

Victorian Energy Upgrades

Lighting Activities Issues Paper –
Response to Consultation Version 2.0



Author

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Acknowledgment

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.



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Executive Summary

Update (28 October 2020): Changes to Part 21 Lighting Incentives

The coronavirus (COVID-19) restrictions have significantly limited residential lighting upgrade activity in 2020 to date – and some impacts may continue to be felt as this sector restarts following the easing of restrictions and the lifting of the activity suspension.

Taking account of this disruption to activities, DELWP has revised the date at which the phase down of residential lighting incentives will commence. This change revises the date published in the Victorian Energy Upgrades Lighting Activities – Response to Consultation on 30 September 2020, as follows:

The changes to Incandescent lighting upgrades (Part 21) scheduled for 31 March 2021, will now commence on 30 June 2021.

This change provides program participants with a clear notice period and enables the unrestricted activity with current incentives to occur, as intended in the original Response to Consultation.

Victorian Energy Upgrades (VEU) is Victoria's flagship energy efficiency and emissions reduction program. It is a market-based program that encourages households and businesses to reduce their energy consumption. The VEU program has had a major impact on lighting technology development and has encouraged the transformation of the lighting industry. Victorian consumers have greatly benefited from the highly efficient LED lighting products that have been installed using incentives provided by the program. This has helped enable rapid and lasting change in the lighting market.

The VEU program can only incentivise upgrade activities where the greenhouse gas (GHG) emissions reduction is considered additional (i.e. the GHG reduction attributed to the activity would not have otherwise occurred). To address the changing additionality within lighting activities, the Department of Environment, Land, Water and Planning (the Department) released a [Lighting Activities Issues Paper](#) (the Issues Paper) seeking views on proposed changes to lighting activities in the VEU program. The Issues Paper was released for public consultation on 4 December 2019, with this consultation closing on 31 January 2020.

The purpose of this Response to Consultation document is to inform stakeholders of the submissions received via consultation and the final decisions the Department has made on changes to lighting activities in the VEU program.

A total of 49 stakeholder submissions were received through the consultation, which provided feedback specific to the proposed changes to lighting activities in the program.

Two options were proposed in the Issues Paper:

- Option 1 included an initial reduction in incentives for certain lighting activities prior to the removal of some activities
- Option 2 maintained the level of incentives but with an earlier date for removal of some activities.

The most common theme in the stakeholder feedback was that VEU program participants required more time to transition jobs and business models. Stakeholder feedback generally preferred a stepped down approach to assist the transition of lighting activities, with several submissions requesting a long phase out with multiple small step-downs in lighting incentives.

The Department has considered this feedback and the supporting evidence and decided to delay all changes to lighting activities. This decision will support program participant business transition and planning and minimise the impacts on jobs, particularly in the face of disruptions from coronavirus (COVID-19). The transition pathways allow bespoke phase out timelines for different categories of lighting, reducing incentives ahead of their removal. The reduction in incentives and removal of activities have also been designed to address technological, market and regulatory changes that mean lighting is becoming less additional.

Other decisions include the provision of more transition time for mercury vapour lamp upgrades in all activities, the aligning of Part 34 J6 building based lighting upgrades with the National Construction Code (NCC) 2019 for ten months, and the inclusion of T5 linear fluorescent and compact fluorescent lamp with non-integral ballast lighting upgrades as eligible activities.

Summary of changes

The summary of the final decisions on changes to lighting activities is outlined below.

Activity	31 Mar 2021	30 June 2021	31 Jan 2022	31 Jan 2023
Part 21		Incentives reduced	Activity removed	
Part 27				Mercury vapour lamps removed
Part 34 J6	Align with NCC 2019 IPD		Activity removed	
Part 34 Non-J6	High Intensity Discharge (HID) Incentive reduced (0.6)		High Intensity Discharge (HID) Incentive reduced (0.4)	Activities removed T5, T8, T12 and CFL remain Efficacy requirement introduced Lamp lifetime reduced
Part 35				Mercury vapour lamps removed

Introduction

More than 1.8 million households and 100,000 business premises have participated in the Victorian Energy Upgrades (VEU) program since it commenced in 2009. The program has reduced Victoria's greenhouse gas (GHG) emissions by more than 55 million tonnes over that time. On average, households and businesses that undertake energy efficiency upgrades under the VEU program, save \$110 and \$3,700 respectively on their annual energy bills.

