

For the Attention of:

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Response to PDRS Consultation

Green Energy Trading welcomes the opportunity to provide feedback to the PDRS Consultation.

Our responses to each applicable question are below.

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

We support the NSW Government implementing better digital systems when delivering Rules. If done correctly, this could save our organisation dozens of man-hours that is currently spent manually re-typing calculation factors / tables and other requirements into our calculation tools and systems after each new Rule gazettal.

Improved machine readable content will also reduce errors in factors and therefore reduce the risk that ACPs improperly calculate ESCs.

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?

Yes, we use two third party applications, Dataforce and Alitsy, for job management and onsite mobile applications for the ESS. For calculations we prefer to build our own, to ensure the most accurate application of the ESS Rules and factors. Even when using third party applications that contain ESC calculators, we still maintain our own custom built calculators to use as a double check. The main function that the third party applications provide us is the use of mobile/onsite applications for the gathering of required evidence by our clients. We would anticipate continuing to use such platforms for the PDRS too.

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?

An online accessible calculator would be immensely helpful to customers, installers and ACPs alike. Many smaller installation businesses and consumers really struggle to understand the benefit that an ESS (or PRC) eligible installation might present, because there isn't a publicly accessible website where they can calculate ESCs (unlike VEU/SRES). This prevents a large number of consumers and businesses from engaging with the NSW program. ACPs are required to develop their own calculators, but no ACP would publish their calculator on a publicly accessible website because of the inherent liability risk and inability to shield from competitors.

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

Yes, we would very likely use any calculation system offered by Department/IPART, so long as it was done well. We have an inhouse IT department that can develop API integrations and we would welcome this for the ESS/PDRS.

The extent to which we would rely on an open API calculation would depend on the legality/responsibility of such an application. If the legislation made clear that provision of such an application by Department/IPART was only to provide *guidance* to ACPs, and the ESS Rule still mandated that ACPs were solely responsible for their own ESC calculations, then we would merely use any offered calculation system as a double check to our own internally developed systems and calculations. However, if the calculation system was more like the VEU Registry, whereby APs can only select from specific inputs and the registry calculates VEECs for each submitted installation, then we would rely on such a system as being the 'source of truth' very heavily. This would reduce the need for us to manage our own systems to calculate ESCs and also assist with transparency in the market if all ACPs had to calculate using the same system.

However, our experience with API integrations has shown that if it is not done well, failed API links can be a major source of disruption to our core business. When we rely on information being sent through an API, it can be very tedious to identify the cause of failures. Sometimes even a small change on the Registry end can have large ramifications on our end, causing certificate creation uploads to fail, sometimes without us even knowing. If the Department/IPART will be introducing API link functionality in the creation of ESCs, you will need to ensure you have a robust process of notifying and advising of any changes to the API infrastructure with at least a 3 month warning period for ACPs to adapt their systems accordingly.

The Department should also be aware of the risk of performance issues associated with prolific non-human queries of the database. The VEU experienced such issues and had to modify their VEU Registry to include captcha on searches to limit bots from performing large volume of calculations in short periods of time. The Department/IPART should take measures to reduce the risk of performance issues occurring in the new digital systems, as any slow down or accessibility issues can negatively impact ACPs trying to create ESCs.

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.

Regarding Clause 6.3 of the draft PDRS Rule, we need clarification on what “...the remaining fraction of Certificates apportioned at the discretion of the Scheme Administrator” means functionally? Currently, when ACPs lodge an implementation datasheet containing multiple implementations batched together, the resulting ‘rounding ESCs’ are included in the quantity of certificates registered by the ACP. This clause in the PDRS makes it sound like IPART will have the power to decide whether or not an ACP obtains those additional rounding PRCs. This creates unnecessary uncertainty and confusion within the PDRS. The treatment of rounding PRCs should be the same as rounding ESCs. We suggest this clause is changed to match the same clause in the ESS Rule so that ACPs have certainty over calculations and resulting PRCs from their implementations.

Additionally, we have a concern over how PRCs will be registered, given the requirement to separate vintage ESCs onto different implementation datasheets currently. With PRCs, one implementation will generate multiple vintage PRCs, and it will be completely impractical for an ACP to have to lodge each vintage separately for one implementation.

