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Department for Energy and Mining

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Proposed Demand Response Capabilities for Selected Appliances in South Australia

Thank you for the opportunity to comment on Proposed Demand Response Capabilities for Selected Appliances in South Australia.

Daikin Australia is recognized as a leading air conditioner manufacturer. As one of the regions most trusted names in air conditioning, Daikin can be found in homes, offices, hotels, and shops across Australia and around the world.

Daikin Australia has ten branches and six major service centres nationwide including a production facility in Australia. We distribute products through the trade specialist installer.

We would like to thank the Department for the work undertaken including active consultation with industry.

We comment further as follows.

Option 1 – AS/NZS 4755.3.1 from 1st July 2021

The AS/NZS 4755.3.1:2014 version standard specifies a reduction reference that is dynamic and determined by energy measurement immediately before the event. The dynamic reference value is flawed because the required reduction for equipment that is not operating before the demand response event is not defined.

According to the references, industry has not applied the AS/NZS 4755.3.1 2014 standard. Ref (1) & (2)

We do not support the AS/NZS 4755.3.1:2014 version standard and only support application of AS/NZS 4755.3.1 2012 version for use with DRED.

Daikin currently offers demand response for air conditioners utilising modes based on rated capability as specified in the AS/NZS 4755.3.1 2012 version standard using an optional part.

To build-in the optional part, work is required to organise separate South Australia models, revise specification, procurement of additional parts, production and logistics.

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We believe the risk of supply shortage should be elevated to high instead of moderate because the proposal effectively reduces the lead time to one month. The GWA Report advises a minimum of twelve months is necessary. Ref (3)

A lead time of at least twelve months would be necessary from date of regulation for the transition.

Option 2 – AS 4755.2 from 1st July 2021

There are no current models that conform to AS 4755.2 in our product range.

Daikin does not support this option because we believe it to be not feasible because AS 4755.2 will not be published before the start date thus leaving no lead time to develop products.

The risk of supply shortage would be extreme causing significant disruption to air conditioning and other related dependent industries.

Option 3 – AS 4755.1 from 1st July 2023

Daikin supports the development of AS 4755.2 as a low cost and flexible solution to implement a demand response program for high sales volume products.

However AS 4755.2 is unpublished and there is much uncertainty because the contents are unknown. It is difficult to evaluate the technical complexity to estimate the required lead time for each different product.

Note: Feedback from the consultation sessions informed the latest version of AS 4755.2 applies reduction from a fixed reference similar to AS/NZS 4755.3.1:2012. Ref (7)

As stated above, there are no current models that conform to AS 4755.2 in our product range.

We are concerned that AS 4755.2 will not be published with sufficient lead time for development. Our belief is the risk of supply shortage should be increased to high instead of low.

A lead time of at least four years would be necessary from date of regulation or AS 4755.2 publishing date, whichever is later.

Low Volume Products

Demand response could also restrict the available range to high sales volume products only.

Low sales volume products may be removed for example:

- high efficiency models impacting the Retailer Energy Efficiency Scheme.
- budget models impacting low-income households.
- specialised products, for example VRV, because the development cost is excessive.

We suggest VRV should be excluded from the scope of regulation.

Related Industries

The South Australian industry has an estimated 1,800 persons directly employed in split systems (up to 18 kW) including importers, sales and administration, suppliers of consumables, refrigeration trades, electrical trades, and other building trades. Ref (5) & (6)

Air conditioners are an important component of the construction industry. Total residential construction in South Australia is estimated at \$3.4 billion. Ref (4)

We urge consideration of the risk to the South Australian economy in the event of an air conditioner supply shortage related to development issues of demand response capabilities.

We trust the above is of assistance and for further clarification please contact the writer at gknox@daikin.com.au or phone 0477 011 288.

Yours Faithfully

A handwritten signature in blue ink, appearing to read 'Gary Knox', is positioned above the printed name.

Gary Knox
BEng (Hons) F.AIRAH
Engineering Manager
DAIKIN Australia Pty. Limited

References:

(1) Decision RIS Smart Appliances - October 2019

"Most submissions made the point that if compliance was to be mandated, the option should be the 2012 version of AS/NZS 4755.3.1, not the 2014 version as proposed in the Consultation Paper. It was submitted that none of the more than 1,000 models on the market that claim compliance with AS/NZS 4755.3.1 meet the 2014 standard ... " Page 57.

<https://www.energyrating.gov.au/document/regulation-impact-statement-decision-smart-demand-response-capabilities-selected-appliances>

(2) CSIRO Technical Report EP175701

"The responses to DRM2 and DRM3 commands were observed in some makes ... but not in others. This observation suggests that many air conditioners implement the 2012 version of the AS/NZS 4755 standard." page2.

<https://publications.csiro.au/rpr/pub?pid=csiro:EP175701>

(3) Demand Response Capabilities for Selected Appliances – South Australia Specific Analysis

GWA Report - May 2020

Regarding option 1 "A lead time of a year would be the absolute minimum notice that suppliers would need." Page 11.

(4) RLB Australia Report – Second Quarter 2020

Construction Work Done Total Residential 2019, 3,403 \$M, Source: ABS, Page 11.

https://www.rlb.com/wp-content/uploads/2020/06/RLB-Australia-Report_Q2_2020.pdf

(5) Consultation RIS: Air Conditioners and Chillers - February 2016

Table 25, year 2021 forecasts the SA market at 6.8% share of AU market annual sales. (SA 74,127 / AU 1,085,021 units). Page 75.

<https://www.energyrating.gov.au/document/consultation-regulation-impact-statement-air-conditioners-and-chillers>

(6) Cold Hard Facts 3 - September 2018

Table 34 Split systems (up to 18kW_r), Total Direct Employment 26,287 Australia. Page 159.
South Australia estimate 1,800 Direct Employment (6.8% *26,287)

<https://www.environment.gov.au/protection/ozone/publications/cold-hard-facts-3>

(7) Consultation sessions - March 2021

“The latest version of 4755.2 has reverted to a fixed reference value approach.” Page 7

https://www.energymining.sa.gov.au/data/assets/pdf_file/0011/385490/17_March_Sessions_Key_Issues.pdf