



13 May 2022

Stephen Procter
Strategic Delivery Manager, Sustainability Programs
Office of Energy and Climate Change

Dear Stephen,

Re: NSW Peak Demand Reduction Scheme (PDRS) Consultation Paper for Rule 1

DNA ENERGY OVERVIEW

DNA Energy is pleased to make a submission within the consultation period for the development of the Peak Demand Reduction Scheme (PDRS).

We are an Australian technology company specialising in demand response. We have a unique range of wireless hardware control devices that combine with our software to control virtually any behind the meter asset. Our focus is on controlling HVAC, hot water, pumps, solar PV, battery storage and EV chargers in the commercial and industrial (C&I) space. This covers aged care, education, retail, commercial buildings, hospitality, agriculture and manufacturing.

One of our flagship sites is a large school where 115 different HVAC systems are controlled in a demand response environment. The site will be the first of its type to attract VEECs for HVAC load reduction under the VEET program.

As well as having several reference sites that demonstrate the value of demand response in curtailing behind the meter loads, we are working with three energy retailers to productise demand response into a retail offering. Within this retailer work, we are currently working on several Virtual Power Plants (VPP), where our hardware and software combination can deliver VPP results for about 20% of the cost of batteries.

Within our hardware suite is a next generation IoT version of a demand response device that has been used in over 160,000 sites in QLD for Energy Queensland's PeakSmart program.

DNA ENERGY RESPONSE TO THE PDRS

- We support this scheme that can deliver better energy network outcomes, both in terms of reliability and pricing, as well as creating innovation in the underlying technologies required to manage it. The scheme will further enable a higher penetration of renewable energy assets within NSW.

- There is much discussion around the relevance of AS 4755 and its future in demand response. Whilst we note some flexibility in which standards may be adopted in the PDRS, we firmly believe that better technology innovation is the fix to AS 4755, not its abolishment. The PDRS may act as an enabler to a deeper technology capability in best utilising AS 4755.
- Whilst we support the inclusion of HVAC to the scheme, there is a vast opportunity missed by focusing only on AS 4755 assets. In our experience in installing demand response systems on HVAC assets in the C&I space, a majority of (non-chiller) assets are larger VRV/VRF or package units. These assets are rarely AS 4755 compliant however mostly have the same or similar ramping/staging capability to 50% and 75% load limit. Further, the cost of controlling one of these larger units is the same as controlling a smaller split type asset, which comprises the bulk of AS 4755 compliant HVAC assets. Therefore, accommodating these larger units with in-built ramping/staging capability will greatly enhance the PDRS in terms of load curtailed.
- Although we note the simplicity of measuring demand response at a NMI level, operating a project-based program will greatly enhance the take up and therefore success of the scheme. Two key factors are:
 1. Based on the webinar on 27 April, no consideration has been made to the impacts of solar PV at a site. In the instance that a site with a large solar PV system has more generation than load and the site has a zero export limit, any effect of demand response may not be seen at the NMI meter in the excess solar moments. Our experience notes that customers with solar are more likely to participate in schemes such as the PDRS, therefore this anomaly in the proposed rules would appear to penalise those customers most likely to participate.
 2. Many C&I sites, which are highly cost effective compared to residential sites in a demand response program, will only have a limited number of assets that can be controlled in the PDRS. It is likely that during PDRS events, the net impact of the demand response may not be realised at the NMI meter as other loads (and generation) will be operating. The allowance of a standardised and robust measurement & verification (M&V) process will enable, alongside standard NMI level validation where it is more appropriate, project-based outcomes to deliver significant results in the PDRS. We believe, based on the quantum of curtailable load in some C&I sites, that the cost of this M&V process will be justified in the revenues created from the scheme.

Kind regards,
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