Regarding Activity HVAC1

We have a concern over the calculation method for this activity. Calculation PRCs for a popular 6kW AC model - Panasonic CU-RZ60XKR / CS-RZ60XKRW results in -5 PRCs when installing a new unit, but 41 PRCs when replacing an existing unit. There are other eligible efficient units that also calculate negative PRCs. This is not very logical and indicates an issue with the calculation formula.

To counteract this, we suggest editing Table HVAC1.1, 1.2, 2.1 and 2.2 to reflect the Baseline Cooling AEER figures instead of Baseline EER figures as this will remove instances of negative PRC values and align with the ESS calculation method.

Regarding Activity HVAC2

There is an error in the draft calculation that must be rectified. The calculation uses Peak Adjustment Factor as per Table A4. However, Table A4 does not include a Peak Adjustment Factor for Activity HVAC2:

Table A4: Baseline Peak Adjustment and Peak Adjustment Factors for Demand Savings activities

Activity Definition	Peak Adjustment Factor	Baseline Peak Adjustment Factor
WH1	0.77	1
RF1	1.25	1.25
RF2	1	1
SYS1 (Refrigeration applications)	0.56	0.56
SYS2	0.28	0.28

Regarding Activity RF2

We note that in the Activity Definition for RF2, there is nothing explicitly stating the Refrigerated Cabinet must not be installed in a Class 1, 2 or 4 building. There is also nothing in section 7.2.7 that requires this activity to be completed in a non-residential site.

Therefore, there is nothing preventing the installation of these units in domestic settings. Given this activity also allows for the installation of a new RC where there is not an existing one, not having this clarification will result in some players wanting to install these RC units in domestic settings as a replacement for a consumer fridge or as a 'wine fridge'. We strongly urge the Department to include an Installation Requirement in the Activity Definition similar to the one for commercial heat pumps having to be installed in a non-residential site for this activity.

Regarding Residential Water Heating activities:

We do not agree with the exclusion of Residential electric hot water activities (D17-D18) from the first round of the PDRS. We understand the explanation given – that there is a high number of electric hot water systems on off-peak tariffs and the desire to avoid incentivising systems being switched to peak tariffs in order to qualify for PRCs.

However, we think there would be significant opportunity to include a Peak Demand Saving activity that aligns with ESS D17 and D18, with just the additional Equipment Requirement that the existing electric hot water system is not already on an off-peak or controlled load tariff in order to qualify for PRCs. Residential electricity bills are easily obtainable to demonstrate this requirement is met prior to an installation taking place.

It is also very unlikely a customer will first pay for their existing hot water system to be switched to a peak tariff just to get the extra incentives from PRCs, as the cost would likely cancel out the PRC incentive. We ask that the NSW Government consider including residential electric water heating activities that align with ESS D17-D18 in the first round of PRCs. This will help with the availability of PRCs in the first compliance year, and also assist with the uptake of the new ESS activities incentivising removing old, inefficient hot water systems.

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?

We do not agree with making DR capability a requirement in the first year of the PDRS for any equipment type.

A quick review of the GEMS Registry shows that out of the roughly 5340 Air-conditioning products listed on GEMS, only 2131 units are eligible for commercial ESCs (F4) and 2345 units eligible for residential ESCs (D16). If requiring DR capability, this would reduce the units available for PRCs to only 1304 units eligible for commercial ESCs and PRCs, and 1423 units eligible for residential ESCs and PRCs. This represents a 40% reduction in the availability of incentivised AC units for PRCs.

There is currently no visibility on how many of the SYS2 eligible Pool Pumps have DR capability as this information is not captured on the Voluntary Energy Rating Labelling Program list. If DR capability becomes mandatory for Pool Pumps, it is highly likely there will be no eligible Pool Pumps with this capability, and therefore no PRCs will be created from SYS2 activity.

However, we do believe that its important to provide a clear message to industry that DR capability is important and should start to be incorporated into products. We want to see industry have enough time to adapt, whilst also ensuring there is enough PRCs generated in the early stages of the Scheme to meet the target.