The VEU program currently includes 36 activities that can be done in eligible Victorian residential, business and non-residential premises. Accredited providers who undertake these energy efficiency activities create Victorian Energy Efficiency Certificates (VEECs). Each VEEC represents one tonne of GHG emissions saved over the lifetime of the activity or product installed. VEECs can then be sold to energy retailers, who must meet an emissions reduction target each year.

The VEU program is governed by the *Victorian Energy Efficiency Target Act 2007* and has three objectives:

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

The VEU program has been highly successful at achieving all three objectives, particularly in respect of lighting activities, where the program has had a major impact on technology development and has encouraged the transformation of the lighting industry. Victorian consumers have greatly benefited from the highly efficient LED lighting products that have been installed using incentives provided by the program. This has helped enable rapid and lasting change in the lighting market.

The VEU program can only incentivise upgrade activities where the GHG reduction is considered additional (i.e. the GHG reduction attributed to the activity would not have otherwise occurred). These activities are specified in the *Victorian Energy Efficiency Target Regulations 2018* (the Regulations) and associated Specifications, and the *Victorian Energy Efficiency Target (Project-Based Activities) Regulations 2017* and associated Specifications. The Regulations set out the activities that attract incentives and the methodologies for calculating GHG emissions reductions, while the Specifications document provides further technical details of the GHG emissions calculations. The technical elements in the Specifications can be more responsive to changing circumstances and be updated more frequently, without foregoing appropriate consultation processes.

Purpose

The purpose of this Lighting Response to Consultation document is to inform stakeholders of the submissions received via consultation and the final decisions reached for the proposed changes to lighting activities in the VEU program.

This document responds to stakeholder submissions and outlines decisions relating to the changes proposed in the Lighting Activity Issues Paper (the Issues Paper). It also includes some discussion of the impacts of coronavirus (COVID-19) on the VEU program and changes made to lighting activities to deal with these impacts. While all changes have considered the stakeholder submissions relating to the VEU Target Setting 2021-2025 consultation, the outcomes of the targets consultation for 2022-2025 will be published separately to this document and at later date.

Background

On 4 December 2019, the Department of Environment, Land, Water and Planning released a Issues Paper seeking views on proposed changes to lighting activities in the VEU program. The scope of the paper covered Part 21 (incandescent lighting), Part 27 (public lighting), Part 34 (building based lighting) and Part 35 (non-building-based lighting) activities.

The VEU program can only incentivise upgrade activities where the GHG reduction is considered additional. An activity is 'additional' if it happens because of a VEU incentive, in contrast to an activity that is 'business-as-usual' (or non-additional) which would occur irrespective of the incentive.

There also are forthcoming regulatory changes which will encourage and/or enforce the continued rapid transformation of the lighting market. These need to be considered along with the other market transitions that are impacting on the additionality of lighting activities in the VEU program. The impact of these transformations effects each lighting type and activity differently.

To address this additionality, the Issues Paper proposed to remove J6 lighting upgrade activities (used where a building upgrade requires a building permit) from Part 34, and mercury vapour lamps from the baseline calculations for Part 27, Part 34 and Part 35. The objective was to ensure program incentives are aligned with new requirements that came into effect on 1 May 2020 for the National Construction Code and to address the impact of the Minamata Convention on Mercury.

The Issues Paper also proposed changes to Part 21 and Part 34 and outlined two options for phasing down these activities:

- Option 1 included an initial reduction in incentives for certain lighting activities prior to the removal of some activities (at February 2021)
- Option 2 maintained the level of incentives but with an earlier date for removal of some activities (at October 2020).

A total of 49 written submissions were received from peak bodies, accredited providers, energy retailers, councils, large energy users, suppliers and manufacturers. The Victorian Energy Upgrades policy team at the Department would like to thank those who made a submission. Submissions not marked as confidential will be posted on the Department's website once both the lighting and targets consultations have concluded: <https://www.energy.vic.gov.au/energy-efficiency/victorian-energy-upgrades>.

Other considerations

While the additionality considerations outlined above form the primary need for changes to VEU lighting activities, the Department must also balance the impact these changes will have on businesses and jobs. The VEU program supports over 2,200 direct and indirect FTE jobs in Victoria, based on a 2018 industry survey and economic modelling. Many of these jobs will be as a result of the success of lighting activities within the program. The timelines outlined in this document support program participant business transition and planning and minimise the impacts on jobs, particularly in the face of disruptions from coronavirus (COVID-19). The transition pathways allow bespoke phase out timelines for different categories of lighting, reducing incentives ahead of their removal.

