Mr Stephen Proctor
Strategic Delivery Manager, Sustainability Programs
Office of Energy and Climate Change
Submitted electronically

13 May 2022

Re: Peak Demand Reduction Scheme Consultation Paper and Draft Rule

Dear Stephen,

Thank you for the opportunity to comment on the Peak Demand Reduction Scheme (PDRS) Consultation paper.

The Energy Efficiency Council (EEC) strongly supports the introduction of the PDRS. While some investment in networks, generation and storage will be essential to support the transition to a clean grid, the amount of expenditure on this infrastructure will affect the size of energy bills. Reducing peak demand will reduce the need for network expenditure, reducing costs for consumers. Reducing demand during periods when demand for electricity is close to, or higher than, available generation will boost energy security and reduce energy bills.

The activities proposed for initial inclusion in the PDRS are sensible, and we look forward to expansion of the scheme to further activities soon.

However, the EEC notes that, while the initial intention of the PDRS is to reduce peak demand during summer months, the scheme should evolve to also respond to the likely future scenario where the significant mismatches between firm supply and demand occur during other times when variable renewable energy generation is low, such as during a dark, cold winter evening. While summer peak demand may pose the most immediate challenge, it is likely that as solar PV deployment continues at a rapid pace, a more pressing challenge will be found in times outside of summer.

More detailed comments in response to the consultation paper are provided in the attached submission.

For further information please contact me on rob.murray-leach@eec.org.au or 0414 065 556.

Yours sincerely

Rob Murray-Leach
Head of Policy, Energy Efficiency Council

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Energy Efficiency Council submission to the Peak Demand Reduction Scheme Consultation Paper

Introduction

The Energy Efficiency Council (EEC) welcomes the opportunity to make a submission to the Office of Energy and Climate Change's consultation paper on the first rule for the Peak Demand Reduction Scheme (PDRS). The EEC is the peak body for energy efficiency, energy management and demand response in Australia. Our members include energy management companies, independent experts and various levels of government.

The EEC strongly supports the introduction of a PDRS to promote the uptake of measures that can reduce demand during critical periods. The PDRS provides a viable avenue to systemically reduce demand and increase engagement with demand management at relatively low cost, in a complementary manner to other mechanisms for managing demand (such as the Wholesale Demand Response Mechanism).

Broadly, the EEC is supportive of the staged rollout of the scheme, building on the proven architecture of the Energy Savings Scheme. The EEC strongly supports the intent of continuous improvement demonstrated in the consultation paper, building on lessons learned as the scheme progresses.

This submission is structured in two parts – a list of general comments is followed by answers to the specific questions posed in the consultation paper.

General comments

Future-proof scheme activities and design

As presently designed, the PDRS seeks to support electricity system stability and strength in the summer period when maximum operational demand is currently experienced. In the current situation, this is the period when a tight balance between supply and demand is currently experienced and focussing on this period makes sense in the short term.

However, while periods of tight balance between supply and demand are currently predominantly found in the summer in the hours 2.30pm to 8pm, this is unlikely to be the case as the penetration of variable renewable energy (e.g. solar PV) increases. When solar PV is generating, it reduces both the demand for energy from off-site generators and the load on the network itself. As more solar PV is added to the grid, tight balances between supply and demand are less likely to occur during summer afternoons, and more likely to occur during evenings, especially in colder months. While total demand during these periods may be lower than total demand during summer afternoons, the net demand (minus onsite generation and storage) will be significantly higher, posing significant challenges to affordably maintaining system security and strength.

Fortunately, it will be possible for schemes like the PDRS to work to reduce the risks to affordability and reliability posed by these periods of critical demand. While the PDRS scheme is currently designed around summer compliance periods, a future minor change to scheme design and legislation could expand the focus of the scheme to providing capacity to deal with any period of critical demand, not just summer demand.

With that objective in mind, the EEC encourages OECC to consider new activities to the scheme with the potential to deliver reductions in demand in defined 'critical periods'. This would have the effect of reducing the cost of managing periods of exceptional demand and reduce the amount of firming required to support additional renewable energy generation.

Ensure scheme integrity

The EEC continues to support strong compliance measures for energy efficiency programs, noting our preference for a focus on enforcement and significant penalties for gaming. Attempting to secure compliance through paperwork will often be far less effective.

Answers to specific questions

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

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?

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?

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

The EEC has no comments at this time on these questions, but broadly supports efforts to make participation in the PDRS efficient, accessible, and cost-effective for certificate creators and consumers.

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.

The EEC has no comments at this time on the calculation approaches for each of the technologies.

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?

Devices that are demand-response enabled can deliver significant benefits to the energy system, with limited impact on energy users. For example, an evaluation of the operation of peak demand response events by Queensland energy operators found that around three-quarters of customers impacted by the demand response event (whose air conditioning units had been subject to DRM control) did not notice any impacts to comfort or unit function.[1]

The PDRS should encourage the installation of end-user equipment that is capable of responding to demand response signals, potentially through enhanced incentives for equipment that is demand responsive. 'Demand-response readiness' can be delivered through a number of routes, including features of the appliance or the addition of control equipment, such as Sensibo. Accordingly, a flexible route should be used to encourage the installation of demand-response ready equipment.

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

As noted earlier, the critical period for the energy grid will shift from the middle of the day to the middle of the night. Accordingly, at some stage the PDRS should provide incentives to:

- Improve the efficiency of hot water systems that operate during the night; and
- Encourage a shift from hot water systems running at night to running either during daylight hours or, preferably, on smart controls.

[1] Energy Queensland 2018, *Demand management plan 2018-19*, p.14

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?

The EEC is keen to learn about new activities and scheme rules, and would prefer to learn about changes through email and/or stakeholder forums.

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

The EEC is keen to see the PDRS incentivise activities that promote flexible, sophisticated ways to manage peak demand, that provide maximum choice and empowerment to consumers. Smart integration of electrical technology with renewable energy generation will support grid stability and affordability as the transition to net zero takes place, and the EEC suggests that technologies that support year-round demand management should be prioritised.