

Victorian Energy Upgrades

Performance Report 2021



An appropriate citation for this paper is:

Essential Services Commission 2022, Victorian Energy Upgrades Performance Report 2021:, June

Copyright notice

© Essential Services Commission, 2022



This work, Victorian Energy Upgrades Performance Report 2021, is licensed under a Creative Commons Attribution 4.0 licence [creativecommons.org/licenses/by/4.0]. You are free to re-use the work under that licence, on the condition that you credit the Essential Services Commission as author, indicate if changes were made and comply with the other licence terms.

The licence does not apply to any brand logo, images or photographs within the publication.



In 2021 the Victorian Energy Upgrades program registered over 7.5 million certificates, resulting in over 7.5 million tonnes of greenhouse gas emissions saved.

Despite coronavirus restrictions over 657 thousand energy efficient upgrades were delivered across Victorian households and businesses during the year.

Our compliance and enforcement efforts resulted in the payment of over \$1.8 million in penalties by energy retailers, and the surrender of over 38 thousand certificates by accredited providers.

This 13th annual Victorian Energy Upgrades performance report outlines the work undertaken to deliver program outcomes for Victorian consumers and program participants in 2021, and to prepare for the program's future.



From the chairperson



I am delighted to introduce the 2021 performance report for the Victorian Energy Upgrades program – the largest energy efficiency program in Australia

Delivering emissions and cost savings for Victorian consumers

Since its introduction in 2009, over 2 million Victorian households and 128 thousand businesses have participated in the program. This has helped to reduce greenhouse gas emissions by over 70 million tonnes and saved participating consumers hundreds of dollars in energy costs.

Despite the continuing challenges presented by the pandemic, the program experienced strong growth in 2021. It delivered over 657 thousand energy efficiency upgrades across more than 410 thousand households and businesses, a 75 per cent increase on 2020. This translates into a 7.5 million tonnes reduction in greenhouse gas emissions.

A growing and evolving program

The program's growth was most significant in upgrades in residential premises. The volume of upgrades delivered in 2021 represents the highest number of annual upgrades undertaken in the program since 2013. We saw strong participation in the program from consumers in regional Victoria as accredited providers pivoted their businesses to service regional areas in response to coronavirus restrictions.

Consumers continued to achieve valuable energy savings through the program in 2021. Participating households saved an estimated average of \$136 off their annual energy bills, while businesses saved an estimated \$2,940 on average.



The program evolved in 2021 to incorporate new participants, technologies, products and services, 168 new businesses registered to participate in the program in 2021. Thirteen new businesses became accredited providers, and 60 businesses – just under a third of existing accredited providers – expanded their accreditation to deliver a wider range of activities. Over 900 new energy efficient products were approved, bringing the total approved products to more than 18,300.

Another indicator of program growth was the fivefold increase in project-based activities projects delivered in 2021 compared to the previous year. These projects are more complex to undertake but allow for a range of incentives to be created across different technologies and business settings. In 2021, the commission approved 29 project-based activities impact reports. The pipeline of project-based activities to be delivered in future years continues to build.

Maintaining program integrity

Maintaining the integrity of the expanding program and confidence in the energy efficiency benefits delivered to consumers remains our foremost responsibility. We continue to work with stakeholders to promote and monitor compliance with the Victorian Energy Efficiency Target (VEET) Act, regulations, specifications and guidelines.

In 2021, in recognition of the challenges presented by the workplace and travel restrictions in place due to the pandemic, we undertook more pre-registration checks of certificates and desktop audits of registered certificates. We also continued to support participants in managing the challenges of the pandemic, including by extending deadlines for them meeting their program obligations.

The commission also carried out 30 investigations and took enforcement action against two accredited provider companies. Over 38 thousand certificates were surrendered by accredited providers in the year due to our compliance efforts. Two energy retailers paid penalties of over \$1.82 million for their failure to surrender sufficient certificates to meet their certificate liability for the 2020 year.

Building public confidence and promoting consumer rights

We recognise that consumer confidence in the program is critical to its ongoing success. It is with consumers in mind that we undertook significant work in 2021 to implement changes to shape the future direction of the program to ensure they are properly informed and protected. This included our continued engagement with Consumer Affairs Victoria on consumer complaints. We have also commenced working with the Australian Communications and Media Authority this year to improve consumer protection outcomes under the program.

We began work on the introduction of an enforceable code of conduct for the Victorian Energy Upgrades program from 1 July 2022. The code sets out minimum standards that consumers



From the chairperson

should expect across their journey with the program, and applies to all accredited providers and third parties operating under the program. It includes general principles around good conduct and specific protections relating to marketing and sales including lead generation, contracting and information provision, installation, after-sales processes, and dispute resolution.

The requirements are consistent with similar industry codes and Australian Consumer Law. Accredited providers who do not operate in accordance with the code will be unable to participate in the Victorian Energy Upgrades program.

We continue to build strong relationships with program participants to enable us to deliver an efficient, effective and adaptive program. For program participants, particularly accredited providers, we seek to help them have a strong understanding of their role and the requirements of the program. We remain committed to engaging with these key stakeholders on the new code of conduct and any other changes to the program's legislative framework.

We urge accredited providers to review their marketing practices and behaviours to ensure they are compliant with the relevant telemarketing, doorknocking, and consumer rights laws. Accredited providers may be subject to formal investigation by the relevant regulator where alleged non-compliance is detected.

The Victorian Energy Upgrades program delivered critical outcomes to help meet Victoria's net zero emissions targets and achieve important cost savings for energy consumers in 2021. We look forward to continuing to support and strengthen this important program in the long-term interests of Victorian consumers.

Kate Symons

Chairperson

Key outcomes for Victorian Energy Upgrades program

Greenhouse gas emissions savings for Victoria

Over **7.5 million**

tonnes of greenhouse gas emissions (CO₂e) were **saved** by the program in 2021.

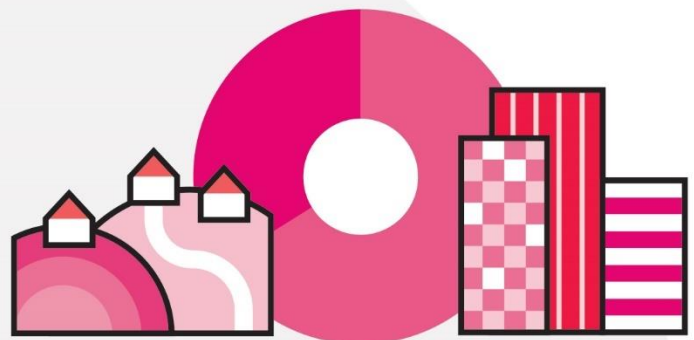


50%

of savings were delivered by **Victorian households**

50%

of savings were delivered by **Victorian businesses**



34%

of savings were delivered in **regional Victoria**

66%

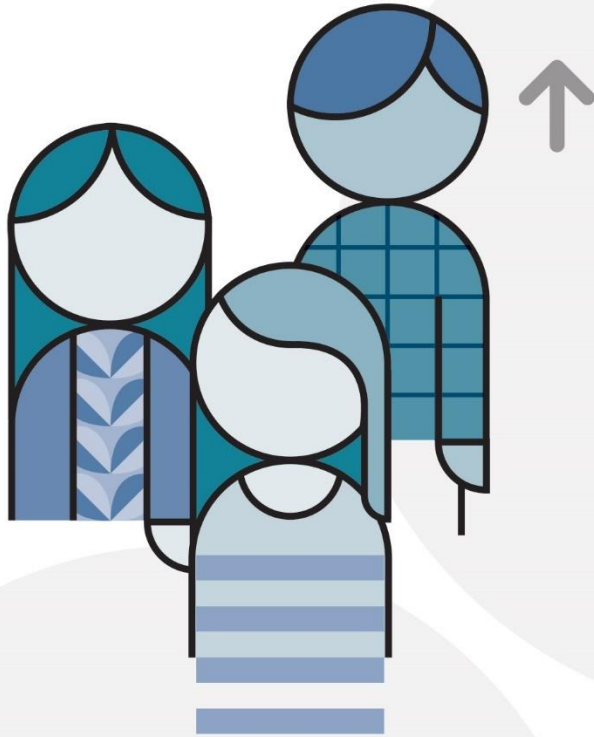
of savings were delivered by **metro Melbourne**

Over **70 million**

tonnes of greenhouse gas emissions (CO₂e) have been **saved** by the program since 2009 to December 2021.

This is the equivalent to taking **21 million cars off the road** for a year.

Energy and cost savings for Victorian consumers



633,346

energy efficient upgrades were delivered to Victorian households – a **76% increase** compared to 2020.

24,097

upgrades were **delivered to Victorian businesses** in 2021.

APPROXIMATELY

394 thousand households and 19 thousand businesses

benefitted from upgrades under the program in 2021.

7.7 GWh

of energy savings expected to be generated from 2021 upgrades.



2021 upgrades are expected to deliver an average of



10MWh

of energy savings and **\$136 of annual cost savings** for participating households.

190MWh

of energy savings and **\$2,940 of annual cost savings** for participating businesses.

Outcomes for program participants

7,512,776
certificates

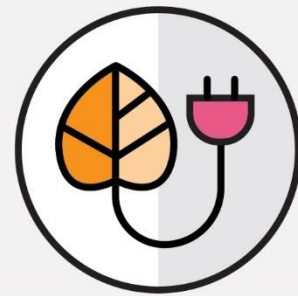
were registered in
the program



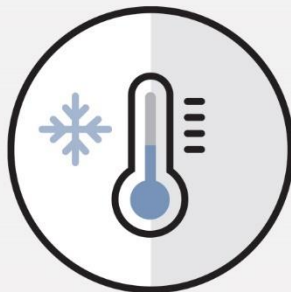
168 new businesses registered to own, trade and surrender certificates.



13 new businesses were accredited and **60** businesses expanded their accreditation to deliver more activities.



915 new energy efficient products were approved for the program, bringing total to **18,326**.

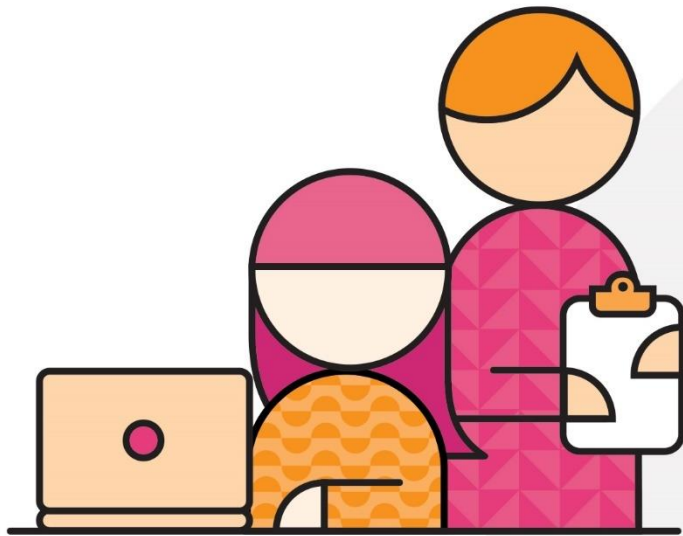


1 new activity (cold room activity) introduced into the program.



29 project-based activity (PBA) impact reports approved – a fivefold increase from 2020.

Compliance and complaints



WE UNDERTOOK

890

upgrade audits (phone, desktop and field audits) and **57** accreditation related audits.

30

investigations which resulted in the surrender of **38,623** certificates.



WE ASSESSED

57,473

upgrade creation claims in 2021

78% increase to 2020.



\$1,820,120
penalties

paid by energy retailers in 2021



561
complaints
were received

=

13
complaints
per 10,000 premises
upgraded



About this report

This is the Essential Services Commission’s report detailing our regulatory and administrative actions under the Victorian Energy Efficiency Target (VEET) Act 2007 (the Act) for the 2021 reporting year.

The Act established the creation of the VEET scheme, known as the Victorian Energy Upgrades (VEU) program (the program) and charged the commission with its implementation from 1 January 2009.

This report is published to meet our statutory reporting requirements for the 2021 year (1 January to 31 December 2021) in accordance with section 7(3) of the Act and includes the following information required under section 67 of the Act.

Table 1 Information required to be published for the 2021 year

Information to be published	Measure
Certificates created in 2021 (1 January to 31 December)	7,891,789
Certificates surrendered by accredited persons in 2021 (1 January to 31 December)	38,623

This report provides information on key aspects of the program for the 2021 year, including:

- our assessment of applications for new accounts and accreditation applications
- our assessment of the creation of Victorian energy efficiency certificates (VEECs)
- our assessment of project-based activities and product submissions
- our compliance and audit activities, including enforcement outcomes against accredited persons and energy retailers¹.
- other key work activities and projects we delivered to maintain the integrity of the program and to prepare for its future.

We have chosen to publish information on the program’s performance in two phases this year. This approach enables an earlier release of the report which will provide more timely information on the performance of the program in 2021 for Victorian consumers and program participants.

¹ Energy retailers who meet specific threshold requirements under the Act have an obligation under the Act to surrender certificates. They are called “relevant entities” under the Act.



About this report

This report does not provide findings relating to the compliance of energy retailers under the program for the 2021 compliance year. Energy retailers with an obligation under the Act are due to submit their annual energy acquisition statements and certificates to the commission by 31 July 2022.² We will publish information relating to energy retailer compliance for the 2021 compliance year, including information on energy efficiency shortfalls and certificates surrendered later in the year, following our review of these retailers' submitted statements and certificates.

² See [letter sent to energy retailers on 25 October 2021](#) granting an extension to 31 July 2022 to meet their 2021 compliance year obligations



Contents

From the chairperson	iv
Key outcomes for Victorian Energy Upgrades program	vii
About this report	xi
About the program	1
The program is a key mechanism for reducing greenhouse gas emissions in Victoria	2
The program delivers savings for participating consumers	2
The program delivers net benefits for Victorians	5
Program performance in 2021	6
Victorian Energy Upgrades program targets met	7
Continued growth in account creation, accreditation and participation by accredited providers	8
Significant increase in the number of upgrades, particularly in residential premises	10
Regional certificate registrations in 2021 similar to 2020, but higher than preceding years prior to pandemic	11
The percentage of certificates registered from non-lighting activities is increasing	13
Certificate price increased significantly through 2021	14
A decrease in number of products approved for use in the program	15
Growth in delivery of completed project-based activities (PBA) projects and pipeline of projects	16
Project-based activities project proposals by sector and technology type have shifted from last year	19
Project-based activities project approval timelines remain well under legislated timeframes	20
Compliance and enforcement in 2021	21
We undertook more pre-registration checks	22
The number of certificates withdrawn decreased in 2021	23
Desktop audits remain a key compliance tool	24
We took enforcement action against two accredited powers in 2021	26
Rate of complaints steady	27
Program administration and development	30
Program reform – code of conduct and Act review	31
Amendments to the VEET Regulations and Specifications	32
Updates to our program requirements and administrative framework	33
Engagement with our program participants	34
Collaboration with other government organisations	36
Adapting to continuing coronavirus impacts	39
Enhancements to our IT systems	40
Glossary	41
Appendices	43
Appendix A: VEU program framework	44
Appendix B: Table of VEECS created and registered by prescribed activity	50



About
the program





The Victorian Energy Upgrades program is the largest energy efficiency program in Australia.