The Department must also balance the impact of these lighting changes with the broader VEU program and VEEC market. It is critical that the program continues to provide important bill savings and emissions reduction benefits to Victorians. Recognising the impacts of coronavirus (COVID-19) and the need for certainty for business planning, the Minister has set an effective target for 2021 of 6.5 million certificates and committed to minimal changes to the program in 2021. The Minister is committed to setting ambitious targets for the VEU program out to 2025. This will be an important element of the government's climate change pledges which will be released this year. The making of regulations to set targets for 2022 to 2025 will be completed in alignment with this process.

Outcomes

Decisions and the impact of coronavirus (COVID-19)

The Department understands that coronavirus (COVID-19) has had a significant impact on VEU program participants. The temporary suspensions of high-volume residential activities through the Specifications from 1 April to 24 June 2020 and again from 13 July 2020 to 28 October 2020 was required to reduce the risk of coronavirus transmission. However, the suspensions have had a major impact on the total number of VEU lighting activities that might have been undertaken during that time – particularly residential lighting. The Department also understands that for activities not subject to a suspension, there have been delays in the importation of products and challenges with completing installations due to business conditions, social isolation requirements and health and safety precautions.

The Department has considered coronavirus (COVID-19) impacts in the development of this response to consultation. The transition timelines for the phase out of certain lighting activities have been extended to respond to stakeholder feedback and to help deal the impact of coronavirus (COVID-19). This is considered a necessary response, particularly for Part 21 activities which have suffered significant impacts as a result of the suspension. As a result of the extension for Part 21 activities, the level of discount applied to this activity will be increased.

Other major decisions include the provision of more transition time for mercury vapour lamp upgrades in all activities, an extension of the time before removal of High Intensity Discharge (HID) lamps (with a further discount factor applied), the aligning of Part 34 J6 building based lighting upgrades with the National Construction Code (NCC) 2019 for ten months, and retaining T5 linear fluorescent and compact fluorescent lamp with non-integral ballast lighting upgrades as eligible activities. Greater detail on decisions is included in the respective lighting activity sections of this document.

The impacts from coronavirus (COVID-19) are currently ongoing. The Department will continue to monitor the effect of these impacts on the VEU program, program participants and the additionality of the wider lighting market.

Lighting activities are a critical part of the VEU program, generating approximately 93 per cent of all VEECs created in 2019. The changes outlined in this response to consultation are designed to address the additionality of lighting upgrades, overcome barriers to certain types of lighting activities, and help transition VEU program participants to other activities where opportunity exists. The Department has also considered how to balance the disruption, administrative burden and compliance issues that VEU participants encounter when undertaking lighting activities.

The summary of the updated decisions on changes to lighting activities is outlined below.

Table 1: Summary of updated decisions and timelines

Activity	31 Mar 2021	30 June 2021	31 Jan 2022	31 Jan 2023
Part 21		Incentives reduced	Activity removed	
Part 27				Mercury vapour lamps removed
Part 34 J6	Align with NCC 2019 IPD		Activity removed	
Part 34 Non-J6	High Intensity Discharge (HID) incentive reduced (0.6)		High Intensity Discharge (HID) incentive reduced (0.4)	Activities removed T5, T8, T12 and CFL remain Efficacy requirement introduced Lamp lifetime reduced
Part 35				Mercury vapour lamps removed

Implementation

The first round of changes for lighting activities will be made through the *Victorian Energy Upgrades Specifications* (the Specifications). These Specifications will come into effect on 31 March 2021.

The reduction of incentives for Part 21 activities will come into effect in the Specifications on 30 June 2021.

The third round of changes will take place on 31 January 2022. Activity changes will be made in the Specifications and through the removal of Part 21 from the Regulations.

The removal of some Part 34 activities and mercury vapour upgrades from public lighting and non-building based lighting activities will be made on 31 January 2023. These changes will be made in the Specifications and will include a minimum efficacy requirement for Part 34 products. The Department will develop the minimum efficacy requirement and then consult on it through a public consultation process. This consultation is proposed to take place early to mid-2022.

The lighting product register will remain in place to support lighting activities. The Department will review the future of the lighting register for activities that are being removed closer to their date of removal.