We suggest that the DR capability requirement for HVAC1 and HVAC2 be required only for installations completed 1 April 2023 and after. This can easily be achieved by amending the Equipment Requirements like such:

Equipment Requirements

1. The New or replacement End-User Equipment must be a registered product in the GEMS Registry as complying with the Greenhouse and Energy Minimum Standards (Air Conditioners up to 65kW) Determination 2019.
2. If the New End-User Equipment or replacement End-User Equipment has a Cooling Capacity recorded in the GEMS Registry:
 - a. The New End-User Equipment or replacement End-User Equipment must have a Commercial TCSPF_mixed value, as recorded in the GEMS Registry, greater than or equal to the Minimum Commercial TCSPF_mixed value for the corresponding Product Type and Cooling Capacity in Table HVAC2.3; or
 - b. If the New End-User Equipment or replacement End-User Equipment does not have a Commercial TCSPF_mixed value recorded in the GEMS Registry, then the EER in the of the New End-User Equipment or replacement End-User Equipment must be equal to or greater than the Minimum EER for the Product Type and Cooling Capacity in Table HVAC2.4.
3. For all implementations completed 1 April 2023 and after, the new or replacement End User Equipment must have demand response capability in accordance with AS4755.3.1 or IEEE 2030.5.

We suggest that DR capability for Pool Pumps not be introduced in this version of the PDRS, it can be introduced after the Minimum Energy Performance Standards for Pool Pumps commence (Oct 2022), so that Pool Pump manufacturers will have time to develop this capability.

For Commercial Heat Pumps (WH1), we do not agree with requiring DR capability at all as it is not feasible for some Commercial applications to turn off or power down their water heating equipment during peak. DR response should be optional for WH1 activities, to account for the different types of industries and their water consumption requirements at different times of day. Otherwise, some commercial sites would be ineligible for PRCs and therefore are disincentivised to participate despite clear opportunities for peak demand reduction in this sector.

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

Unsure what this question is asking, it's not worded very well. We do not agree with incentivising the removal of off-peak tariffs, that would be counter to the aim of the PDRS.

We do agree with requiring water heaters to be on continuous tariffs (not off peak) in order to be eligible for PRCs. We feel this can be satisfactorily evidenced using the sites electricity bills, a photo of the meter or a statement from the Purchaser and there is no reason to exclude residential water heaters from the first round of the PDRS.

We would also agree with introducing a new PDRS activity that incentivises home owners to switch their standard electric hot water systems to a controlled load / off-peak tariff. However, this would be an activity mostly carried out by Electricity Retailers in conjunction with the DNSP and may have implications for load shifting.

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?

We are keen to be involved in the development of the PDRS from an ACP/nominated capacity holder view.

Email notifications, webinars and forums are typically the best way to obtain information about changes in the Schemes. We suggest the Department hold more targeted consultations and workshops that actually allow for industry to raise questions and discuss as a group.

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

Projects currently being scoped under the PIAM&V method have the potential to significantly contribute to demand reduction under PDRS and this existing ESS activity **should be included** in the first PDRS rule. The peak demand savings could reasonably be determined using the pre and post hourly measurement data during the peak period. A method of analysis could be developed quickly and reasonably in conjunction with the existing M&V industry.

Installation of batteries, either in conjunction with a solar installation or where there is an existing system, **should be included** as an eligible activity in the first PDRS rule. As we transition to electrification of all systems the ramp at peak time will continue to get steeper. Batteries (charged by solar) can have a significant effect in mitigating the steepness of the ramp up and total peak during the peak period. It's critical that the speed of the battery roll out is significantly increased to relieve stress on the network at times of peak demand and including them as an activity in the first rule will go a long way to supporting this in NSW. Additionally, there will be a larger contingent of batteries available to participate in the subsequent phases of the scheme in demand response and demand shifting.

Demand response activities currently contracted to retailers and DR providers that are already required under existing Demand Response Scheme **should not be eligible** under the PDRS. If allowed, this could swamp the market without providing any additional capacity.

Thank you for your consideration of our submission. And if any point mentioned above requires further clarification, please do not hesitate to contact either myself or Caroline Bennett on 03 9805 0725

Yours sincerely,

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