The program is a key mechanism for reducing greenhouse gas emissions in Victoria

The Victorian Energy Upgrades program is a major part of the Victorian Government's objective in achieving greenhouse gas emission reduction outcomes. Targets set under the program aim to reduce Victoria's energy demand by seven per cent by 2025.³

The program helps reduce Victoria's greenhouse gas emissions by providing access to discounted energy-saving products and activities via accredited providers. When these businesses undertake an eligible energy upgrade, they create Victorian energy efficiency certificates (VEECs) under the program. Each certificate represents one tonne of carbon dioxide equivalent of greenhouse gas saved.

Energy retailers are required to acquire and surrender these certificates to meet the annual targets set in Victorian legislation. The target set for the 2021 year was 6.5 million certificates.

Since the program began in 2009, over 70 million tonnes of greenhouse gas emissions have been saved by the program. This is equivalent to taking over 21 million cars off the road for a year.

The commission's key role is to regulate the creation, registration and surrender of certificates under the program in accordance with the program's legislative framework. Information on the program's legislative framework, our program responsibilities and our compliance and enforcement framework can be found in Appendix A of this report.

The program delivers savings for participating consumers

Over 2 million households and 128 thousand businesses have benefited from energy upgrades that have delivered energy and cost savings at their residential or business premises.

In 2021, approximately 394 thousand households and 19 thousand businesses benefitted from energy upgrades through the program in Victoria.⁴ These upgrades are expected to generate

³ Department of Environment, Land, Water and Planning, Victoria's Climate Change Strategy, May 2021.

⁴ Based on upgrade activities which had their certificates registered in 2021.



About the program

approximately 7.14 GWH of electricity savings and two million GJ of gas savings over the lifetime of the upgrades. This represents a total of 7.7 GWH of energy savings.

Households that undertook an upgrade in 2021 would save an average of \$136 on their annual energy bills and 10MWh over the lifetime of the upgrades.⁵ Businesses would save an average of \$2,940 on their annual energy bills and 191MWh of energy over the lifetime of the upgrades.⁶

⁵ Assuming an electricity price of \$0.22 per kWh and gas price of \$0.02 per MJ, and 15 years lifetime for the upgrades.

⁶ Assuming an electricity price of \$0.23 per kWh and gas price of \$0.02 per MJ, and 15 years lifetime for the upgrades.



Frankston City Council's street lighting upgrade project

During 2020 and 2021, Frankston City Council upgraded approximately 7,000 fluorescent street lights across Frankston city with energy efficient LED lights. The project was identified by the Council as a way of significantly reducing greenhouse gas emissions, energy usage and costs. It was also a key project supporting the Council's climate emergency response and objective to be carbon neutral (zero net emissions) by 2025.

The Council benefited from approximately \$394,000 in certificates under the program, which was used to help fund the \$1.73 million project.

The LEDs are up to 53 per cent more efficient than the lights they replaced and are expected to deliver Council approximately \$4 million in energy and maintenance cost savings over their estimated 20-year lifespan. The old lights were recycled following their removal.

The project resulted in the registration of 5,189 certificates under the upgrades program in 2021, which represents emission savings of approximately 5,200 tonnes over the first ten years. This is equivalent to taking 1,561 cars off the road for a year.

The project will also deliver better lighting outcomes for Council and its residents by providing:

- greater uniformity of lighting across and along streets
- better colour and visibility
- less loss of brightness over time
- less glare and light pollution
- greater reliability and lower maintenance costs.

"The Victorian Energy Upgrades program has delivered numerous key benefits to Frankston municipality and, in turn, its residents. This is a significant initiative to help us to achieve our net zero emissions target by 2025. Whilst the benefits to our climate and local environment are unquestionable, another major benefit is the \$4 million in ongoing cost savings that we expect to see for the next 20 years. The new LED streetlights will make our roads safer for pedestrians and motorists alike, enhance the aesthetic of our City and reduce light pollution for our residents. We are delighted with the outcomes of this fantastic initiative."

Councillor Nathan Conroy, Mayor of Frankston City Council



The program delivers net benefits for Victorians

All Victorian energy consumers benefit from the program. More efficient use of energy by Victorian consumers:

- can reduce wholesale prices by avoiding the need for investment in new generation or augmenting the energy grid
- can improve energy security by reducing energy demand at peak times.

Residential consumers are expected to save on their energy bills across the 2021-2030 period even if they do not participate in the program.⁷

Since 2009, the program has helped introduce more than 18 thousand energy-saving products to the market, establishing commercial opportunities for more than 220 new businesses and 6,100 trade professionals.

The program has also contributed to creating economies of scale for lighting products, which has transformed the lighting industry. Production costs of high efficiency lights has significantly reduced because of the wide scale upgrades of lighting products under the program.⁸

⁷ Department of Environment, Land, Water and Planning, Regulatory Impact Statement (Victorian Energy Efficiency Target Amendment (Prescribed Customers and Targets) Regulations 2020, 2019, p 8.

⁸ Department of Environment, Land, Water and Planning, Regulatory Impact Statement (Victorian Energy Efficiency Target Amendment (Prescribed Customers and Targets) Regulations 2020, 2019, p 20.

A stylized red graphic of a flower or plant with a white speech bubble. The graphic consists of a dark red stem and a wide, shallow bowl-like shape. Two vertical, rounded rectangular shapes are positioned above the bowl. To the right, a large, light red, stylized flower or leaf shape is partially visible. A white speech bubble with a dark red border is positioned in the upper right quadrant, containing the text.

**Program
performance**
in 2021



Since its commencement in 2009, the program has consistently delivered enough certificates to meet its annual program targets.

Victorian Energy Upgrades program targets met

In 2021, just under 7.9 million certificates were created by accredited persons. Of this number, we registered over 7.5 million. This meant the number of certificates delivered in the year was 16 per cent higher than the number of certificates required to meet the program's 2021 target of 6.5 million certificates. This marked a significant increase from certificate creations and registrations in 2020, when approximately 6.1 million certificates were created and 6.05 million were registered.

Over 360 thousand certificates were withdrawn by accredited persons due to our pre-registration checks during the year. In addition, over 38 thousand certificates were surrendered by accredited persons because of our compliance and audit efforts.

The following table shows the number of certificates created, registered, withdrawn, and surrendered by accredited persons, both in 2021 and since the start of the program in 2009.

Table 2 Certificates created, registered, withdrawn, and surrendered

Certificate transactions in 2021	2021	Total (2009 – 2021)
Certificates created	7,891,789	76,752,282
Certificates withdrawn by accredited persons ⁹	360,065	5,142,108
Certificates registered	7,512,776	70,651,484
Certificates refused registration	-	117,355
Certificates surrendered by accredited persons	38,623	401,812

Volume of certificates available to meet program targets in future years

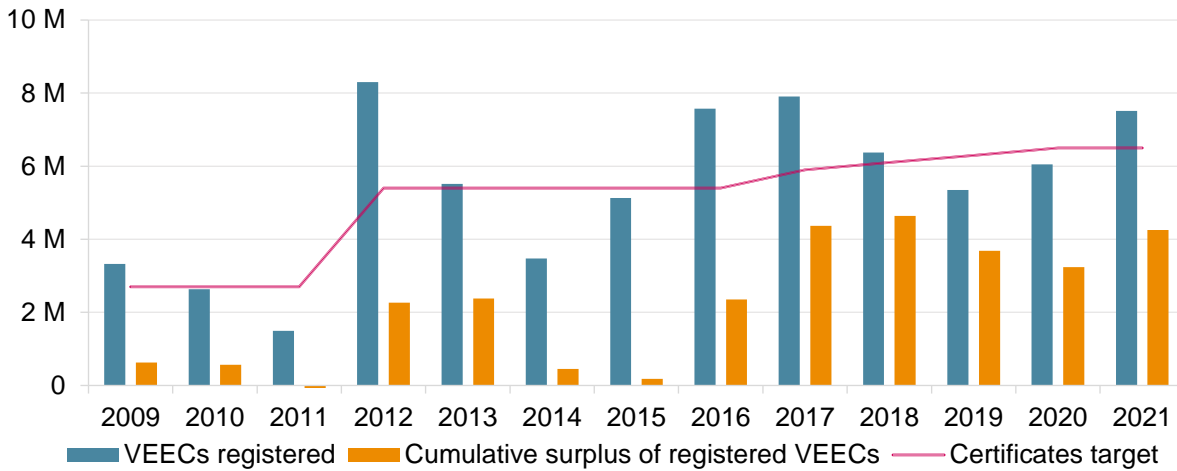
The program's certificate surplus rose by 30 per cent to over 4.25 million certificates at the end of 2021. This represents an increase from the previous year's certificate surplus of around 3.24 million.

⁹ Withdrawn certificates may be resubmitted by an accredited person and registered at a later date when the organisation is able to provide us with sufficient evidence to satisfy our pre-registration checks



Program performance in 2021

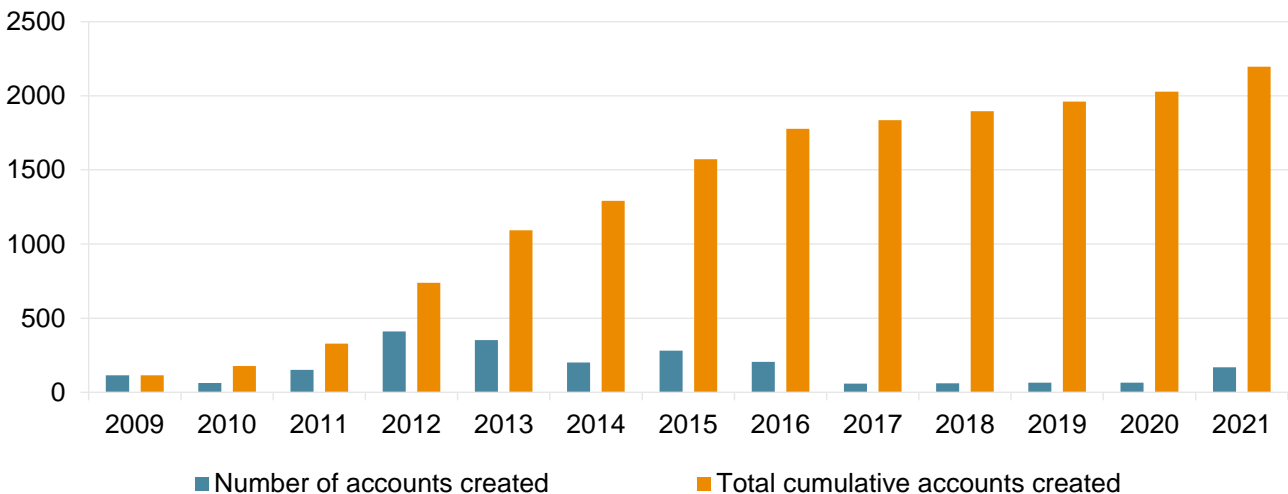
Figure 1 Certificate target, certificates registered, and surplus of certificates registered (in millions) – 2009 to 2021



Continued growth in account creation, accreditation and participation by accredited providers

Under the program, account holders can own, trade and surrender certificates, whereas only accredited persons can create certificates. In 2021, 168 new accounts were created, bringing the overall total to 2,196. This represents the largest increase in the number of new accounts since 2016.

Figure 2 Cumulative number of VEU accounts by year – 2009 to 2021





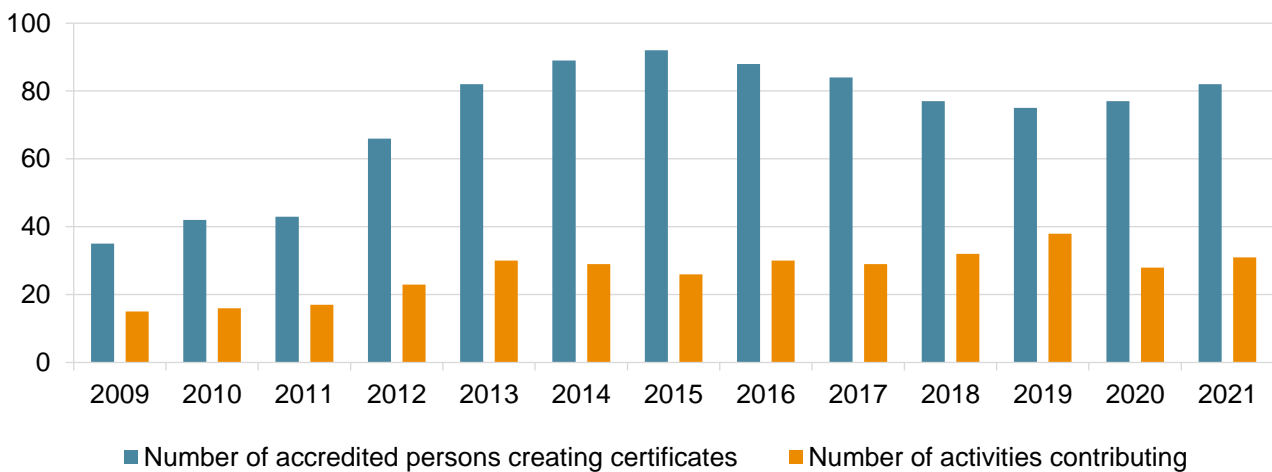
Program performance in 2021

Thirteen new accredited persons were approved in 2021, bringing the total number in the program to 233. The number of persons accredited under the program's project-based activities increased to twenty-five during the year.

We also approved 60 expanded accredited persons applications, enabling these accredited persons to undertake additional activities under the program. This was a substantial increase from 2020, when 17 were approved. The result shows increasing interest by accredited persons to deliver a more diverse range of energy efficiency activities under the program.

The number of active accredited persons (accredited persons who are creating certificates) in 2021 was 82, an increasing trend since 2019. There was a small increase in the variety of activities delivered by accredited persons under the program from 28 activities in 2020 to 31 activities in 2021.

