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Draft Victorian Energy Upgrades Water Heating Regulations and Specifications.

AGL Energy (AGL) thanks the Department of Environment, Land, Water & Planning (DELWP) for the opportunity to provide feedback on draft Victorian Energy Upgrades Water Heating Regulations and Specifications.

AGL is committed to meeting the needs of its energy customers both now and through the transition to a net zero emissions future. AGL is one of Australia's largest energy-led multi-service retailers, providing over 4.2 million electricity, gas and telco services to residential, small, and large businesses, and wholesale customers. Our diverse power generation portfolio includes base, peaking, and intermediate generation plants, spread across traditional thermal generation and renewable sources.

AGL support the introduction of gas hot water systems to be replaced by efficient electric heat pump systems. However, we are concerned about the timelines for compliance to the new water heating standard AS/NZS 4234:2021 and the adoption of a Global Warming Potential refrigerant of less than 700, as we do not think that they will be achievable and could adversely affect the program, increase certificate prices and increase energy costs for Victorian energy users.

Our comments follow in Annex 1.

We would be very happy to meet with the Department to discuss any of our comments or queries; please contact Jenniy Gregory at jgregory@agl.com.au.

Yours sincerely,

Con Hristodoulidis
Senior Manager Regulatory Strategy
AGL Energy

Annex 1: Water Heating Activities Issues Paper and Draft Specifications

Q1. What are your views on VEU (Victorian Energy Upgrades) transitioning to use the new AS/NZS 4234:2021 standard for product modelling?

AGL supports the transition to the new standard. However, we believe appropriate time must be allowed for products to be tested to the new standard as well as the development of new products. As this standard was only published on 25 June 2022, it is unlikely that there will be significant products redesigned, manufactured, tested and distributed in the first half of 2023.

This shortage could result in new homes accounting for all systems compliant with AS/NZS 4234:2021, and electric hot water replacements ceasing to be a significant activity under the VEU until volumes manufactured to the new standard increase significantly. We do not believe that this shortage would be a desirable outcome for either Victoria's GHG reduction strategy, the VEU and its participants, certificate prices or potential customers.

Q2. Do you have any comments on the proposed new 'very small' and 'small' methodology for calculating energy savings?

No comment.

Q3. What are your views on the revised calculation methodology proposed to allow existing product registrations?

The AEMO data[1] is higher for Victoria than the numbers used in Table 2 and Figure 3, which uses three-year old data from the RIS and does not include transmission and distribution losses.

We believe that the Electricity Emissions Factors and the Supplementary Energy Factors should be forward looking over the life of the device being installed. For example, a discounted average should be used whereby later years are included at a discounted weighting to the overall average.

Using the proposed methodology, replacing gas systems with electric results in around 5 VEECs (Victorian Energy Efficiency Certificates) less than replacing an inefficient electric hot water system. This equates to only around $350. We believe this value is low in that it costs considerably more to replace a gas HWS with a heat pump than an inefficient electric HWS with a heat pump due to additional plumbing and electrical work required for the fuel transition.

AGL recommends that additional VEECs should be allocated to this activity to cover the additional costs incurred and incentivise the phase out of gas HWS. We believe forward looking Electricity Emissions Factors and the Supplementary Energy Factors assist in achieving a higher incentive and is therefore consistent with the broader Victorian Government policy intent.

[1] https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/market-operations/settlements-and-payments/settlements/carbon-dioxide-equivalent-intensity-index

Q4. Do you have any comments on the proposed transition timeframes for existing product registrations?

We do not believe that a transition date 1 July 2024 looks feasible, as it may not be long enough for all manufacturers to transition their existing products entirely to a new refrigerant and be tested and registered as complying to the new Standard.

Q5. What are your views on the proposed inclusion of refrigerant GWP (Global Warming Potential) threshold of 700 for HPWHs (Heat Pump Water Heaters)?

AGL agrees that only HPHWSs that use refrigerants with a GWP less than 700 should be eligible to be installed in the future under the VEU program. This should be transitioned into the scheme in a manner that is achievable by business, noting that manufacturers must redesign and test their new models, then retool and build, which can take over three years.

In addition, businesses have orders for supplies of existing products which need to be sold, otherwise the cost of this business inventory will be passed onto customers without any commensurate benefits.

AGL does not agree that heat pumps leak refrigerant during their lifetime and that this has to be factored into the calculations. They are manufactured as a closed loop system and the products undergo standards tests to make sure that they do not leak. If they did leak, annual refuelling would be required.

The Cold Hard Facts series of reports referenced, we believe, are outdated and not aligned to current industry practices, noting that version three was published in 2018 and predicted its findings on the prior five years.[2]

Q6. Do you have any comments on the proposed transition period for the introduction of the refrigerant threshold?

AGL believes that an orderly and timely transition is needed to allow manufacturers to cost-effectively transition their products to a low GWP refrigerant (which they are also required to under the Montreal Protocol), noting that many heat pump manufacturers also sell outside of Australia and thus have requirements from other jurisdictions.

If the certificates were based on the refrigerant Greenhouse Gas savings, as well as the efficiency of the system, this could speed the timeframe for introducing replacing gas hot water systems with heat pumps as an activity to the VEU scheme.

It would also allow existing manufacturers to bring new refrigerant products to market in a timely manner. However, we would suggest that there is a sunset date for the heat pumps using high emission refrigerants.

Q7. What are your views on the proposed removal of activities where gas water heaters can replace electric water heaters (1A, 1B, 1F and 3B)?

Totally endorse.

[2] http://www.expertgroup.com.au/pdf/CHF3PresentationFinal070918.pdf

Q8. Do you have any comments on the proposed transition time for the removal of these activities?

Please see answer to Q5 above. AGL suggests 1 January 2023 for products currently registered with the VEU and 2025 for new products aligned to the <700 GWP and tested to the new water heating standard. AGL suggests that a review is slated for 2024 to make sure that manufacturers have been able to access equipment, supplies and refrigerant in order to make this manufacturing and supply transition

Q9. What are your views on the proposed new activities allowing the replacement of gas water heaters with efficient electric water heaters?

AGL strongly supports the inclusion of new activities replacing gas HWS with electric heat pumps. However, we query why only the medium sized load is eligible for replacement of gas with HPWHS. AGL believes all gas HWS should be replaced with efficient electric heat pumps and that this is aligned to the broader policy intent.

Q10. Do you have any comments on the proposed new calculation methodology for these new activities?

We recommend that these activities be brought online as soon as possible (especially given the recent AEMO warning about lack of gas supplies in 2023), and allow existing registered products to replace gas systems, in the same transition as suggested in the responses above.

Q11. Is there any information you can provide to support the development of appropriate, safe and practical installation and decommissioning requirements for water heating activities?

N/A.

Q12. What is considered best industry practice for decommissioning and disposal of water heating appliances?

N/A.

Q13. Do you have any comments on the clarification that multiple HPWH (Heat Pump Water Heater) systems or tanks cannot be installed in-line?

Thermal energy storage is one of the cheapest forms of energy storage available. Consideration should be given to allowing tank sizes larger than 425l to be available for VEEC creation.

Consideration should also be given to incentives to schedule the charging of such devices in periods of low wholesale electricity prices, outside of periods of peak demand.

We do recognise that it is not a good outcome to have only one tank replaced and claimed where there are more than one tanks. However allowing tanks to be manifolded to create a thermal store from either solar PV or solar thermal sources should be allowed.