approved activity, a home battery system, scheduled to discharge (thanks to a control method) throughout the **Summer Peak Demand Reduction Duration** will provide the same level of demand reduction.

The scheme administrator or NSW Government could be provided with data to demonstrate that the battery successfully discharged throughout the **Summer Peak Demand Reduction Duration**.

9. What activities, technologies and business models are you most eager to see in the PDRS and why are these important to you?

1. Technologies with programmable or remote API control, to further reduce consumption and demand during the specified Peak Demand reduction scheme windows.
Home batteries should be included in these technologies, as long as they have a control method in place.
2. It's interesting that approved activities **HVAC1**, and **HVAC2** involving heat pumps mandate that all devices must have demand response capability in accordance with AS4755.3.1, but activities **WH1** and **SYS2** don't.

Similarly, while mandating that some devices require demand response capabilities (and thus are able to be remotely controlled), there is no consideration of a control method or service that could ensure that these devices never operate during the **Summer Peak Demand Reduction Duration** time period.

We believe this should be considered, as not only is the newer, more energy efficient appliance going to have an overall demand lower than the original appliance, its demand could be shifted entirely out of the **Summer Peak Demand Reduction Duration**.

The entire removal of an appliance (and its corresponding demand) is rewarded under the approved activity **FR1**. As a result, the **Peak Demand savings capacity** of a new appliance specified under the approved activities **HVAC1**, **HVAC 2**, **WH1**, **SYS2**, should be calculated in the same manner (i.e. Input Power is 0kW), as long as there is a control method in place, that ensures there is no operation during the **Summer Peak Demand Reduction Duration**.