Figure 3 Number of accredited persons creating certificates and the number of activity types that contributed to those certificates





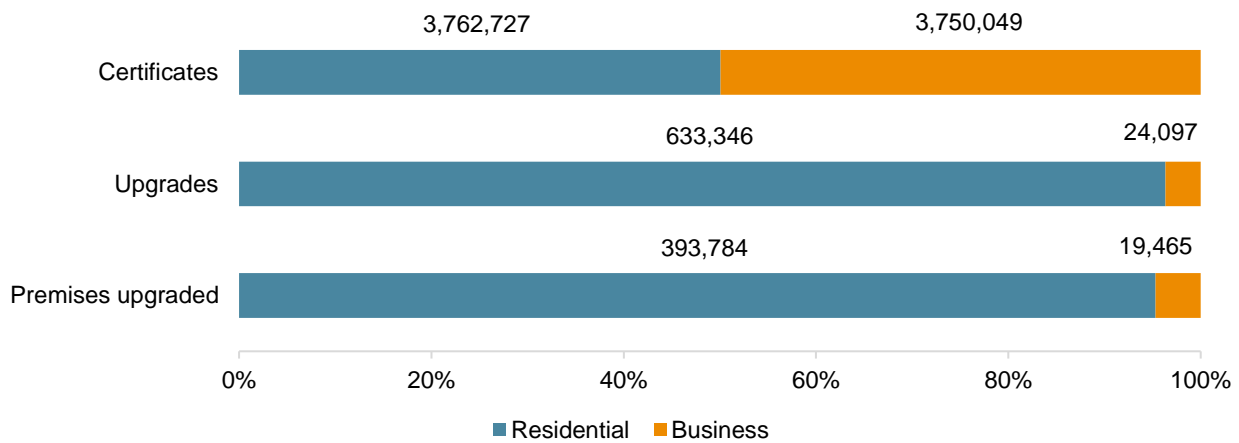
Significant increase in the number of upgrades, particularly in residential premises

The program delivered significantly more upgrades in 2021 than in 2020. VEECs were registered from around 657 thousand energy efficient upgrades, undertaken across over 393 thousand residential premises and around 19 thousand businesses premises throughout Victoria. This represents a 75 per cent increase from the previous year, when around 375 thousand upgrades were delivered.

The increase was most significant for upgrades undertaken in residential premises. The volume of upgrades delivered in 2021 represents the highest number of annual upgrades undertaken in the program since 2013 (see Figure 5).

During the year, 96 per cent of upgrades were undertaken in residential premises. However, the number of certificates registered from upgrades in business and residential premises were quite similar in scale, with an almost 50/50 split. This is because larger amounts of certificates are registered on average for upgrades undertaken in business premises compared to residential premises

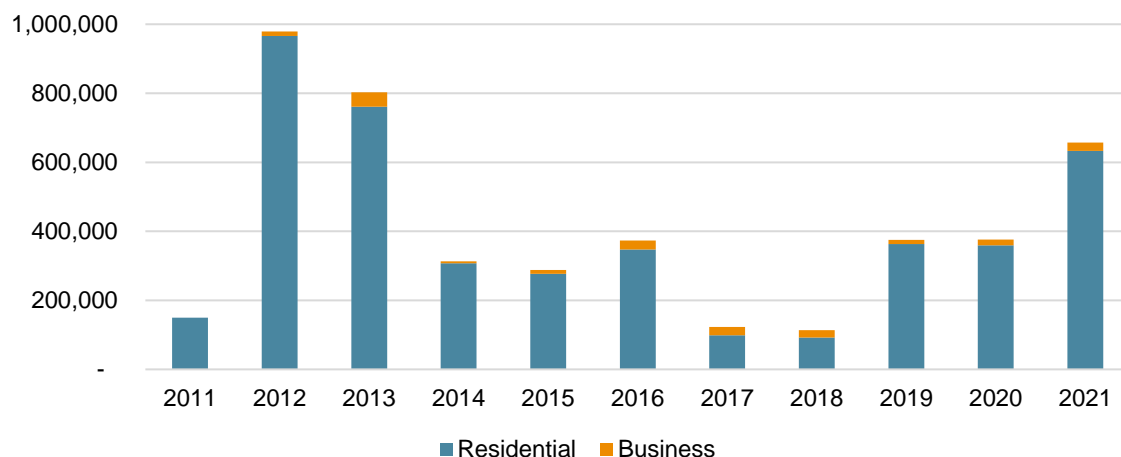
Figure 4 Number of premises upgraded, upgrades undertaken, and certificates registered by types of premises in 2021





Program performance in 2021

Figure 5 Number of upgrades undertaken by premises type – 2009 to 2021

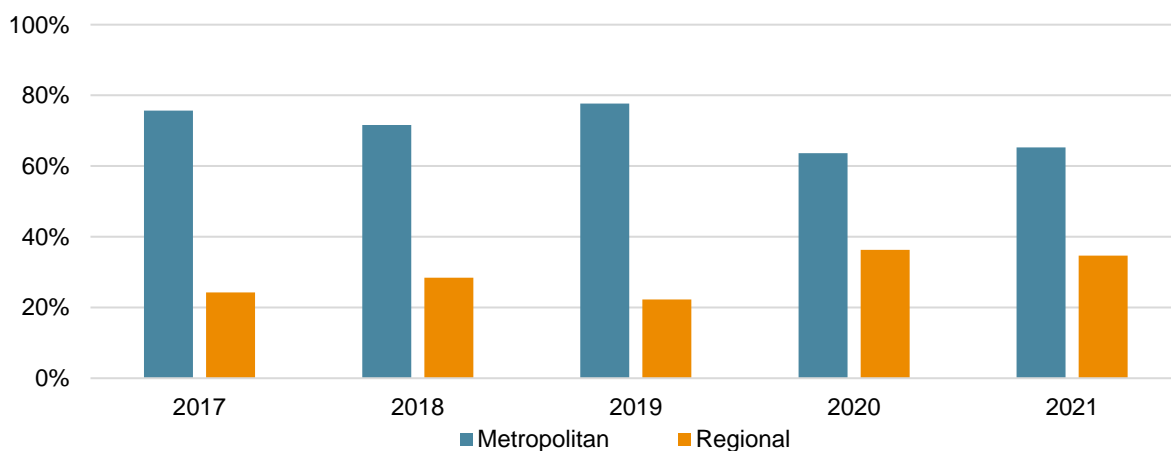


Regional certificate registrations in 2021 similar to 2020, but higher than preceding years prior to pandemic

In 2021, the percentage of certificates registered by upgrades in metropolitan and regional premises remained at similar levels to the previous year, when accredited providers pivoted away from metropolitan to regional upgrades in response to coronavirus restrictions.

The percentage of certificates from upgrades in regional premises accounted for approximately one third of the total certificates registered in 2020 and 2021. This level of certificate registration is higher than the rates seen in the preceding three years prior to the coronavirus pandemic.

Figure 6 Percentage of certificates registered in metropolitan Melbourne and regional Victoria – 2017 to 2021



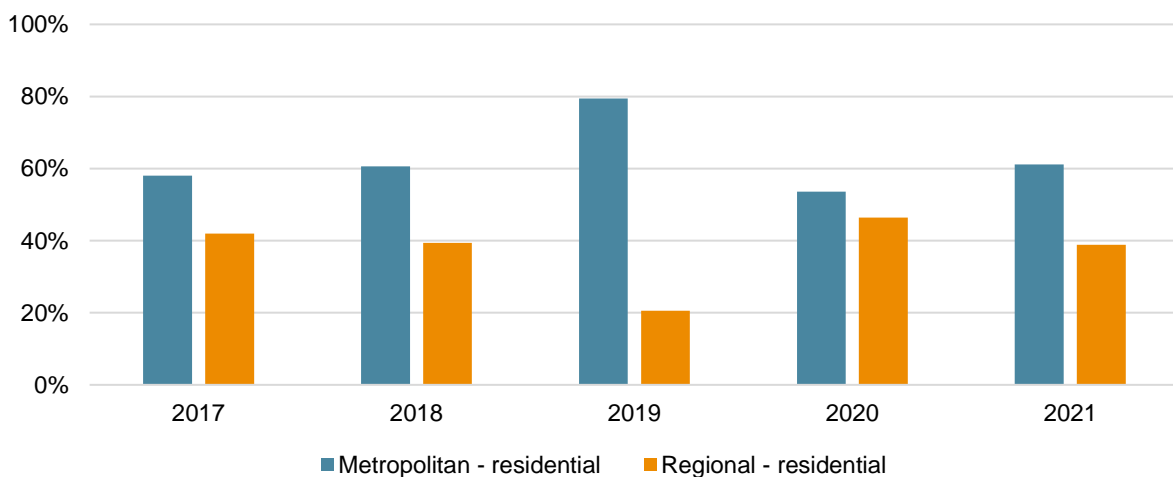


Program performance in 2021

The increase in upgrades delivered in regional areas are most significant in residential premises. Compared to 2019, there has been around a 150 per cent increase in certificates registered from upgrades undertaken in 2021. The number of residential regional upgrades in 2021 is six per cent higher compared to 2020, when the coronavirus restrictions first impacted on the accredited providers' ability to delivery upgrades under the program.

Regional Victoria accounts for approximately 26 per cent of the state's total number of households in 2021.¹⁰ It is worth noting that 39 per cent of residential certificates were created from regional areas in 2021, which means that regional households were overrepresented in the number of upgrades delivered to residential premises across the state. In 2019, only 21 per cent of residential certificates were created from regional areas compared to metropolitan areas. It is therefore possible that coronavirus restrictions in Victoria helped enable many regional households to access upgrade opportunities under the program during 2020 and 2021.

Figure 7 Percentage of certificates registered in residential premises in metropolitan Melbourne and regional Victoria – 2017 to 2021



¹⁰ Department of Environment, Land, Water and Planning, Victoria in Future 2019: Population Projections 2016 to 2056, July 2019.



The percentage of certificates registered from non-lighting activities is increasing

Lighting upgrades continued to dominate certificate registration in the program, delivering 79.6 per cent of certificate registrations in 2021. However, this is a lesser percentage than in 2020 when lighting upgrades delivered 89.6 per cent of certificate registrations.

In 2021, there was an increase in the percentage of certificates being registered by other activities in the program. Certificates registered by water heating activities increased from making up 5.1 per cent of the certificate registrations in 2020 to 8.9 per cent in 2021. The number of registered certificates delivered by other program activities increased from 5.3 per cent in 2020 to 11.5 per cent in 2021, with increases in certificates from low flow shower rose and in home displays being the most notable.

Figure 8 Certificates registered by activity type – 2017 to 2021

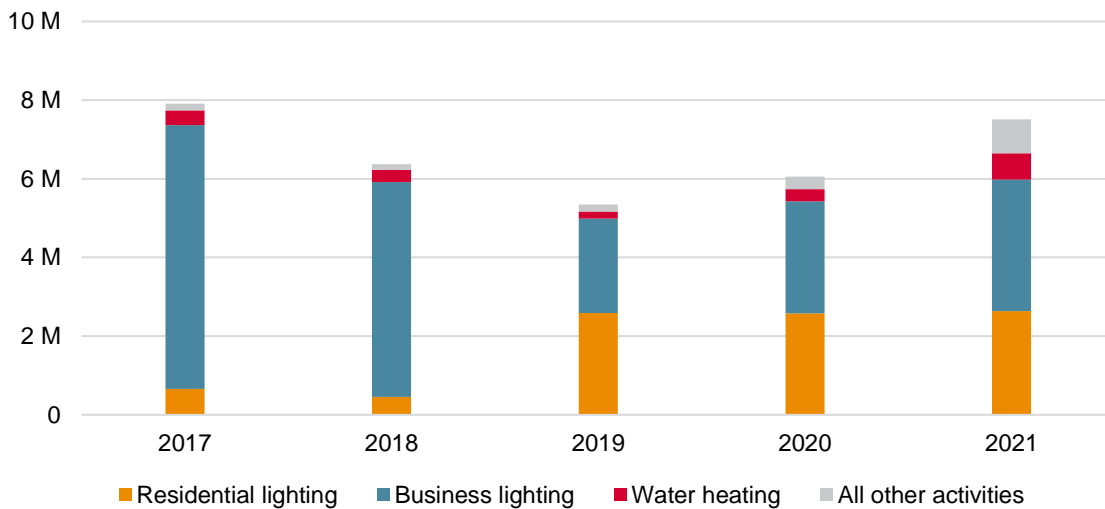


Figure 9 illustrates the quarterly trends in certificate registrations by activity type. The fluctuations in certificate registrations from residential lighting in Q2 and Q3 of 2020, and Q3 and Q4 of 2021 are indicative of the impact from coronavirus restrictions and lockdowns over the past two years¹¹.

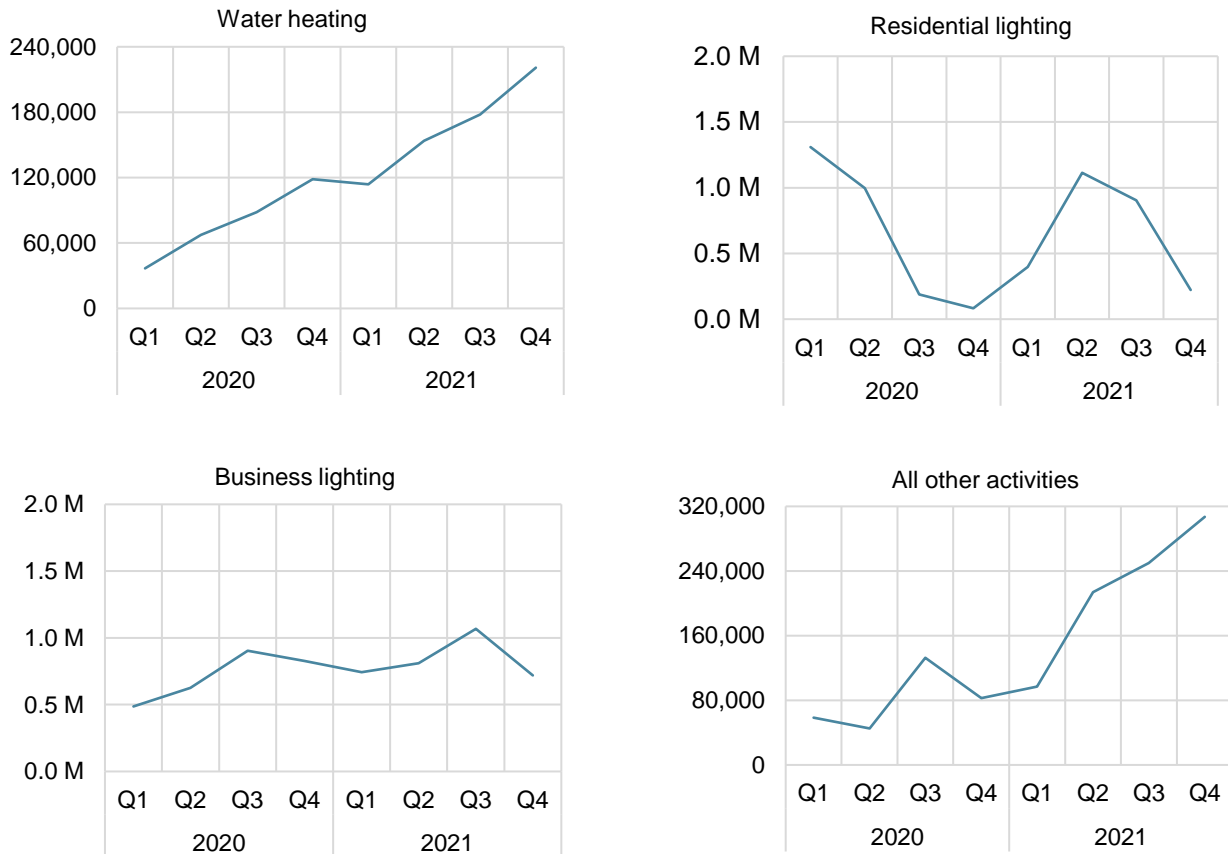
¹¹ When certificates are registered after an upgrade has occurred depends on the timing of when an accredited provider submits the certificate creation claim and the quality of the evidence they are able to provide to the commission as part of the assessment process. In 2021, 73% of certificates were registered within the first three months after the upgrade.



