

# PALS CONSULTING

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**This submission has two themes. The first highlights the impact the VEET program has had in other Australian jurisdictions and suggests it continue to leverage support and rewards for comparatively efficient equipment types. The second is to offer a suggestion of where the VEET program might expand into equipment used in the commercial sector: specifically in relation to walk-in cool rooms.**

PALS acknowledge Victorian Government leadership in creating the suite of policies within the Victorian Energy Efficiency Target (VEET), which have contributed to energy and climate change policy development throughout Australia. VEET impacts have been calculated for the state economy but what has not been factored into those calculations is the wider impact of the VEET program on Australian industry, and the other equipment-related energy efficiency programs managed in other Australian jurisdictions.

The International Energy Agency was the first expert body to point to the many other benefits that energy efficiency programs generate on economic indices within a jurisdiction, beyond strictly measured energy-saving impacts. The Victorian Government VEET policy has had and continues to have far reaching impacts, not the least of which is driving efficiency improvement beyond Victorian state borders.

Nowhere is this claim more evident than in the field of lighting efficiency. The Howard Federal Government phased out the use of many forms of incandescent lamps when the present Prime Minister held the Environment portfolio but little has happened since on a national level. CoAG has failed to organize further standards banning the sale of other inefficient lighting options, leaving subsequent improvement to other policy interventions in that marketplace. The Victorian Government has been responsible for driving the lighting R&D agenda in Australia through VEET incentives. With a real focus on residential lighting activities in Victoria, VEET has filled the policy void caused by the abdication of follow-up national equipment standards.

CoAG failed several times to impose further minimum energy performance standards on lighting. Without the impetus and incentives offered by VEET, local LED product development would have languished for many years in the Australian marketplace. Without VEET, the lighting industry could have been forgiven for believing efficiency improvement need only be subject to market forces. The operation of VEET over the last 10 years has been a reminder to industry of the importance step-changes in lighting efficiency can have to greenhouse abatement and conserving energy.

In the submission of PALS, better coordination between white certificate schemes like VEET and the Federally regulated minimum energy performance standards would provide an even more consistent market signal to suppliers. The effect of combining and coordinating these programs would greatly leverage the impacts of the two by providing a common policy framework and consistent public messaging.

As the Victorian Government contributes substantially to the Federal Government operated Equipment Energy Efficiency (E3) program, such policy coordination is actually plausible and would garner widespread stakeholder support, if the outcome were policies that are more nationally consistent, coherent and compatible with Australia's international commitments.

The materials circulated to inform stakeholders of the proposed changes to the VEET promote the revised scheme's ability to respond 'flexibly' to future market permutations. PALS supports this sentiment and suggests the Department of Environment, Land, Water and Planning (DEWLP) give effect to that claim by:

- ensuring the revised VEET scheme can easily adopt effective measures demonstrated within other State white certificate schemes by building in a fast track economic assessment process for equipment already included in those other programs;
- acknowledging the market impact and relationship of VEET with the Equipment Energy Efficiency program by looking to enhance the interaction between these programs (ie substantial Victorian resources are tied up in one-off assessment procedures where a more coordinated approach to setting minimum and high performance levels operating in the marketplace would lessen DEWLP resourcing and enhance both programs' impacts);
- demonstrating the move to include commercial (as well as residential) equipment in VEET by identifying a set of priority commercial equipment types for inclusion in the program; and
- consulting with stakeholders about other product types to be prioritized and how complying equipment could be identified.

Many government policies commence life as efforts to improve the operation of the marketplace. The theorem goes that all market participants can be relied upon to make economic judgments that maximise their interests. This theory is predicated on all players having access to reliable and accurate market data. PALS would encourage DEWLP to make all information it gathers from VEET participants available in the public domain.

Improving access to accurate, reliable information is already a stated key feature of the E3 program and should be fostered by DEWLP. The mandatory comparative energy label for consumers on domestic appliances is one important media of market information, the value of which has been demonstrated in numerous market studies. Comparative data provided by the internet offers hope for more up-to-date and complex information, for domestic and commercial classes of equipment that interested parties may use to benchmark competitive equipment. Best-in-class is still a powerful advertising claim by any supplier.

PALS encourages DEWLP to consider the case for including walk-in cool rooms into the VEET scheme. There are a number of reasons why cool rooms offer a strong candidate equipment type for prioritization. The May 2018 edition of *Ecolibrium* (the journal of the trade body, AIRAH) published a report on a global study of one hundred of the most important measures to reversing global warming.