It should be noted that the lighting market is expected to continue its rapid transition towards delivering affordable, quality, highly efficiency LED lighting products. The Department will continue to monitor this market and adjust the level of incentive if necessary, to maintain the objectives of the *Victorian Energy Efficiency Target Act* and the integrity of the VEU program. Any change process will be carried out in accordance with the *Guidelines for updating the Victorian Energy Upgrades Specifications*.

Stakeholder feedback

There was a total of 82 submissions across both the 2021-2025 Target Setting and Lighting consultations. Of these, 49 submissions included feedback on the proposed changes to lighting activities outlined in the Issues Paper. The submissions concerned all VEU lighting activities and covered a range of positions. The Department thanks all those who provided submissions and appreciates the feedback and comments given. Stakeholder responses to the major themes will be discussed below, while greater detail is included in the respective lighting activity sections of this document.

Timing

The Issues Paper proposed two dates for changes. The first round of proposed changes was to be implemented in August 2020. The second round of proposed changes were to be implemented in October 2020 or February 2021, depending on what option was preferred. The date for initial changes (August 2020) was dependant on providing a minimum of six months' notice following the publication of the response to consultation.

The timing of the proposed changes received the most stakeholder feedback, with the majority of the submissions requesting that some of the proposed changes be delayed. A total of 40 submissions either requested a delay of one to five years, a more gradual transition, or a continuation of activities. Only two supported the proposed timeframes and one submission suggested an 'as soon as practicable' approach was best.

Preferred Option

Two options were included for consultation as outlined above. There were 20 responses which were broadly supportive of Option 1 (phase down and then removal of some activities) while eight responses preferred Option 2 (no phase down but earlier removal of some activities). It should be noted that in general, while supportive, many submissions expressed the need for a delay and often had different suggestions relating to the more detailed proposals for each activity.

Additionality

The primary justification for the reduction in incentives and removal of some lighting activities was that they were no longer additional, or the remaining future additionality was not substantial enough to generate uptake under the program. Many stakeholders argued that activities should not be removed as there is always some

energy savings gained (and therefore additionality) where an LED upgrade is completed under the program. Several submissions argued that LED retrofits only occur outside the program during a larger building retrofit, and that some or all lamp failures are replaced like for like. Some of these submissions suggested the upgrade lifetime should be tied to the average time period between building retrofits. A few submissions also highlighted the difference in 'lifetime' between Part 21 and Part 34, noting that lamps installed under Part 21 have a lifetime that is high based off the average lamp use in residential houses.

A common theme of the feedback concerned how additionality is applied. There are many factors that the Department has considered.

The time between building retrofits

Lighting import data and industry feedback suggests that LED products have been the main choice for installation in building fit-outs for the past few years. The time until the next building retrofit therefore serves as one input into lamp lifetime of the upgrade calculation. The average time until a building with inefficient lamps receives an upgrade as part of a retrofit, could be assumed to be half (assuming a normal distribution) the average time between retrofits for that building type. The lamp lifetime period would then begin from the time when LEDs became the main choice for retrofits. In Victoria, it is possible that many fit-outs including lighting upgrades do not require a building permit so this time likely overestimates the time between retrofits. This is also not the only measure of additionality and the other factors outlined below can also bring forward lighting upgrades.

LED replacements at end of lamp life

While some end users may choose like-for-like replacement lamps when their existing lamps reach the end of their life, upgrades to LED products are becoming increasingly more common as the lighting market evolves. The timeline for lamp replacement in buildings is considerably shorter than the timeline for building retrofits. It is possible that a small number of lamp failures may be the catalyst for a bulk lighting replacement.

Regulatory changes

Regulatory changes include the NCC 2019, LED minimum energy performance standards (MEPS) and halogen phase out, and the Minamata Convention on Mercury. These will impact by directly enforcing transitions for certain product categories and indirectly transition the wider lighting market.

Efficacy of LED replacements.

Where efficacy is above market levels, such as products installed under Part 21A, the additionality of an upgrade is marginally higher. The proportion of additionality which comes from an increased efficacy is small. This will decrease over the life of the product as the efficacy of LED products available in the market increases.

Pool of opportunity

The remaining pool of opportunity is a consideration for the inclusion of activities in the VEU program however it does not necessarily directly impact the additionality. As the pool of opportunity decreases, it is possible that a large incentive from the VEU program may result in installations occurring in buildings where the business case without an incentive is not as strong. This could be due to reasons such as reduced hours of operation.