Program performance in 2021

Certificate registrations from business lighting remained relatively consistent over this period, while water heating and all other activities trended upwards.

Figure 9 Certificates registered quarterly by activity type – 2020 and 2021



A full breakdown of certificates created and registered by each activity type can be found in [Appendix B: Table of VEECS created and registered by prescribed activity](#).

Certificate price increased significantly through 2021

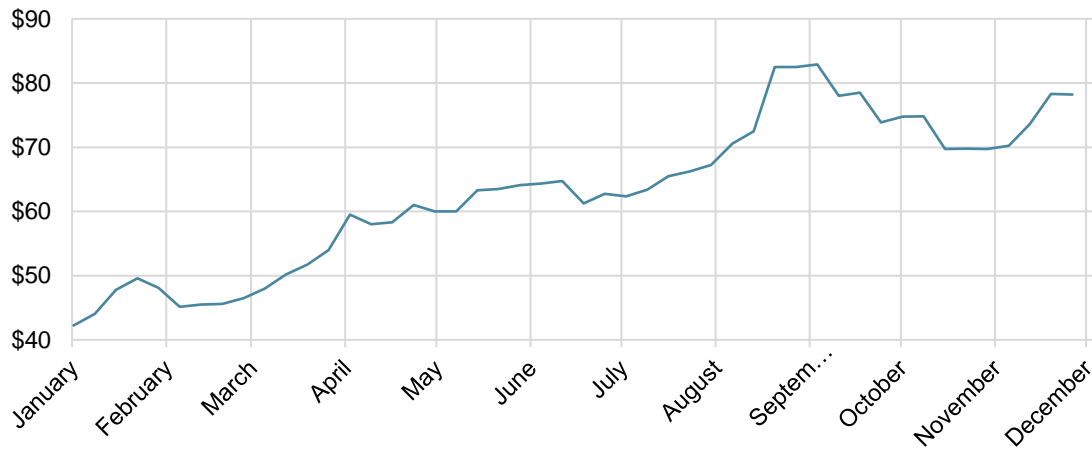
The certificate spot price for VEECs increased throughout the year, from \$42.25 in January to a high of \$82.90 in December.¹² This was a significant increase from last year's price, which varied from a low of \$30.25 to a high of \$42.30.

¹² This price is based on data provided by TFS Green for certificates traded in the spot market. It may not represent the actual average certificate price over the year. However, it does provide a useful guide to movements in the certificate price over the year.



Program performance in 2021

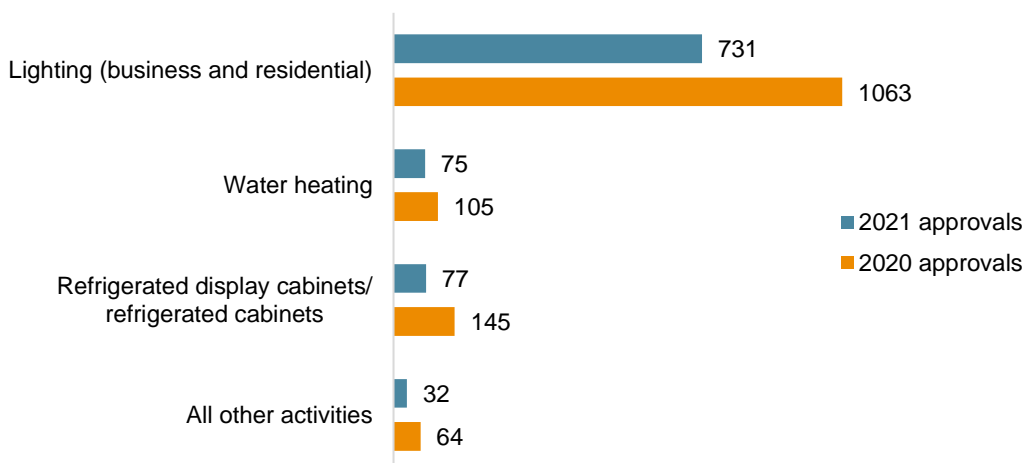
Figure 10 Weekly certificates spot price in dollars (\$) for Victorian energy efficiency certificates as reported in 2021



A decrease in number of products approved for use in the program

During 2021, 915 new products were approved for use in the program, a decrease compared to the 1,377 products approved in 2020. Most product approvals continued to be for lighting products. The number of products approved across all the major product types decreased in 2021 compared to 2020.

Figure 11 Summary of product approvals – 2020 and 2021





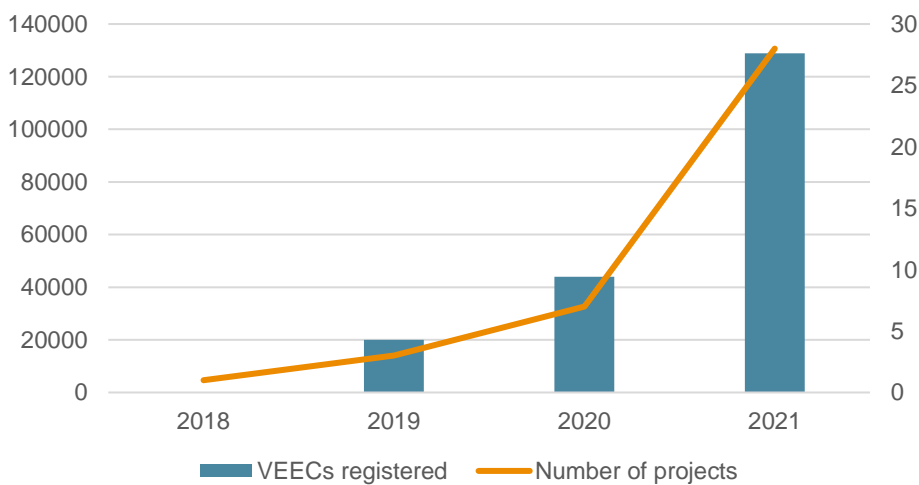
Growth in delivery of completed project-based activities (PBA) projects and pipeline of projects

Project-based activities (PBA) allow business to access large and bespoke energy efficient activities under the program. These activities are more complex to undertake but allow for a range of incentives to be created across different technologies and business settings.

In 2021, the commission approved 29 PBA impact reports. These reports are submitted by an accredited provider once the project has been implemented to determine the abatement achieved and therefore how many certificates can be created. The number of PBA projects implemented, as evidenced by the number of impact reports submitted in 2021, represents almost a five-fold increase in projects delivered compared to 2020.

28 of these PBA projects delivered 128,833 registered certificates in 2021. This represents an almost four-fold increase in the number of certificates registered from PBA projects in 2020 (43,967) and is an average of approximately 4,600 certificates awarded per PBA project. The largest PBA project successfully created and registered 50,000 certificates during the year.

Figure 12 Number of certificates registered and number of PBA projects – 2017 to 2021





Tongala co-generation project - largest PBA project to date

HW Greenham & Sons Pty Ltd is a large-scale family-owned livestock business with three sites across Australia; Smithton, Tongala and Moe. During 2017-18, the business engaged Northmore Gordon, an accredited provider under the program, to do an energy audit to investigate options to reduce energy costs at its Tongala processing facility. One of the key energy saving opportunities identified was the installation of a gas fired cogeneration system to displace grid supplied electricity and hot water from inefficient gas fired hot water generators.

Greenham then worked with Northmore Gordon to scope out an effective and efficient cogeneration system solution for the site. The solution chosen included converting existing wastewater lagoons from aerobic to anaerobic in order to capture the biogas produced and installing two 1000MW co-generation systems to be fired with a combination of biogas and natural gas. The co-generation systems were fully automated with remote monitoring and custom-made automated control systems.

The Tongala facility was originally an exempt large energy user site under the Victorian Energy Upgrades program. However, the due diligence work for the upgrade identified that it was financially beneficial for Greenham to opt-in to the program. This was done prior to undertaking the upgrade at the Tongala site to be eligible to create certificates under the program.

The upgrade project, which was claimed under the program's measurement and verification method, delivered 50,000 registered certificates in 2021 for the expected energy savings from installation of the co-generation systems. This represents emission savings of approximately 50,000 tonnes of CO₂-equivalent.

The revenue from the certificates made a material contribution to the capital cost of the project for Greenham, while the project itself is expected to deliver approximately \$800,000 in annual energy savings.

It also has the added benefit of capturing methane from the anaerobic lagoons, therefore delivering additional emissions savings from avoided release of methane into the atmosphere.



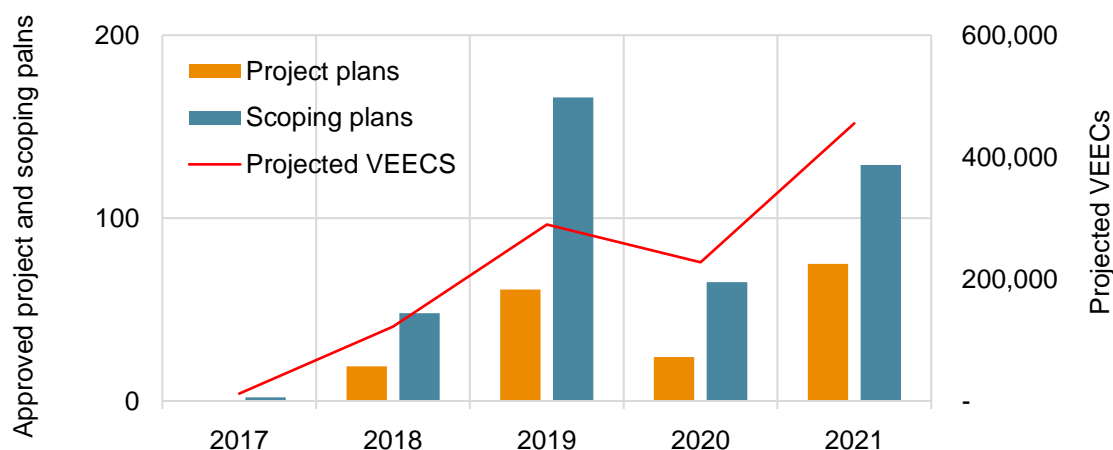
Program performance in 2021

The number of projects that had their scoping plans¹³ and project plans¹⁴ approved, which represents the pipeline of PBA projects to be delivered in future years, also increased significantly from 2020 to 2021. From 2020 to 2021, the number of scoping plans increased from 65 to 129, while the number of project plans increased from 24 to 75.

It is projected that approximately 455,443 certificates will be created in future years from scoping plans approved in 2021¹⁵. This is approximately twice as many certificates as anticipated from the plans approved in 2020 (227,445). This increase can partly be explained by the fact that twice as many scoping plans were approved in 2021.

It is worth noting that the number of scoping plans approved for 2021 (129) is 22 per cent fewer than that of 2019 (166). However, the scoping plans approved in 2021 are anticipated to deliver substantially more certificates compared to 2019 (289,414). This indicates that the average size of PBA projects in 2020 and 2021 are much larger than in previous years

Figure 13 Approved project and scoping plans, and projected VEECs – 2017 to 2021



¹³ The scoping plan covers the project's ownership and purpose and must be approved by the commission before work can start on the project.

¹⁴ The project plan builds on the information in the scoping plan and is key to our assessment of a project's eligibility to create certificates and must be provided to the commission before work can start on the project.

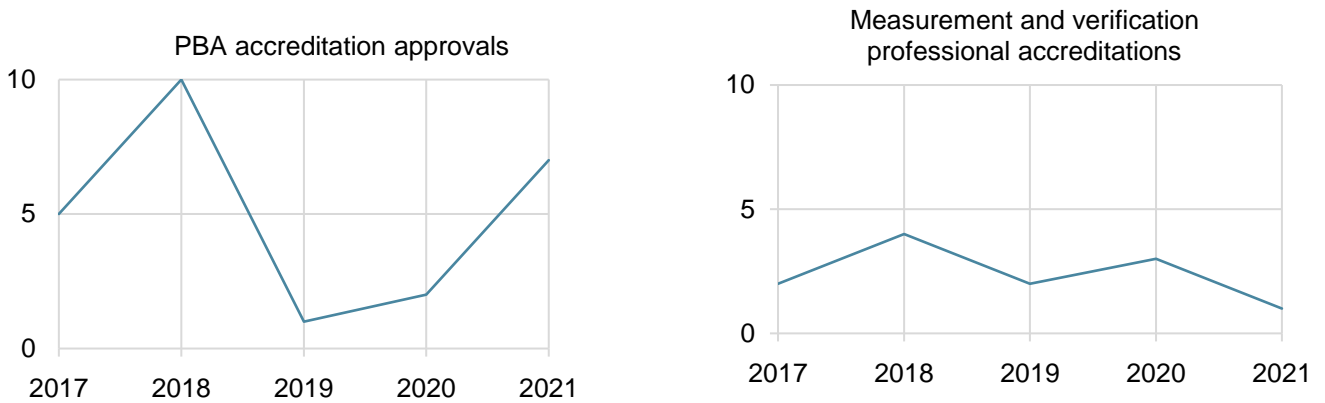
¹⁵ Certificate numbers provided in scoping plans are estimates only, and some scoping plans do not end up providing the estimated number of certificates. This figure should be understood as an indication of number of certificates to be expected in future years.



Program performance in 2021

In 2021, we approved seven new accredited persons to undertake PBA upgrades, an increase from the previous two years. Only one new measurement and verification professional was approved in 2021.

