

The logo for BOOM! is a rectangular box with a gradient from orange on the left to yellow on the right. The word "BOOM!" is written in white, bold, sans-serif capital letters inside the box.

Submission to Victoria's Gas Substitution Roadmap

A large, empty rectangular box with a thin red border, positioned below the title.

About BOOMPower

[BOOMPower](#) is a software company built to support asset, facilities and sustainability managers to deliver energy projects in-house — quickly and easily. The BOOM platform helps users identify, prioritise and procure upgrades, and then report on the benefits.

The BOOM platform has facilitated over \$7M of energy projects in the past three years, with \$10M now underway, including solar, storage, heat pumps and more. The core software platform was originally built to support the Victorian community housing sector, with support from the Community Housing Industry Association Victoria and the state government, through the New Energy Jobs Program. However, BOOM is supporting a wide range of property teams, from education to sports clubs to aged care, and everything in between.

Supporting Large-Scale Residential Hot Water Heat Pumps

Several of our community housing clients have requested advice on upgrading centralised hot water systems on apartment buildings. Typically, these are gas, or flat plate solar thermal systems with gas boost which have reached end-of-life (typically due to leaks in the panels or tank).

BOOMPower has prepared business cases for upgrading these to heat pump water heating, often in conjunction with solar PV, which can serve the heat pump, as well

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as common area loads. We've found that projected emissions savings over ten years in Victoria are typically 35%, and can approach 100% if the heat pump running time can be aligned with solar generation.

However, total cost of ownership over the same ten years is around 10% higher than for gas, driven by higher upfront capital costs. Given the considerable potential for deployment of large-scale heat pumps to reduce hot water emissions in apartment and commercial buildings, we advocate for incentives to overcome this upfront cost barrier. This will accelerate deployment, and reduce costs for all as the supply chain develops.

Recommendations

Unlike small heat pumps, large-scale versions (tank size > 425L) are not eligible for STCs, which puts them at a significant disadvantage, despite some economies of scale. Ultimately, we'd like the Commonwealth regulations around this to be resolved, but given the pace of regulatory change, we suggest a grant scheme in the interim to level the playing field. This could be a fixed sum, percentage, based on the capacity of the installed unit, or number of apartments. By way of comparison, the City of Adelaide Energy Smart Apartments program offers up to \$5000 for such a heat pump upgrade.

Our understanding of the VEU regulations means that VEECs cannot be created for large scale heat pump upgrades if the existing hot water system is solar thermal, even if the solar thermal component is non-operational. As it stands, this is likely to mean that many failed solar thermal systems will simply be switched to gas as the lowest CapEx option, but with higher emissions and running costs then locked in for a further 10 years or more. Instead, we recommend allowing VEECs to be created on the basis of the gas baseline, provided the existing solar thermal system has failed, and is no longer covered by the manufacturer warranty (typically 5-10 years post-install). While the resulting VEEC subsidy is likely to be relatively small, it will further incentivise large scale heat pumps when coupled with the above STC-equivalent scheme.