Market changes

The market is constantly changing due to factors including consumer understanding, product availability, supply chains, technological development and the resulting reduced demand for non-LED products. It is expected that the lighting market in 2022 will be significantly different to what it is today. An example of this transition can be seen in HID lamp imports. In 2019 these were only 37 per cent of what they were in 2016, and only 25 per cent of the number imported in 2013.

The chart below shows the import data for all lamp technologies into Australia. The VEU LED installations are overlaid above the LED import data. This data clearly shows a significant market transition to LED products. The large number of LEDs installed under VEU in 2016 and in 2019 (VEU LED) is primarily due to the volumes installed under Part 21C and Part 21A respectively. Australian LED import data (LED) collection began in 2017 which is why there is no data available prior to this date.

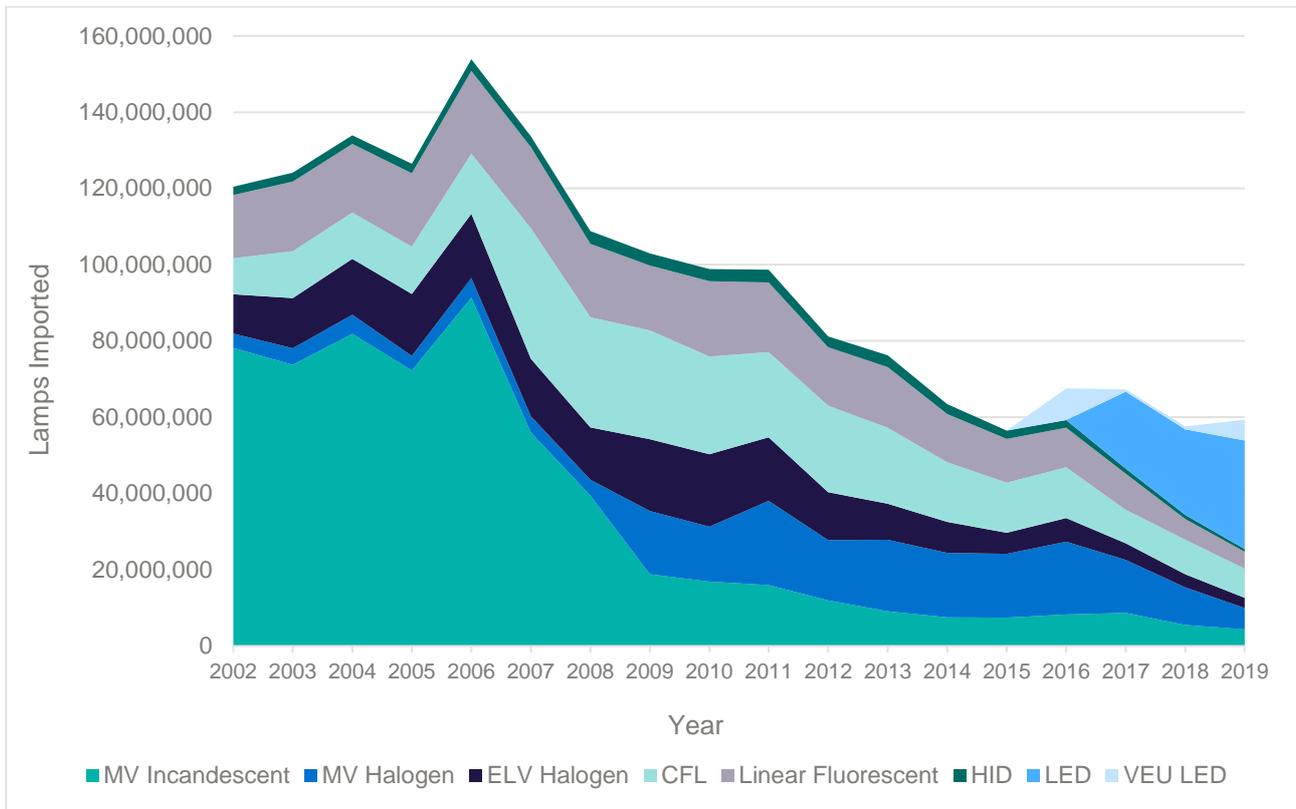


Figure 1: Australian lamp import data

Product disposal

A number of stakeholder submissions noted that there was considerable benefit in upgrading lamps through VEU due to the program requirements on lamp destruction and recycling. This feedback was focused on upgrades of mercury vapour lamps however it was also raised as point for compact fluorescent lamps (CFLs) upgraded under Part 21A. One submission noted that there are high quantities of mercury in other HID lamps.