Figure 14 Number of PBA accreditation and measurement and verification accreditation approvals – 2017 to 2021

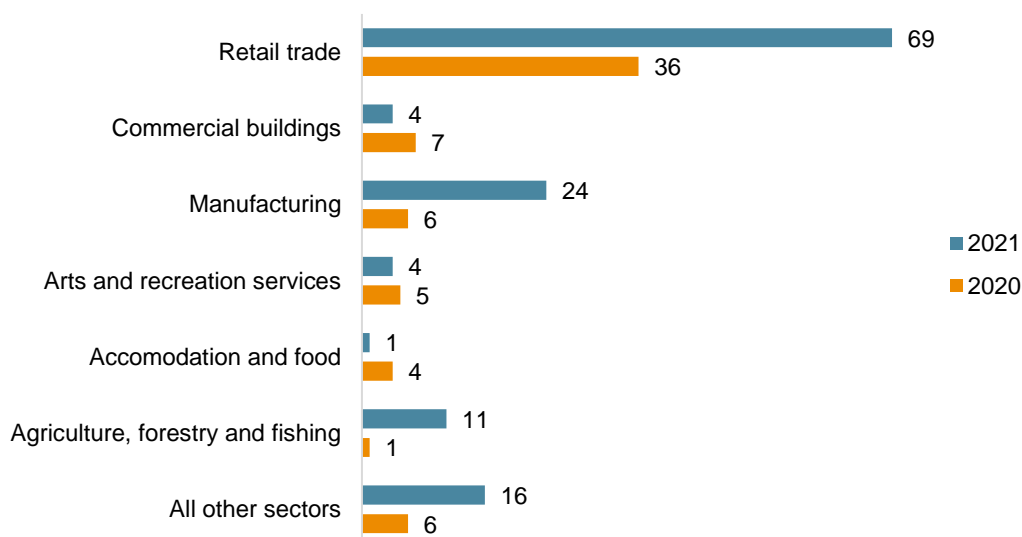


Project-based activities project proposals by sector and technology type have shifted from last year

Most PBA projects were proposed to be delivered in the retail trade space. While this was also the dominant sector in 2020, the number of PBA projects proposed to be delivered in the retail trade space more than doubled from the previous year. The number of projects proposed in the manufacturing, agriculture, and forestry and fishing sectors had also significantly increased.

Interestingly, there was a decline in the number of projects proposed to be delivered in the commercial buildings and arts and recreation services sectors. This was despite the substantial increase in the number of scoping plans approved in 2021.

Figure 15 Number of PBA projects with scoping plans approved in 2020 and 2021 – by sector

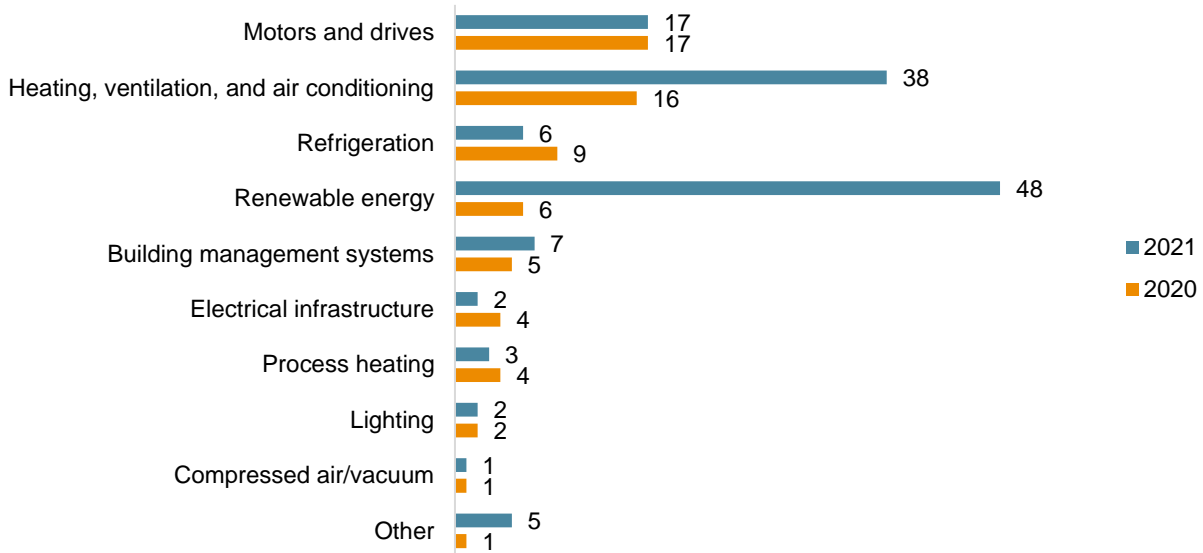




Program performance in 2021

Renewable energy technology saw a marked increase in proposed PBA projects in 2021, going from six in the previous year to 48. Heating, ventilation, and air conditioning technology projects also increased substantially.

Figure 16 Number of PBA projects with scoping plans approved in 2020 and 2021 - by technology type



Project-based activities project approval timelines remain well under legislated timeframes

We continued to maintain required processing times in relation to PBA project approvals. The average time for approvals across all three phases of project approvals remain well under legislated timeframes.

Table 3 Average assessment times and legislated times for project-based activities in 2021

Project documentation	Average time during 2021 (days elapsed)	Legislated time in PBA Regulations (days elapsed)
Scoping plan	1.4	60
Project plan	5.8	180
Impact report	9.8	120



**Compliance
and enforcement**
in 2021



Ensuring compliance with the VEET Act, regulations, specifications and guidelines, and the integrity of the Victorian Energy Upgrades program, is a core commission responsibility

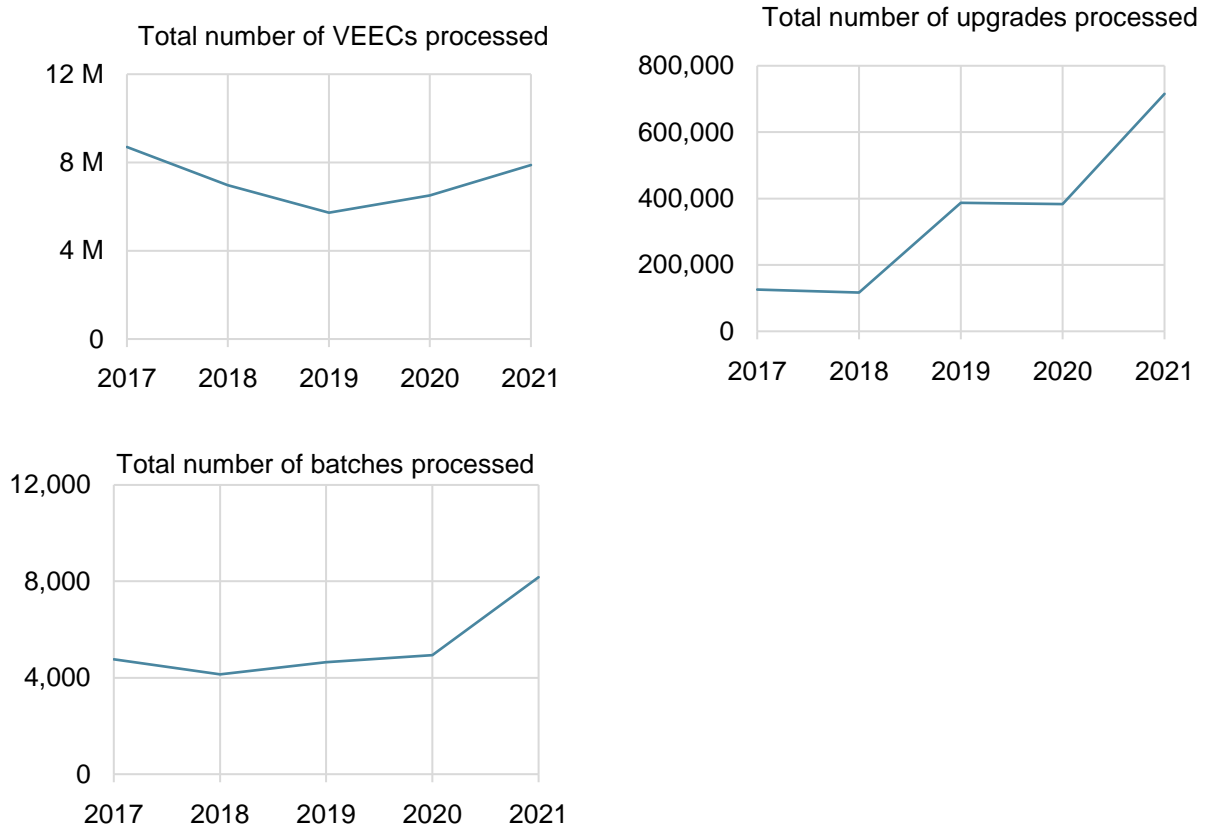
In 2021, given the workplace and travel restrictions in place due to the coronavirus pandemic, our compliance and enforcement efforts used similar methods as the previous year. A high level of pre-registration checks and desktop audits were carried out to closely monitor compliance with the program by accredited persons.

We undertook more pre-registration checks

We validate certificates before they are registered, taking a risk-based approach that checks whether the installations are likely to be eligible to create certificates. The total number of certificates processed rose by 21 per cent in 2021.

Notably, the total number of upgrades and batches the commission needed to process rose significantly. Compared to 2020, there was an 87 per cent increase in the number of upgrades, and a 66 per cent increase in the number of batches.

Figure 17 Pre-registration summary of upgrades, certificates and batches processed - 2017 to 2021





We increased the number of pre-registration checks in response to the increase in upgrade and batch processing volumes. We assessed and issued requests for further information for 57,473 upgrades over the year, a 78 per cent increase from 2020. A total of 3,459 upgrades were flagged with compliance issues, an increase of 16 per cent from the previous year.

Despite the steep increase in the number of upgrades to be assessed and processed, we maintained the same sampling rate per 10 upgrades as in 2020. The compliance issues rate is lower when compared to previous years when we had fewer upgrades to assess.

Figure 18 Total number of upgrades subject to a request for further information and compliance issues - 2017 to 2021

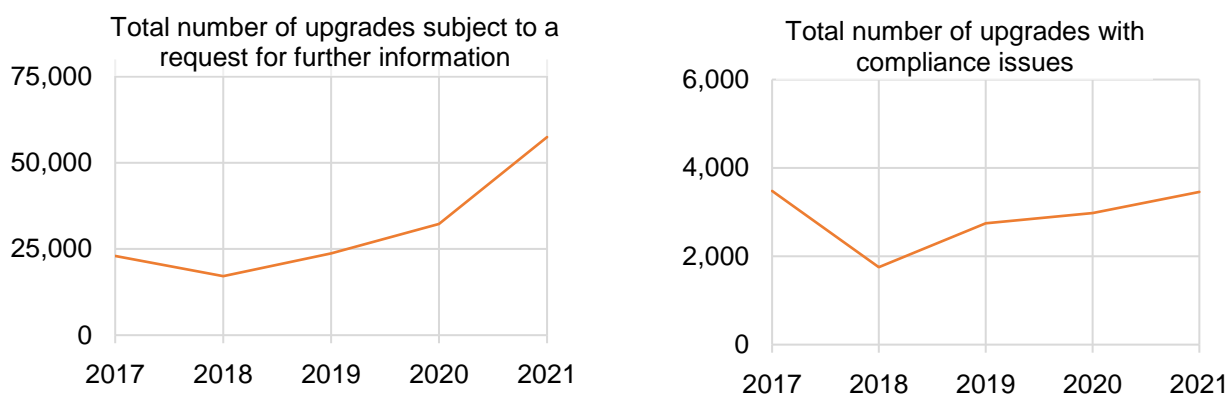


Table 4 RFI sampling and compliance issues identified as a proportion of upgrades undertaken

Sampling type	2017	2018	2019	2020	2021
Number of upgrades with compliance issues per 100 upgrades	2.8	1.5	0.7	0.8	0.5
Number of upgrades subjected to request(s) for further information per 10 upgrades	1.8	1.5	0.6	0.8	0.8

The number of certificates withdrawn decreased in 2021

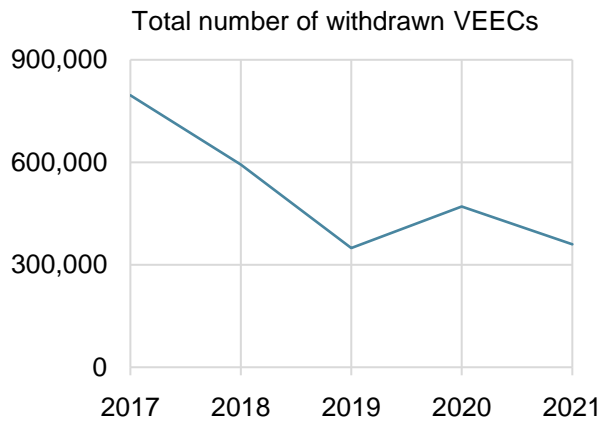
In 2021, 360,065 certificates were withdrawn by accredited persons. This is a decrease from the previous year, in which 470,929 certificates were withdrawn.

There are a variety of reasons that an accredited person may withdraw certificates. It may be a result of their own business processes or the commission's pre-registration checks. Some certificates may have been resubmitted and registered at a later date when the accredited person is able to supply the evidence needed to meet pre-registration checks. This reduction in the



number of withdrawn certificates may indicate increasing rigour in the internal compliance checks of accredited persons prior to submitting certificate claims.

Figure 19 Total number of VEECs withdrawn by year - 2017 to 2021



Desktop audits remain a key compliance tool

The audits and investigation we undertake are pivotal in ensuring accredited providers are creating certificates that comply with legislative requirements.

We conducted 890 upgrade audits in 2021 consisting of phone, desktop and field audits. Due to lockdown and travel restrictions of the pandemic, we had limited scope to undertake field or detailed audits. We predominantly used desktop audits to determine compliance and completed 691 of these audits during the year. We also audited ten project-based activities projects, which is double the number of projects we audited in 2020.

Project-based activities (PBA) projects audited in 2021

We conducted audits on 10 project-based activities projects. These projects created approximately 110,000 certificates which are worth approximately \$6.9 million.¹⁶ Projects we audited include two of the largest PBA projects to date:

- A biogas capture and cogeneration project at farm in Tongala (50,000 certificates).
- A boiler upgrades and system optimisation project at Peninsula Health Frankston hospital (24,384 certificates).

