Submission – RRC0064 Improving Life Support Processes

Energetic Communities Association Inc (ECAI) is writing to make a submission regarding a **consultation paper following a rule change request from Essential Energy and SA Power Networks**.

Demand response vs life support

The interaction between demand response (DR) program and life support / medical heating and cooling programs and the potential consequences has not been raised in this rule change, however we see an urgent need for immediate attention to the issue.

Energy Queensland (EQ) has been implementing a successful DR program for several years, PeakSmart. Compatible air conditioning units (AC) can be installed with a PeakSmart receiver that allows EQ to control AC operations in times grid stress. There are 3 Demand Response Modes (DRM):

1. DRM1: Compressor off
2. DRM2: capped to operate at 50%
3. DRM3: capped to operate at 75%

PeakSmart is a successful (uptake) and effective (reduce outages and reliability issues) program that supports the grid with very minimal inconvenience to consumers. It is also a program that is set and forget, the decision is made once and then consumers have no interaction whatsoever with the system. Households are made aware of its working only once when applying for the one-off rebate.

In 2024 and 2025 (so far), EQ triggered DRM1 (the AC provided no coolth) on 4 different days at various locations for up to 6 hours https://www.energex.com.au/manage-your-energy/cashback-rewards-program/peaksmart-air-conditioning/peaksmart-events. . (Note: it has come to our attention that not all PeakSmart event are listed on this page. The actual list can be requested from Energex).

Unsurprisingly, they were during very hot days.

During the DRM1 events, the interaction between demand response and life support/ medical heating and cooling became problematic. Broadly consumers were blindsided with potential impacts on their health if these events' duration was to increase and heat to worsen.

This issue has the potential to become very salient this summer, with extreme weather events increasing the need for the DR program.

This Queensland example shows how interaction between demand response programs and life support and medical cooling and heating households can be health compromising and potential deadly.

As the Cheaper Home Batteries Federal Rebates is accelerating the adoption of home batteries that are VPP capable, we foresee challenges equivalent to PeakSmart or worse expanding to the whole of Australia.

VPPs are inherently complex, and significantly more complex than PeakSmart for household to grasp their workings and potential consequences.

Here we provide a scenario to illustrate our concerns. A household purchases a battery to soak up their excess solar. They realise that signing up to a VPP could be an opportunity to improve the payback period on their investment. It works for a few years, they have no need to review the inner workings of the VPP program. One household members health deteriorates, and they now require life support and/or medical heating and cooling. They realise that backup would be essential for their wellbeing and potentially their survival in case of power outages. The good news is they have a battery. The bad news is it is managed within a VPP and when the outage came their battery was drained by the VPP operator.

This scenario highlights the urgency of the challenge and its potential dramatic consequences. The increasing frequency and intensity of extreme weather events and the VPP operators' business model based on improving grid resilience during such events can come in direct contradiction with households' resilience with potentially deadly consequences for households with life support / medical heating and cooling requirements and their own investments toward personal resilience. To be clear, the potential misalignment between grid resilience through demand response and personal resilience is true for any household but the consequences for households with life support / medical heating and cooling requirements would be dramatic and are predictable.

This issue would be exacerbated in private rentals and social housing, especially because at-risk tenants tend to live in the poorest quality housing, increasing their heating and cooling requirement to maintain the healthy temperature range and comfort. Renters also lack agency to modify or improve their home and do not have the visibility if there is PeakSmart AC in the property or if some Consumer Energy Resources are locked into DR programs.

We are seeing cases in Queensland where tenants are being refused life support and medical heating and cooling by retailers because the home they rent has PeakSmart AC. Considering that the first VPP in Australia was deployed in South Australia on social housing,

collecting and acting on the potential learnings from it and addressing life support and medical heating and cooling tenanted homes challenges is urgently needed.

To summarise, we understand the requirement and support the need for demand response programs (PeakSmart, VPP, others) and foresee an urgent need to consider the impact for households signing up to these programs and requiring life support and medical heating and cooling at the time of signing up or further down the track.

Some suggestions to tackle this challenge for rapid implementation:

1. The registers for life support and medical cooling and heating households have to be well maintained and available for checking for DR program operators. DR (including VPP) program designers and operators need to be trained in life support and medical heating and cooling requirements in designing DR (including VPP) programs and offers and explain the ramification to households. In addition, at the time of registering for life support and medical cooling and heating, households need to be made aware and supported to understand the ramifications of DR programs they are signed up to. We acknowledge that in some cases the DR operator and the organisation receiving the life support and medical heating and cooling application may be the same or different entities. Ultimately in both cases a determination needs to be made that guarantees householders safety.
2. Life support and medical cooling and heating households could participate in DR program if designed with some specific features. This would be the preferred option rather than excluding them from DR program. Households with life support and medical heating and cooling have large electricity needs and excluding them entirely will discriminate and exclude them from benefiting from DR program financially, in terms of emission reductions, or simply as wanting to do their bit to support the grid.
3. The complexity of the issue increase when considering tenanted homes. Tenants needs to understand before even applying for a rental if the home has equipment engaged in DR programs and understand its impacts on life support and medical heating and cooling requirement. Tenants represent 30% (and growing) of the population. Tenants require clarity on the potentially life-threatening impacts of DR programs on them and urgent solutions.
4. Again, DR need and life support need are bound to increase over time, so monitoring, evaluation, and review needs to occur every year.