Waste disposal requirements were introduced into the VEU program to identify fraudulent behaviour and inappropriate disposal. While the Department acknowledges the stringent compliance checking of the program has likely resulted in large scale best practice lamp disposal, Victoria has subsequently introduced clearly defined e-waste requirements as of 1 July 2019.¹

While an auxiliary benefit, waste disposal is not a specific goal of the *Victorian Energy Efficiency Target Act* and is regulated elsewhere. Due to this, product disposal benefits are not calculated in the incentive calculations and are outside the scope of the Issues Paper.

Project Based Activities

Lighting upgrades completed as part of Project Based Activities (PBAs) were also outside of the scope of the Issues Paper. There were a number of questions on the role of lighting in PBAs during the stakeholder consultation forum held on 11 December 2019.

Lighting upgrades as part of PBA methods will continue to be allowed. However, it is not the intention of the Department to transition lighting upgrades from a deemed method to a PBA method on an ongoing basis. The calculation of savings provided by lighting upgrades under PBA methods will need to be reviewed in the future as the additionality of lighting upgrades continues to decrease.

¹ Available from - <https://www.sustainability.vic.gov.au/Campaigns/eWaste>

Product register

The lighting Issues Paper requested feedback from stakeholders on the value provided by the VEU lighting product register. There were three submissions that were supportive of the VEU product register remaining due to the benefits it provides. These submissions highlighted the importance of the register outside the deemed VEU activities such as for PBAs and other energy efficiency programs. One of these submissions did note that it is the role of the Victorian Government or the Essential Services Commission (ESC) to regulate lighting outcomes for Victorians or any other jurisdiction. One submission noted that the register will become obsolete when the LED MEPS is implemented and that continued maintenance of the register would be a redundant use of administration resources.

Part 21 – Incandescent Lighting

Outcomes

Update (28 October 2020): Changes to Part 21 Lighting Incentives

The coronavirus (COVID-19) restrictions have significantly limited residential lighting upgrade activity in 2020 to date – and some impacts may continue to be felt as this sector restarts following the lifting of the suspension.

Taking account of this disruption to activities, DELWP has revised the date at which the phase down of residential lighting incentives will commence. This change revises the date published in the Victorian Energy Upgrades Lighting Activities – Response to Consultation on 30 September 2020, as follows:

The changes to Incandescent lighting upgrades (Part 21) scheduled for 31 March 2021, will now commence on 30 June 2021.

This change provides program participants with a clear notice period and a further three months of unrestricted activity with current incentives, as intended in the original Response to Consultation. This will support their ability to deliver significant further upgrades to Victorian households, meet forward contracts and transition their business models.

Part 21 – Incandescent lighting activities

30 June 2021

- The incentive for Part 21 will be reduced for all scenarios.
- A consistent power factor multiplier will be applied across all Part 21 activities.
- The lower efficacy and lifetime categories will be removed from the Specifications.

31 January 2022

- Part 21 will be removed from the VEU program.

The Department will delay all changes to Part 21, with the first reduction to incentives being made on 30 June 2021. Part 21 will be removed six months later on 31 January 2022. Implementing this will provide certainty to providers and installers returning to residential activities following the temporary suspension of activities.

This decision provides a balance between submissions wanting activities for at least two years, prior to the impact of coronavirus (COVID-19) and those who wanted an earlier removal and significant reductions in incentives.

To balance the increased available time to carry out these activities, the proposed incentives consulted on in the Issues Paper will be decreased. The approximate 22 per cent discount initially proposed for Part 21 activities will now be increased to 35 per cent. The implementation of this discount factor will be delayed 11 months and will come into effect on 30 June 2021. The 35 per cent discount factor will be applied on top of existing calculations for all Part 21 scenarios, efficacy categories and lifetime categories. This approach balances the need to reduce incentives to address additionality, particularly for higher lifetime categories, with the need for increased transition time to assist accredited providers to transition business models and recover from the impacts of coronavirus (COVID-19). The uniform approach will also simplify the administrative transition.