¹⁶ Based on a certificate price of \$63 which was the average certificate spot price in 2021

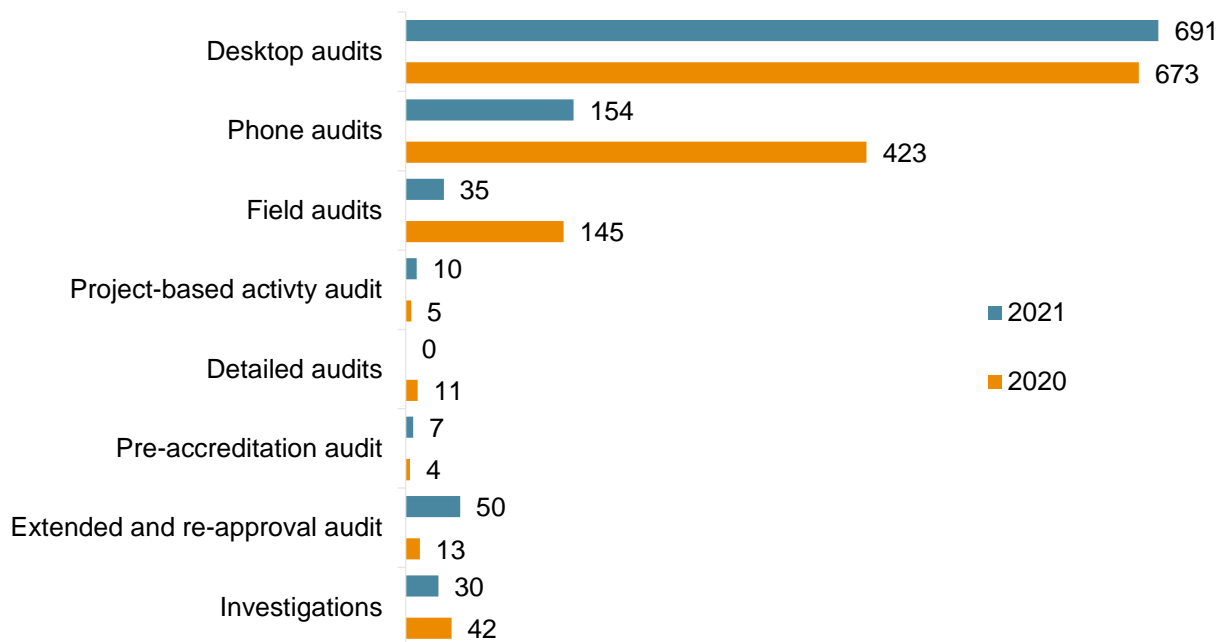


Compliance and enforcement in 2021

We carried out 57 accreditation related audits in 2021, a more than three-fold increase in comparison to the 17 audits carried out in 2020. This rise in audits represents the increased number of stakeholders interested in participating in a more diverse range of program activities during 2021.

We undertook 30 investigations in 2021, compared to the 42 completed in 2020.

Figure 20 Number of audits and investigations conducted in 2020 and 2021



Our audit and investigation efforts resulted in the surrender of 38,623 certificates by accredited persons due to non-compliance in 2021. In total, 401,812 certificates have been surrendered by accredited persons since the program's commencement in 2009 to 31 December 2021.



We took enforcement action against two accredited powers in 2021

In March 2021, the commission considered that two of the program's accredited providers, Eco Carbon Care Solutions Pty Ltd (Eco Carbon Care Solution Pty Ltd) and National Carbon Bank of Australia Pty Ltd (National Carbon Bank), had breached the program's legislation.

These alleged contraventions included overstating the number of energy-efficient lamps installed, as well as level of pre-upgrade energy use.

Both accredited providers had created certificates for activities undertaken by subcontractors. However, evidence showed that they did not meet our compliance requirements.

As a result of the enforcement action:

- National Carbon Bank surrendered 10,922 certificates
- Ecocare Carbon Solutions surrendered 17,144 certificates
- National Carbon Bank withdrew 11,532 certificates from registration, further to the commission's decision that they engage an independent auditor to determine the validity of 43 upgrades pending registration
- National Carbon Bank completed two independent audits (a process audit and a certificate creations audit) and offered a further 128 certificates for surrender because of the certificate creations audit
- Ecocare Carbon Solutions completed two independent audits and is due to submit its creation audit report by July 2022.

We also referred the allegations of fraud to Victoria Police, and potential breaches of the Electrical Safety Act 1988 to Energy Safe Victoria in relation to the conduct of installers.

Two relevant entities paid penalties of over \$1.8 million

Under the program, energy retailers (known as relevant entities under the Act) must surrender certificates in proportion to the volume of electricity and gas they sell to Victorian customers.

The commission issued Blue NRG with a Victorian energy efficiency certificate shortfall statement in September 2021, requiring a shortfall penalty payment of \$1,585,082.72. The penalty was issued as we found that the number of certificates they surrendered for the 2020 relevant entity compliance year was 31,184 short of their liability for the year.

The commission also issued People Energy with a Victorian energy efficiency certificate shortfall statement in September 2021, requiring a shortfall penalty payment of \$235,037.92. The penalty



was issued as we found that the number of certificates they surrendered for the 2020 relevant entity compliance year was 4,264 short of their liability for the year.

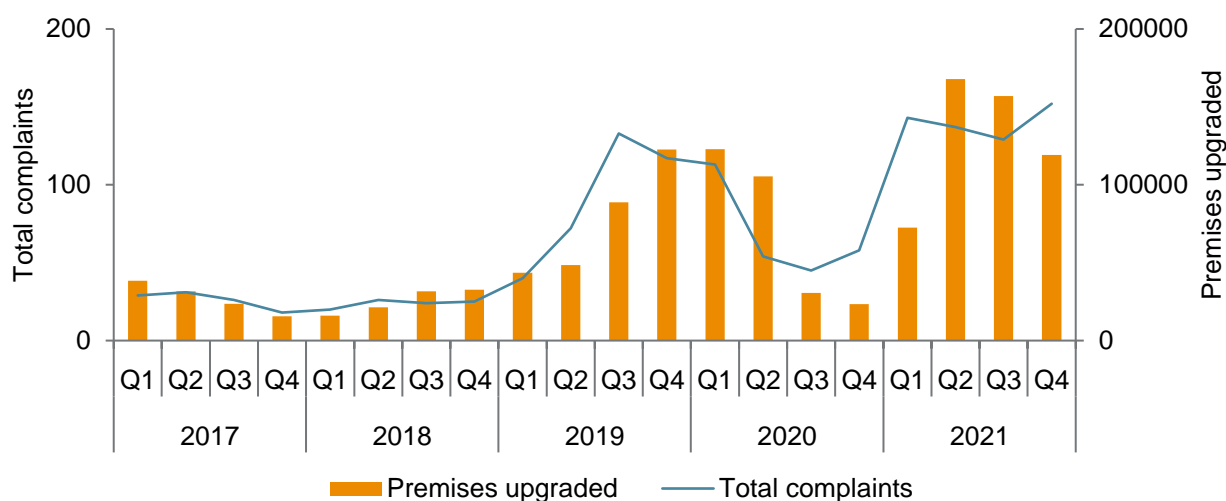
People Energy paid their penalty in November 2021. Blue NRG paid their penalty in installments agreed by the commission between November 2021 and March 2022.

Rate of complaints steady

In 2021 we received 561 compliance-related complaints, compared to 270 complaints received in 2020.

Historically, complaint volumes are correlated with the number of premises upgraded. We saw a steep increase in the number of complaints in Q1 2021, as the volume of premises upgraded under the program increased in this quarter from the previous year.

Figure 21 Total number of complaints by premises upgraded - 2017 to 2021



However, given that the number of premises which received upgrades more than doubled in 2021 compared to 2020, the rate of complaints remained steady. The proportion of complaints to upgrades remained at similar levels to 2020 — approximately 13 complaints for every 10,000 premises upgrades during the year.



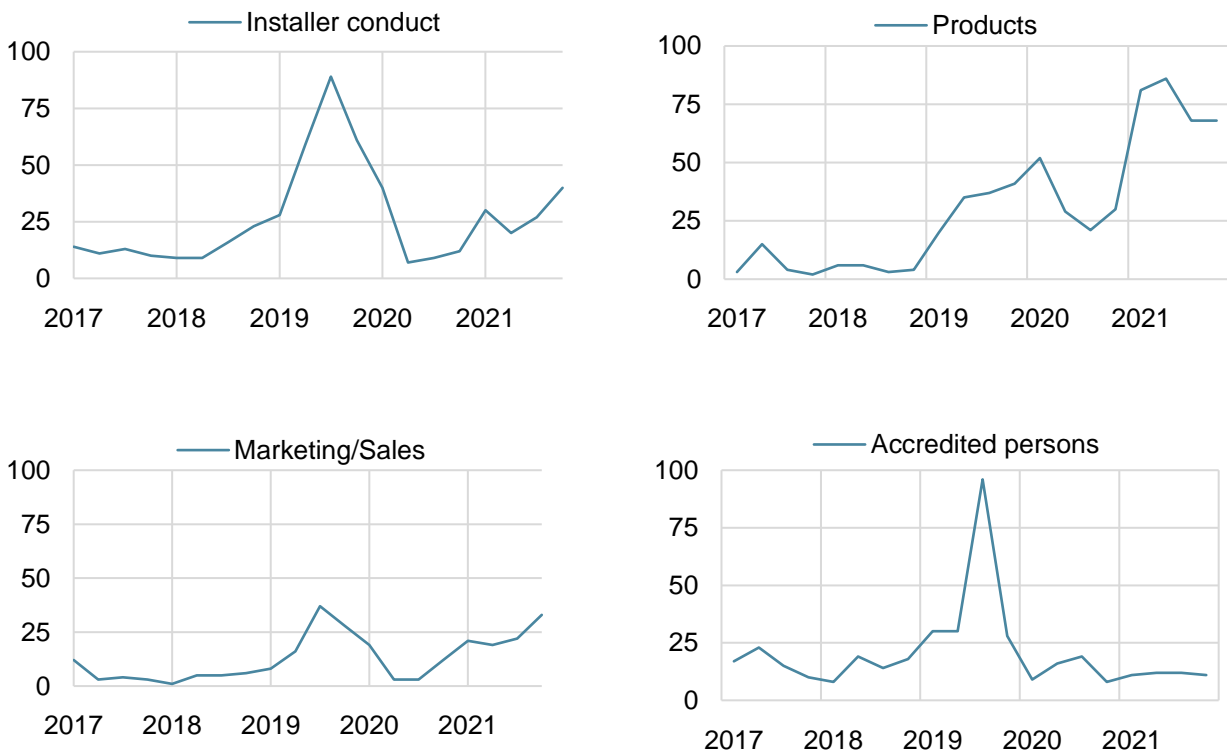
Compliance and enforcement in 2021

Each complaint the program receives is recorded and categorised against one or more complaint category. The categories include:

Installer conduct	Marketing/sales	Product issues	Accredited providers
<ul style="list-style-type: none">• Ineligible or incomplete upgrades,• Occupational health and safety issues,• General installer behaviour and conduct• Property damage and unattended bookings	<ul style="list-style-type: none">• Complaints relating to communications such as telemarketing, flyers, websites, doorknocking activities and shopping centre booths• Questionable use of government and/or program logos and branding	<ul style="list-style-type: none">• Issues including product failing or breaking• Warranty issues, or products being not fit-for-purpose	<ul style="list-style-type: none">• Accredited providers being unresponsive to consumer calls or emails• Failure to provide assignment forms or other paperwork

In 2021, there was a marked increase in complaints related to product issues, compared to previous years of complaints in that category and compared to other complaint categories. The volume of complaints for all other complaint categories were relatively steady compared to previous years.

Figure 22 Quarterly trend by complaint categories - 2017 to 2021

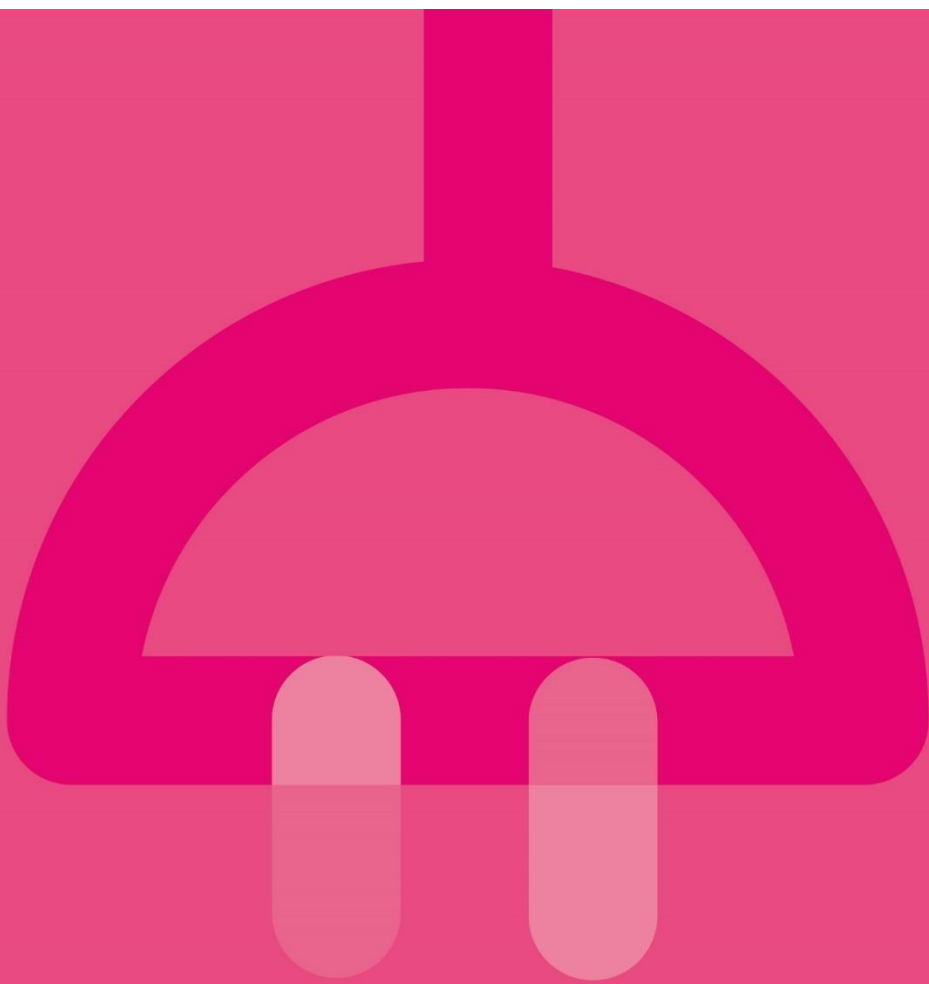




We referred 17 complaints from consumers to Consumer Affairs Victoria

Our complaints management process regularly identifies conduct of program participants that may contravene Australian Consumer Law. The commission is not empowered to pursue contraventions of the Australian Consumer Law directly. However, we are committed to taking appropriate action when such concerns arise to protect consumers and the integrity of the program. In 2021, we made two referrals to Consumer Affairs Victoria regarding seventeen complaints from consumers relating to providing potentially false or misleading representations to consumers:

- about the business representing the Victorian government
- about the consent or approval obtained from residential consumers
- about the requirement for the consumer to undertake an energy efficient installation



**Program
administration**
and development





Program administration and development

We regularly update our administrative framework settings in response to new opportunities and emerging issues. This enables us to optimise the program's operations for both ourselves and program participants.

