Appendix 1

How Victorian Energy Upgrades works

The VEU program achieves a reduction in GHG emissions by reducing the total demand for energy by residential and business consumers. This reduction in demand is achieved by improving the energy efficiency of premises, or the appliances and equipment used within the premises.

While improving energy efficiency will result in lower energy costs for those participating in the program, there may be an initial investment cost to modify or replace appliances or adapt premises, which may be a barrier to energy efficiency improvements occurring.

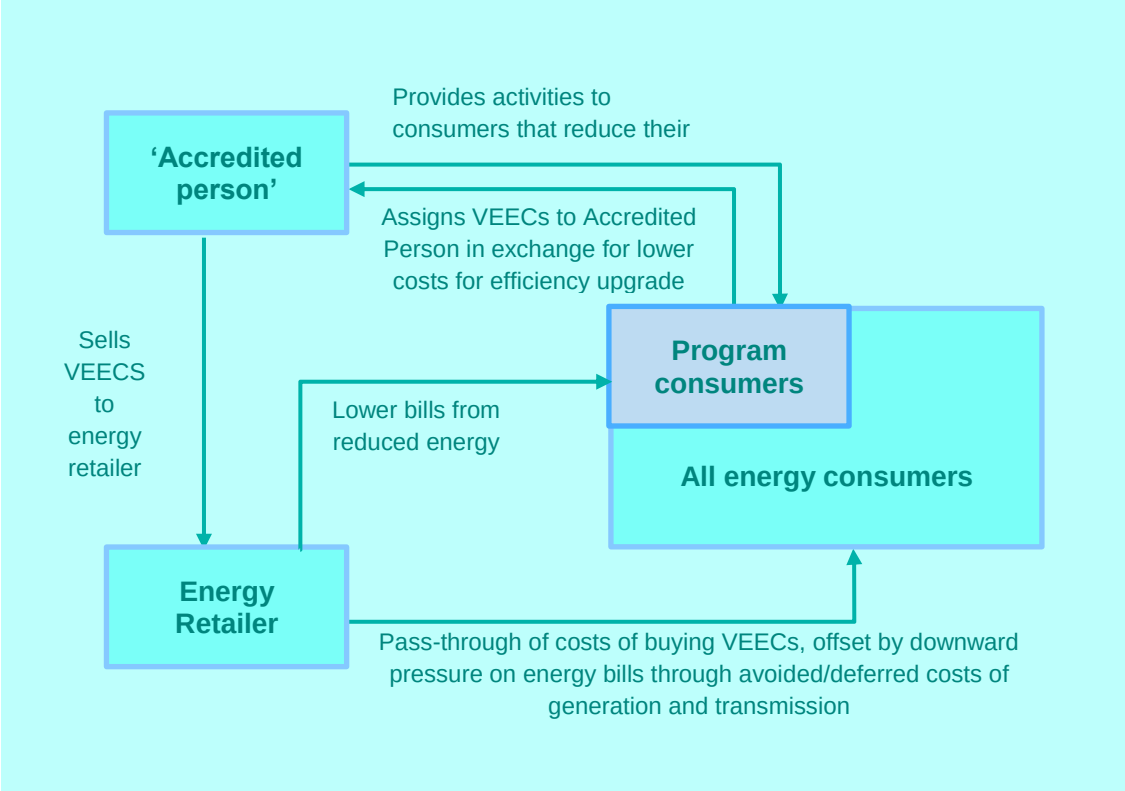
These investment barriers have been examined in previous reviews and impact assessments prepared for the overarching legislation, including the most recent amendments in 2018. The existence of these barriers has historically justified the need for the VEU program. In the section on 'the residual problem' it will be determined whether these barriers remain.

The VEU program reduces these investment barriers by creating a tradeable certificate (VEEC)—the value of VEECs is created by requiring energy retailers[121] to buy VEECs; this value can be used to lower the costs to energy consumers of investing in energy efficiency improvements.

The market for VEECs operates through 'accredited persons' (APs) who may create VEECs for energy consumers. Consumers assign the VEECs to the accredited persons in exchange for being offered a discount on an energy efficient upgrade to their premises. This reduced price, together with the shift in effort from the consumer to the accredited persons to pursue VEEC-creating activities and provide information about how to best undertake an upgrade, helps consumers overcome the barriers to investing in energy efficiency improvements. Accredited persons recover this discount and their own costs by selling the VEECs to energy retailers. There are currently over 200 accredited persons able to create VEECs.