The number 1 solution is not, as some might expect, renewable energy options like wind turbines or solar farms, but rather the phase down of the use of HFCs and better control of leaks of refrigerant gases.

According to modelling in that study, published as "*Drawdown*", , almost 90 gigatonnes and \$US 9 billion could be saved worldwide by this most important of all solutions.

In the soon-to-be-published, Cold Hard Facts 3 (CHF3 - the latest in a series of reports produced over the last decade that analyses the refrigeration and air-conditioning industry in Australia - there are more than 200,000 refrigerated walk-in cool rooms and 60,000 freezers in Australia, of which more than a quarter are located in Victoria. With component sales showing 3.5% growth pa over the last 7 years, this is an expanding segment of the energy intensive 'cooling' economy.

A very large proportion of this installed equipment is employed in small businesses along the length of the cold food chain.. These are the types of SME's for whom energy savings are valuable by reducing costs creating higher profit margins for business.

The authors of CHF3 report that cool rooms generally have one of the highest leak rates of any equipment using refrigerants (possibly because they have not been subject to any past policy interventions unlike say air conditioners and building chillers). CHF3 estimates that walk-in coolrooms (WICs) lose approximately 15% of their refrigerant charge per annum, the large majority involving refrigerants with high GWP's (i.e. HFC-404A GWP of 3922, HFC-134a GWP of 1430 and HCFC-22 GWP of 1810). CHF3 also calculates energy use in WICs in Australia is significant: 4,800 GWh per annum, of which around 1,250 GWh, can be attributed to Victorian installations.

The potential energy that could be saved if only efficient cool rooms were commissioned is conservatively estimated at more than 25% of the current annual energy consumption. In more precise terms, Small WIC Unit Energy Consumption = 11,680 kWh/yr; Large WIC Unit Energy Consumption = 59,334 kWh/yr resulting in an overall average of 18,800 kWh/yr. The Australia wide energy spend to deliver the essential cooling services that WIC provide is \$775 million based on AEMO 2016 average commercial electricity price of 16c/kWh [more if the projected electricity rate increases post 2018 actually come into effect].

VEET might examine policies that would impact both new WICs and refurbishments. The US Department of Energy, for instance, has introduced efficiency requirements and test methods for Walk-in Coolers and Freezers (WICFs) that took effect from 1 January 2009. Initially, the US used minimum design requirements for WICFs with chilled storage area of less than 278.71 m<sup>2</sup>. The standards covered construction materials and electrical energy-using components. In 2017, a more sophisticated scheme was instituted based on minimum insulation requirements (R-values) for insulated panels and doors together with continuing design/construction requirements

for components affecting heat load. The new scheme calculates Annual Walk-in Energy Factors based on cool room net capacity and sets minimum standards. This measurement supports comparative benchmarking of equipment and even could be used for labelling schemes.

A dialogue with local stakeholders could inform the decision about whether Australia should first use a simple check-list regulation, or move immediately to match the current US energy efficiency regulation measuring efficiency. The consultation dialogue could traverse practical issues, like better insulation and sealing, to installation practices more generally and equipment operation guides; from optimal siting design, commissioning and maintenance practices, to greater use of enhanced technology and defrost controls. Considerable efficiency improvements can be captured in installed equipment by routine maintenance. Cleaning of air filters and maintaining an optimal refrigerant charge can dramatically reduce energy consumption so training of the service industry is important.

Cool rooms are spread across the refrigerated cold food chain from farm gate to supermarket, and throughout the hospitality sector including convenience stores and restaurants. They represent a real opportunity for VEET to move into the commercial sector and be seen to drive energy cost reductions in very cost sensitive sectors. If required, expert groups like AIRAH or others could help with measurement, installation impact tools and training.

The review of the VEET is occurring because the regulations sunset in December 2018. DEWLP has reviewed the current regulations to include:

- A fresh start for activities;
- Revised greenhouse gas equations; and
- Greater flexibility in activities and product approval.

PALS submit enhanced formal cooperation with other State white certificate programs and the Federal equipment energy efficiency program will also improve the operation of the future state scheme. PALS also suggest walk-in cool rooms as a strong candidate from the commercial sector for inclusion in the VEET.

Yours faithfully,

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