Engagement and collaboration are key to this work.

The legislative framework and administrative settings for the program is complex and updated regularly. The following section sets out key developments impacting the program in 2021, and an overview of the work carried out to manage the program's operations and changes. This includes the ways we engaged with stakeholders and collaborated with other government agencies to deliver better outcomes for the program. Our response to managing the challenges faced by program participants during the coronavirus pandemic is also outlined.

Program reform – code of conduct and Act review

In 2021, the Department of Environment, Land, Water and Planning (DELWP) continued developing several significant program reform pieces which will shape the future direction of the program. This carried over from the work commenced in 2020.

The scope of the reform includes the development of a code of conduct for accredited persons and third parties under the program, and options to strengthen the legislative structure of the program. In 2021, the commission worked closely with DELWP to inform the scope of the code of conduct ahead of the formal consultation in early 2022.

Scope of the code of conduct

The code of conduct sets minimum standards of behaviour aimed at protecting consumers and strengthening public confidence in the Victorian Energy Upgrades program.

The code includes general principles around good conduct for accredited persons, installers, and any other service providers involved in delivering upgrades under the program. The code incorporates protections relating to marketing and lead generation, contracting arrangements, sales, installations, after-sales processes and dispute resolution. Code requirements are consistent with Australian Consumer Law and current best practice.

Accredited persons, or their service providers, that breach the code will not be eligible for Victorian Energy Upgrades incentives or to create certificates. Registered certificates will become invalid.

The [code](#) comes into effect on 1 July 2022.



Program administration and development

In 2021, we also collaborated with DELWP on the review of the VEET Act focusing on enabling an expanded compliance and enforcement framework, and improvements to consumer protections under the program. Work we did during the year to ensure we were well positioned to implement the proposed Act changes include:

- Building our understanding of regulatory frameworks and practices in similar programs across Australia, and recent developments in regulatory approaches and regulatory reforms.
- Working closely with DELWP on refining the proposed amendments to the Act
- Undertaking a review of our current compliance and enforcement framework in light of proposed changes
- Commenced planning work on how we would implement the reform changes, including undertaking of a functional and capability gap analysis

Amendments to the VEET Regulations and Specifications

DELWP made five changes to the program's legislative framework in 2021 by releasing updated versions of the VEET Regulations 2018, Measurement and Verification in the Victorian Energy Upgrades Specifications and/or VEU Specifications 2018. Details of these legislative changes are outlined in Table 5.

In response, we developed regulatory and administrative requirements to support the changes. This included releasing communications, guidance documents and forms to assist stakeholders' understanding of the impact of the changes for their participation in the program.



Table 5 Legislative changes to the VEU program in 2021

Date of change	Detail of changes
1 April 2021	<ul style="list-style-type: none">• Building based lighting J6 upgrades were updated to align with the National Construction Code (NCC) 2019 (Volume one).• Building based lighting non-J6 upgrades were updated to reduce the incentive for high intensity discharge lamps by applying a reduced discount factor of 0.6.
30 June 2021	<ul style="list-style-type: none">• Changes to the project-based activities' measurement and verification method to introduce a set of provisions. These are to be applied when calculating emissions abatement for projects affected by a state of emergency or disaster such as the coronavirus pandemic.
1 August 2021	<ul style="list-style-type: none">• Changes to the electricity emission factor to 0.9546 across a range of activities under the program, reflecting the increase of renewable energy in Victoria.• Changes to the incentives for incandescent lighting activity (activity 21) and the removal of lower efficacy and lifetime upgrade product categories.
17 August 2021	<ul style="list-style-type: none">• Introduction of cold room activity to the program.
30 October 2021	<ul style="list-style-type: none">• Revisions to refrigerated cabinet activity.• Changes to equation 10.5 of the VEU specifications to include an electricity emissions factor.• Change in terminology from 'refrigerated display cabinets' to 'refrigerated cabinets' under refrigeration fan motor and ventilation fan motor activity (activity 33).• Corrected date for part 34 activity (building based lighting upgrades) - applicable to 31 January 2022.• Clarified product requirements for voltage reduction units in table 34.1 of part 34 activity (building based lighting upgrades).

Updates to our program requirements and administrative framework

In 2021, we published a range of updated guidance documents and forms setting out our changes in requirements and administrative framework. This was done in response to emerging issues identified during the year.



Key updates made to our administrative requirements during the year are outlined in the following table.

Table 6 Administrative requirement changes made to the program in 2021

Date of release	Updates made
4 January	Changes to licensing requirements for plug-in style refrigerated cabinets
11 January	Changes to evidentiary requirements for building based lighting upgrades activity to mitigate compliance risks
22 January	Changes to the program's mandatory safety training requirements to reflect the reaccreditation outcome of training units
29 April	Updated evidentiary requirements for low flow shower roses (activity 17) to clarify requirements, including providing examples of ineligible shower roses
17 August	Update to product application guide for solar or heat pump water heaters to clarify requirements
31 August	Update to VEEC assignment form for project-based activities to clarify declaration requirements
11 October	Update to lighting product application guide to clarify the definition and requirements of voltage reduction units for building based lighting upgrade products
28 October	Release of a new lighting calculator based on the revised ANSI/IES TM-21-10 standard for establishing the lifetime of LED lamps
28 October	Update to evidentiary requirements for in-home displays (activity 30) and high efficiency refrigerators and freezers (activity 32)
11 November	Update to our requirements and product criteria in relation to water heating and space heating activities
16 December	Update to lighting product application guide to clarify the testing standards for ingress protection
22 December	Update to evidence requirements for cold room activity (activity 43)

Engagement with our program participants

A key principle of our regulatory approach is to engage with businesses participating in the program. We aim to build strong relationships which enable us to deliver an efficient, effective and adaptive program. For program participants, particularly accredited providers, we seek to help them have a strong understanding of their role and the requirements of the program.

Additionally, our dedicated stakeholder contact channel enables telephone and email enquiries from members of the public, consumers, accredited persons, relevant entities, and product



Program administration and development

manufactures. In 2021, we received 4,864 queries from stakeholders and consumers, 95 per cent of which were responded to within 10 days.

In 2021, we engaged with stakeholders to improve our administrative and evidentiary requirements on the following matters:

- We liaised with accredited providers to set new training and evidence requirements for in-home display activities. This was to gain assurance that in-home display units are being installed correctly at consumer's premises (October 2021).
- We consulted and sought feedback from stakeholders on proposed changes to eligibility criteria, and the evidence requirements for cold room activity (November 2021).
- We consulted on proposed requirements to demonstrate safe decommissioning of wood-fired room heaters and fireplaces. This included seeking feedback on the appropriate level of assurance to demonstrate compliance with our regulations and safety considerations, and what decommissioning methods might allow wood-fired room heaters to remain safely within premises. (September 2021)

In 2021, we held two online stakeholder forums.

- During the first forum in July, attended by 204 persons:
 - the commission presented on the program performance
 - DELWP presented on proposed policy changes (including new activity updates and large energy users changes)
 - Sustainability Victoria presented on their small business energy saver program which seeks to leverage the VEU program to encourage the uptake of energy efficiency upgrades by small businesses.
- During the second forum in December, attended by 220 persons:
 - the commission presented on the program performance
 - the DELWP presented on proposed policy reforms measures (including the code of conduct, new and revised activities, and large energy users changes).
 - On this occasion, the commission sought to deliver a more interactive forum by live-polling attendees to seek feedback on some of our key stakeholder engagement initiatives. This was done to help inform our design and delivery of the initiatives.

Consultations and forum presentation are available on the [commission website](#).



Validations workshop for accredited providers

We held an online workshop on 28 April 2021 for accredited providers to educate them on the upgrades assessment process for the space heating/cooling and water heating activity, including common issues identified and examples of best practice submissions. Fifty-four people attended the workshop which helped attendees better understand the evidence requirements for these activities to facilitate more efficient processing of certificates for the accredited providers.

Collaboration with other government organisations

In 2021, we continued working with regulators from other state and federal energy efficiency programs to address common compliance or administrative issues, and to align operation of the program with other energy efficiency schemes.

We also worked closely with various Victorian government organisations during the year to deliver better outcomes for both the program and Victorian consumers. This included:

- DELWP, to prepare for program reform, to deliver on legislative changes to the program, and to coordinate program events and communications. This included communications to stakeholders on the implications of coronavirus restrictions for the program during the year.
- Sustainability Victoria, to ensure effective administration of the Small Business Energy Savers program which leverages the program's activities, and to promote the program to various consumer groups
- Consumer Affairs Victoria, to address marketing and other consumer related complaints. We referred 17 cases of potential breaches of Australian Consumer Law to the organisation in 2021
- the Victorian Building Authority and Energy Safe Victoria, to effectively manage compliance issues and to enhance regulatory alignment with the Building Act 1993 and Electricity Safety Act 1998, respectively.

The commission worked with New South Wales to develop the first harmonised activity across our energy efficiency programs

A key event of this year is the first harmonised activity across both the Victorian Energy Upgrades program and the New South Wales' Energy Savings scheme – the commercial and industrial heat pump water heater activity. Delivery of this activity involved working with DELWP, in partnership with our New South Wales counterparts, the Independent Pricing and Regulatory Tribunal (IPART) and the Department of Planning, Industry and Environment (DPIE).



Program administration and development

Successful development and implementation of the activity required us to build and share knowledge and operational processes between the organisations.¹⁷ This activity commenced operating in the program on 1 February 2022 in the Energy Savings Scheme on 1 April 2022.

¹⁷ IPART administers and regulates the *Energy Saving Scheme* in New South Wales, under which participants create energy savings certificates. The Department of Planning, Industry and Environment is responsible for the policy framework of the scheme.



Working with Agriculture Victoria to promote the program to farmers and accredited providers

Agriculture Victoria set up a project in January 2021 to develop case studies of energy efficiency upgrades at farm sites. This was done in response to recognition that farmers were not effectively accessing upgrade opportunities under the Victorian Energy Upgrades program.

The purpose of the project is to enhance the adoption of the program's project-based activities in the agriculture sector. By developing case studies, the project aims to promote the agriculture sector to accredited providers as a source of upgrade opportunities and to demonstrate the benefits of the program to farmers.

The project's scope is to develop videos and written case studies for upgrade projects at five farm sites which are to be used to incentivise engagement between accredited providers and businesses in the agriculture sector. The case studies will be published on the Energy Smart Farming website

<https://extensionaus.com.au/energysmartfarming/home/>

The project is a collaborative effort between multiple Victorian government agencies – Agriculture Victoria, DELWP, and the commission – and the project consultant, accredited provider, and client farmers. Since the project's inception, commission staff have been part of a working group who meet regularly to track the progress of the project, identify risks, and discuss matters requiring resolution.

We provided high level advice and guidance to the working group on the requirements of the program's measurement and verification method. We reviewed and approved the scoping and project plans for the five projects submitted by the project consultant. Once these plans were approved, the farmers were able to install the energy efficient equipment in the selected farms and collect the data on the energy savings over a defined period.

Of the five projects which were approved for implementation under the program, efficiency upgrades have been made at four sites thus far. The upgrade projects have been delivered across a range of farms in Victoria, including an aquaculture farm, a greenhouse, a poultry farm, and a fruit orchard. These four projects are expected to deliver 1,500 MWh of energy savings and over 10 thousand tonnes of greenhouse gas emissions savings.



Adapting to continuing coronavirus impacts

The Victorian Energy Upgrades program has continued to adapt to the challenge of the pandemic.

We continued to support participants in registering over 7.5 million certificates over multiple lockdowns and changing restrictions during the year. We maintained online working practices and facilitated engagement with our stakeholders via online meetings and online forums. As we had limited scope to undertake field or detailed audits during the year, our key audit tool continued to be desktop audits

We continued to account for the impacts of the pandemic when making decisions and considering requests for amendments and extensions. We also continued to adopt a streamlined certificate validation process to reduce the time taken to register certificates to assist the cash flow position of accredited providers.

We maintained our collaboration with DELWP to provide timely clarification on the impact of coronavirus restrictions on the program.

Specific measures undertaken in 2021 to support program participants are outlined below

Accounting for the coronavirus pandemic under VEU M&V projects (2021)

On 30 June 2021, DELWP released updated measurement and verification specifications. These included a set of provisions which are to be applied when calculating emissions abatement for project-based activities projects under the measurement and verification method.

The provisions outline the methods and allowances available to accredited providers to adjust their project baselines when affected by a state of emergency or disaster. This allows accredited providers to better manage the impact of the pandemic on their project's ability to create certificates under the program.

Following the release of the updated specification, we released an updated activity guide and project plan approval form to reflect this change.

Extension for relevant entities to meet their 2021 compliance year obligations

The commission decided to grant a three-month extension to relevant entities to meet their 2021 compliance year obligations. This was in recognition of the fact that 2020 and 2021 had been a difficult period for many program participants, including energy retailers and accredited providers, due to the pandemic.



This extension gives relevant entities up to 31 July 2022 to submit their 2021 annual energy acquisition statements, independent audit reports and to surrender certificates to meet their 2021 liability. This decision was made further to our discussions with a number of program participants, as well as the DELWP.

Enhancements to our IT systems

We continued to maintain and improve our [Victorian Energy Upgrades Registry](#) system throughout 2021, releasing three system updates that featured seven system changes. These updates were made to:

- reflect changes in the legislative and administrative settings of the Victorian Energy Upgrades program
- reflect updates to backend-supporting software development and user interfaces
- streamline our administrative systems and processes.

We also migrated our on-premises servers to Azure cloud in 2021. This delivered a number of benefits, including improved system security, better system monitoring and disaster recovery arrangements, improved integration with Microsoft tools, and a more scalable system based on changing user demand.

Work on the development of a new IT system to replace the current Victorian Energy Upgrades Registry system also progressed during the year. The new system aims to deliver a fast, secure, intuitive, and versatile IT system which will enable more efficient administrative outcomes for program participants and commission staff.