[121] Large retailers only: retailers that have 5000 or more customers; or purchase 30 000 MWh or more of electricity on the wholesale market; or purchase 350 000 GJ or more of gas on the wholesale market. Currently there are 31 retailers that are subject to the program, and 4 retailers that fall below these thresholds.

Figure 22: How the Victorian Energy Upgrades program works



The number of VEECs a retailer needs to surrender each year depends on the amount of energy they purchase from the wholesale market. Most of the energy they purchase and sell on to Victorian energy consumers is 'liable energy' for the purposes of the program. For each retailer, the share of total liable energy that they purchase and sell will correspond to the share of the annual VEEC target that they are responsible for. For instance, if they purchase and sell one third of all the liable energy, then they must deliver VEECs that correspond to a third of the annual target under the program. One VEEC corresponds with the reduction of 1 tonne of GHG emissions.

Currently, VEECs can be created in two ways:

- through activities prescribed in the current Regulations. These use a simplified approach, whereby the GHG abatement (and the number of VEECs) for each activity is 'deemed' through a standard methodology included in the Regulations
- through project-based activities (PBAs), which are possible under separate Victorian Energy Efficiency Target (Project-based Activities) Regulations 2017 (PBA Regulations). PBAs are customised (and generally large scale) discrete activities that improve energy efficiency at premises, for which VEECs may be created by calculating GHG abatement by measuring the actual energy saved.

The VEU program is a market-based approach to achieving the objective of reducing GHG emissions. By creating a market in VEECs, competition among accredited persons to sell VEECs to energy retailers means that VEECs will tend towards activities that have the lowest cost for each tonne of GHG emissions avoided.[122] This also means the market hinges on GHG abatement values prescribed for each activity as these directly price the activity in the market. Activities included in the program are expected to increase the take-up of energy efficiency improvements beyond business-as-usual levels. Analysis and calculations for these activities exclude the generation of additional certificates.

[122] In this context, lowest cost is the amount of cost difference offered to consumers to take up the activity as well as the accredited person's costs of complying with the program (including $1 per VEEC registration fee).

As GHG emission reductions are created by incentivising gas and electricity efficiency activities this supports the second legislative objective of the Act.

Participation by consumers, including businesses, is entirely voluntary. Agreeing to undertake VEEC-creating activities relies on the consumer making a decision as to whether they will be better off, taking account of any reduced prices, information and services provided by accredited persons. Consumers who elect to participate in the VEU program enjoy reductions in their energy costs afterwards, for at least the period where the upgrade reflects a bring-forward of efficiency that would be achieved under a business-as-usual scenario and also through reductions in wholesale energy costs.

Energy retailers are required to buy VEECs, but will pass some of the cost on to their customers – including those not participating in the VEU program – through higher energy prices.[123] Modelling commissioned by the Department shows that historically this additional cost has been more than offset by the reduced demand for energy brought about by improved energy efficiency putting downward pressure on wholesale energy prices.

The third objective of the Act – encouraging investment, employment and technology development in industries that supply goods and services which reduce the use of electricity and gas by consumers – is supported because suppliers of certificates invest in new business models to deliver low cost upgrades at scale. This has seen new technologies develop and rapidly achieve market penetration (e.g., LED lighting), resulting in significant employment both to identify and deliver installations, in the manufacturing of products, and investments to generate these new activities.

Large Energy Users

Legislatively, the mechanism that currently excludes large energy users works in the following way:

- Energy supplied to exempted large energy users is not a 'scheme acquisition' under the Act. This means that retailers do not face a liability when they sell energy to these large energy users.
- As such, the cost of the program is not passed through to these users. Because large energy users are not paying for the program, incentives from the VEU program are not available for energy upgrades that are undertaken on their sites.
- If an organisation elects to 'opt-in' they are required to pay their retailers for participating in the program. Retailers are obligated to purchase VEECs in accordance with the emissions associated with the generation of electricity they supply – this is the cost retailers 'pass through' to energy users.

[123] State of Victoria, 'Independent Review into the Electricity and Gas Retail Markets in Victoria' (August 2017), <https://www.energy.vic.gov.au/__data/assets/pdf_file/0030/79266/Retail-Energy-Review-Final-Report.pdf>.