Glossary

Term	Definition
activity or prescribed activity	An activity which is prescribed under the Act and regulations which provides for certificates to be created under the program for reduction in greenhouse gas emissions that would not have occurred if the activity was not undertaken.
accredited person or accredited provider (AP)	Person accredited under the Victoria Energy Upgrades program. Once accredited, a person is eligible to create certificates in the VEU program in respect of prescribed activities.
certificate or VEEC	Victorian energy efficiency certificate representing one tonne of carbon dioxide equivalent of greenhouse gases to be reduced by the prescribed activity.
certificate created	Victorian energy efficiency certificate created as part of the program, representing one tonne of carbon dioxide equivalent of greenhouse gases to be reduced by the prescribed activity.
certificate registered	Victorian energy efficiency certificate created as part of the program and registered by the commission. Only registered certificates are available for trading or surrender under the program.
certificate surrendered	Victorian energy efficiency certificate surrendered to the commission by either a relevant entity to acquit their legislative obligations, or by an accredited person as a result of compliance and enforcement actions initiated by the commission.
certificate withdrawn	Victorian energy efficiency certificates created but then withdrawn by the accredited person. These certificates may be re-submitted for registration at a later date by the accredited person.
commission	Essential Services Commission, established under the Essential Services Commission Act 2001.
compliance year	Period over which each annual target must be achieved, which is a full calendar year.
DELWP	The Department of Environment, Land, Water and Planning which is the Victorian government department responsible for developing the Act, regulations and specifications for the program.
energy acquisition statement	Annual statement by a relevant entity about the amounts of electricity and gas acquired under program acquisitions during the year.
energy efficiency certificate shortfall	Number of certificates for which a relevant entity has failed to acquit its share of the program target.
energy efficiency shortfall penalty	Civil pecuniary penalty for which a relevant entity is liable in the event of an energy efficiency certificate shortfall.



Glossary

Term	Definition
greenhouse gas	Carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons, perfluorocarbons and any other gas prescribed to be a greenhouse gas.
GJ	Gigajoule – one thousand million joules
GWh	Gigawatt hour – one million kilowatt hours
liability	The liability of relevant entities to surrender certificates under the program.
MWh	Megawatt hour – one thousand kilowatt hours.
PBA	Project-based activities method which helps businesses access incentives for large and custom projects under the program
relevant entities	Energy retailers who have an obligation under the Act to surrender certificates
regulations	The Victorian Energy Efficiency Target Regulations 2008 (the VEET Regulations) and the Victorian Energy Efficiency Target (Project-Based Activities) Regulations 2018 (PBA Regulations).
the Act	Victorian Energy Efficiency Target Act 2007.
the program	The Victorian Energy Upgrades program. Also known as the VEET scheme as established under the Victorian Energy Efficiency Target Act 2007.
upgrade	An upgrade occurs where energy efficient products are installed at a consumer's premises in accordance with the requirements of a prescribed activity under the Act and regulations.

The background is a solid bright yellow. In the lower-left corner, there is a large, stylized yellow shape resembling a flower or a bowl with a stem. In the lower-right corner, there are several overlapping, curved shapes in shades of yellow and orange, resembling petals or abstract forms. A white, teardrop-shaped bubble is positioned in the center-right area, containing the text 'Appendices'.

Appendices



Appendix A: VEU program framework

Our role

We administer the program in accordance with the program's Act and regulations. Our responsibilities include:

- accrediting persons who can create Victorian energy efficiency certificates (VEECs) under the program
- validating the creation of certificates for registration
- administering the registration, transfer, and surrender of VEECs
- approving energy efficient products that can be installed under the program
- setting performance standards for certain products to be installed under the program
- monitoring compliance with the Act, regulations, and guidelines
- issuing shortfall statements and enforce energy efficiency shortfall penalties
- maintaining electronic registers.

Our regulatory responsibilities are set in the Act, the regulations, the specifications, and the guidelines.

The Act

The Act came into operation on 1 January 2009. It is the primary legislation establishing the program and enables the authority of regulations and guidelines to be made. We administer the Act and discharge our regulatory responsibilities as set in regulations, specifications and guidelines.

The objectives of the program as set out in the Act are to:

- reduce greenhouse gas emissions
- encourage the efficient use of electricity and gas
- encourage investment, employment and technology development in industries that supply goods and services which reduce the use of electricity and gas by consumers.

The Regulations

The Act is supported by the Victorian Energy Efficiency Target Regulations 2008 (the VEET Regulations) and the Victorian Energy Efficiency Target (Project-Based Activities) Regulations 2018 (PBA Regulations).



The VEET Regulations specify what activities can create certificates. This includes what products can be installed and the greenhouse gas abatement for each activity. The PBA Regulations set out the requirements for project-based activities via two methods – measurement and verification and benchmark rating.

The Victorian Energy Efficiency Target Amendment (Code of Conduct) Regulations 2022 includes the introduction of a new code of conduct for all service providers involved in delivery of upgrades under the program, commencing on 1 July 2022. The code sets minimum standards of behaviour aimed at protecting consumers and strengthening public confidence in the VEU program.

The Specifications

The VEU Specifications contain the technical requirements for activities prescribed in the VEET Regulations, and the methods and variables for determining the amount of greenhouse gas equivalent emissions reduced by each activity prescribed in the VEET Regulations.

Under the PBA Regulations, there are two separate specification documents:

- The Measurement and Verification in the Victorian Energy Upgrades Program – Specifications sets out the rules for defining the methods and variables to be used when calculating the abatement of a prescribed activity using the Measurement and Verification method.
- The Benchmark Rating in Victorian Energy Upgrades - Specifications' sets out the rules for defining the methods and variables to be used when calculating the abatement of a prescribed activity using the Benchmark Rating method.

The VEET guidelines

We issue guidelines which outline general administrative processes under the program. This includes:

- how program participants can become accredited
- how certificates can be created, registered, transferred, withdrawn, or surrendered
- details on how to undertake some prescribed activities
- how participants are to operate in the scheme, including occupational health and safety and record keeping requirements
- how the commission undertakes its assessment, compliance and enforcement activities
- what information the commission collects for our registers of accredited persons and certificates.



Our compliance and enforcement framework

The Act provides the commission with auditing and enforcement powers to ensure that accredited persons properly create certificates, and that relevant entities surrender enough certificates to acquit their liability for the reporting year. The commission uses these statements to determine whether relevant entities have correctly calculated their VEET liabilities and surrendered the required number of certificates for the reporting year.

Our key goal is to safeguard the integrity of the program by maintaining confidence in the energy efficiency benefits delivered to consumers, and delivering a balanced, transparent and efficient program for participants. We do this by implementing an integrated risk-based framework to all our regulatory activities, and regularly engaging with stakeholders to discuss improvements.

The compliance-driven functions we undertake include:

- accreditation of persons seeking to participate in the program or to extend their accreditation to be able to deliver new activities
- risk-based pre-registration checks of certificates created by accredited persons
- audits and investigations of accredited persons
- audits on relevant entity statements to ensure they surrender enough certificates to match their liabilities under the program
- registration of products to ensure they meet the required performance and installation standards.

Pre-registration checks

Pre-registration checks form an important screening process for the program. We evaluate in batches of up to 10,000 certificates, and our checking protocols are based on the risk factor of the activity and the risk rating of the accredited person. Each batch will consist of multiple upgrades, and the number of certificates associated with each upgrade will vary depending on the nature of the upgrade.

We use both manual and automatic systems to maintain a constant sampling rate. Accredited persons may be required to provide additional evidence in response to a request for further information (RFI) to demonstrate that the created certificates meet the relevant requirements.

Our pre-registration checks may raise compliance issues on certificate claims. When potential systemic compliance issues are identified, auditing plays a key role in undertaking further investigative work to determine certificates were created in compliance with legislative requirements.



Audit and investigations of accredited persons

We use phone, desktop, and field audits to check that upgrades are undertaken correctly. We review specific evidence during a desktop audit and inspect upgraded premises during a field audit. These audits inform our detailed audits and investigations of accredited persons. Where audits and investigations identify significant and systemic non-compliance, we may pursue enforcement action or seek an administrative solution with the accredited person.

We use a range of sources, including intelligence from complaints, tip offs and our internally generated risk profiles of an accredited provider to undertake audits and investigations. Table 7 list the various methods we use to safeguard compliance of certificates.

Table 7 Compliance focused engagement methods with accredited persons

Compliance method	What we do
Upgrade audits	We use phone, desktop, and field audits to check that upgrades are undertaken correctly. We use specific contacts with consumers to obtain intelligence and data, or to support our audits and investigations. This work helps us to confirm the eligibility of an upgrade.
Project audits (for project-based activities)	We undertake a review of the project's impact reports and verification of supporting documentation and energy savings data. The audit may also include meeting with the energy consumer to discuss and validate the quantity of VEECs claimed.
Audit meetings	We conduct pre-accreditation audits of anyone applying to become a new accredited person or expand their existing accreditation to include a new upgrade activity. These include meetings with business.
Detailed audits	We undertake detailed audits to assess the accredited person's systems, processes, and controls. We undertake these audits based on the risk profile of the accredited person, certificate creation rates, and other risk criteria. As part of these audits, we interview key personnel and installers to gain assurance that they are participating in accordance with the program requirements.
Audit investigations	We undertake significant audits arising out of intelligence indicating the possibility of significant non-compliance within the program.



Enforcement actions

In 2021, our approach to enforcement was to resolve, where possible and appropriate, any performance issues using administrative tools. This means the largest outcome of our compliance activities is the voluntary withdrawal or surrender of certificates by accredited persons. If we believe that non-compliance has occurred and that an administrative solution is not appropriate or an administrative solution has not been complied with, we may commence enforcement action.

In April 2022, the commission published a commission compliance and enforcement policy which outlined the commission's approach to compliance and enforcement across its regulated sectors and the Victorian Energy Upgrades program. The commission's approach to enforcement action is to consider:

- our aim – which is to secure compliance of individual regulated entities and deter future non-compliance across the industry
- the evidence obtained from our investigations
- whether proposed enforcement action is in proportion to the level of actual or potential consumer or small business harm and the seriousness of the contravention
- any other aspect of the public interest that warrants litigation (including clarification of the law).

In making its evaluative judgment on a case-by-case basis, the commission balances factors like compensation, prevention, specific and general deterrence.¹⁸

Figure 23 Types of enforcement actions we can take



¹⁸ Review our [compliance and enforcement policy \(current and historical\)](#) to learn more about our approach to promoting and enforcing compliance under the program,



Shortfall statements and enforced energy efficiency shortfall penalties

Relevant entities determine the number of certificates they are required to surrender each year by calculating their annual greenhouse gas emissions liability. This liability is calculated by multiplying each of that year's electricity and gas acquisitions with the relevant greenhouse gas reduction rate.

For 2021, the greenhouse gas reduction rates were fixed at 0.17255 for electricity and 0.00870 for gas. We may issue a shortfall statement imposing an energy efficiency shortfall penalty on a relevant entity if it fails to surrender sufficient certificates to acquit its liability in a given year.

The civil penalty is determined by multiplying the relevant entity's certificate shortfall for the year by the prescribed shortfall penalty. The shortfall penalty rate for 2021 was fixed at \$70 per tonne of carbon dioxide equivalent of greenhouse gases.



Appendix B: Table of VEECS created and registered by prescribed activity

Activity type	VEECS created			VEECS registered		
	Number of upgrades	Number of VEECS	% VEECS change from 2020	Number of upgrades	Number of VEECS	% VEECS change from 2020
Water heating activities						
1 Jan 2021 – 31 Dec 2021						
1A - Water heating - Gas/LPG storage replacing electric resistance	42	1,332	-40%	43	1,366	-36%
1B - Water heating - Gas/LPG instantaneous replacing electric resistance	724	24,197	-21%	762	25,504	-16%
1C(18) - Water heating - Electric boosted solar replacing electric resistance	102	3,877	-13%	101	3,818	-12%
1D(18) - Water heating - Gas/LPG boosted solar replacing electric resistance	21,784	675,506	135%	20,459	634,449	133%
1F - Water Heating - Gas/LPG boosted solar replacing electric resistance	22	1004	16%	25	1,187	47%
3B - Water heating - Gas/LPG boosted solar replacing gas/LPG	17	159	-15%	18	167	-6%
Space heating & cooling activities						
1 Jan 2021 – 31 Dec 2021						
5(08) - Space heating - Space air to air heat pump (revoked)	0	0	-	13	130	N/A
5(18) - Space heating - Ducted gas heater	1,079	23,029	5%	1,079	23,489	7%
7(18) - Space heating - Ducted air heat pump replacing ducted air heat pump (revoked)	17	2,277	995%	16	2,159	938%
9(18) - Space heating - Gas/LPG space heater	4	76	7500%	4	76	7500%
10(18) - Space heating – Room to air heat pump	512	14,952	599%	202	6,861	4698%
Lighting activities						
1 Jan 2021 – 31 Dec 2021						
21A(18) - Lighting - Incandescent GLS or CFL replacement	207,303	1,787,095	23%	196,479	1,734,691	-7%
21B - Lighting - Incandescent reflector lamp replacement	106,533	311,693	28%	103,106	307,821	4%
21C - Lighting - 12V halogen lamp replacement	41,379	397,088	70%	40,229	396,368	45%
21D - Lighting - 12V downlight and transformer replacement	1,849	30,393	318%	1,749	28,669	351%



Appendices

21E - Lighting - Mains voltage GU10 halogen lamp replaced with GU10 lamp	26,586	170,146	52%	25,728	166,929	28%
21F – Lighting - Mains voltage GU10 downlight replaced with integrated downlight	138	3,756	6160%	129	3,308	13683%
27(18) - Public lighting	13	64,230	77%	7	27,610	41%
34 Non J6(08) - Building based lighting upgrade (revoked)	0	0	-	1	29	-100%
34 Non J6(18) - Building based lighting upgrade	17,025	3,480,956	4%	15,722	3,340,602	19%
34 J6(18) - Building based lighting upgrade (revoked)	1	322	-97%	1	322	-98%
35(18) - Non-building based lighting	59	24,475	2%	56	22,799	-7%
Refrigerator/freezer activities		1 Jan 2021 – 31 Dec 2021				
19 - Destruction of pre-1996 refrigerator or freezer	1,857	8,700	-86%	4,011	20,178	-63%
22 - High efficiency refrigerator and freezer	364	376	N/A	278	288	N/A
32(18) - Refrigerated display cabinet	698	75,209	-31%	642	73,975	-36%
32(21) – Refrigerated cabinet	925	49,228	N/A	690	33,522	N/A
Other activities		1 Jan 2021 – 31 Dec 2021				
15 - Weather sealing	28,013	67,724	2141%	18,506	44,766	2068%
17 - Low flow shower rose	88,070	200,984	369%	79,809	185,298	945%
25 - Energy efficient clothes dryer	1	2	N/A	1	2	N/A
30 - In-home display unit	169,450	342,550	1278%	147,546	297,450	1588%
36 - Water efficient pre-rinse spray valve	1	4	N/A	1	4	N/A
43 - Cold room	2	106	N/A	2	106	N/A
Project-based activities (PBA)		1 Jan 2021 – 31 Dec 2021				
PBA measurement and verification	29	130,343	292%	28	128,833	292%
Total	714,599	7,891,789	29%	657,443	7,512,776	24%

N/A as there were no certificates registered or created in 2020.