Minor activity adjustments including the removal of lower lifetime and efficacy categories and the application of a consistent power factor will be implemented on 30 June 2021. The increased efficacy category for Part 21B will not be implemented as the Department agreed with stakeholders that it would not sufficiently drive product development and program benefits. This change would also incur an administrative burden by requiring accredited providers and the ESC to update their systems and calculations.

Part 21D activities will be discounted at similar rates to other Part 21 scenarios, as proposed in the Issues Paper. While the Department agrees that the higher cost of these products reduces the likelihood of replacement, the proposed level of incentive coupled with the activity extension remains reasonable for this scenario.

Table 2 summarises the input values that will be applied to Part 21 activities from 30 June 2021.

Table 2: Input values for Part 21 – from 30 June 2021

Activity	Minimum efficacy (lumens/watt)	Lamp lifetime (hours)		
		15,000	20,000	25,000
21A	84	0.05	0.07	0.08
	100	0.10	0.14	0.18
	120	0.16	0.22	0.27
	140	0.23	0.30	0.38
21B	78	0.34	0.46	0.57
21C	62	0.31	0.41	0.51
	75	0.32	0.43	0.53
	90	0.33	0.44	0.55
21D	58	0.31	0.42	0.52
	69	0.33	0.44	0.54
	83	0.34	0.45	0.56
	100	0.34	0.46	0.57
21E and 21F	58	0.38	0.51	0.63
	69	0.39	0.52	0.65
	83	0.40	0.53	0.67
	100	0.41	0.55	0.68
Power Factor multiplier (all Part 21 activities)				
PF Multiplier	PF < 0.8	0.8		
	PF ≥ 0.8	1.0		

Stakeholder feedback

Preferred Option

Two options were proposed for Part 21. Option 1 included a reduction of incentives and then the removal of all Part 21 scenarios. Option 2 maintained the current level of incentives but brought forward the removal of all Part 21 scenarios.

Reducing the incentives received more stakeholder support than maintaining current levels of incentive and then removing the activity, however this was contingent on delaying the dates by which the activity was phased down and then removed.

Nine consultation submissions estimated approximately 1,000 jobs would be impacted by the proposed changes. Many of the jobs impacted were identified to be administrative or involve lead-generation and could not necessarily be easily transitioned to other activities without training and time to adapt businesses. These submissions requested a minimum of two years transition to allow for the retraining and redeployment of staff currently active in Part 21.

Removal of Part 21 activities

The Issues Paper proposed the removal of Part 21 activities with different dates proposed depending on the preferred Option. There was general opposition to the removal of Part 21 however this was mainly due to the proposed transition timings. A total of ten submissions offered alternative timings with most requesting the activity is not removed earlier than 1 January 2022.

Lifetime categories

It was proposed to remove the lower lifetime categories for all scenarios. The lowest lifetime category would be 15,000 hours. These categories are not used in the VEU program and did not receive much response. Four submissions supported the idea and a further 12 indicated partial support.

Efficacy categories

The Issues Paper proposed to remove the lower efficacy categories for all scenarios (excluding Part 21A). Option 1 also proposed to introduce a higher efficacy category for Part 21B.

As with the lifetime categories, these efficacy categories are generally not used in the VEU program and did not receive much response. Three submissions supported the idea and a further 12 indicated partial support.

Two submissions felt that there was no value to providing an increased efficacy category for Part 21B as the transition time would not be sufficient to develop products to take advantage of such a small incentive increase.

Power Factor multiplier

It was proposed to apply a consistent power factor multiplier across all Part 21 scenarios under Option 1. The proposed change would align the calculation across all Part 21 activities. This may have a very minor impact on the level of incentive for a few products. There was minimal stakeholder interest in this proposed change with four submissions directly supporting the proposal and two disagreeing.

Discount factors

Option 1 proposed reduced incentives, including larger reductions for higher lamp lifetime categories for all Part 21 scenarios.

Around seven submissions did not agree with the proposed discount factors developed for Part 21. Generally, these submissions felt that they underestimated the GHG reduction achieved by a Part 21 activity. A total of 15 submissions indicated partial support for the proposed discount factors so long as their introduction was delayed. Some submissions argued that the Commonwealth LED MEPS and halogen phase out have not reached a final decision and provided evidence that there were still many halogen GLS lamps being replaced.

Four submissions argued that the incentive for Part 21 was significantly overvalued relative to those for Part 34 due to the high lifetime of lamps and the low average annual hourly use. These submissions proposed an alternative reduction for Part 21 which would essentially equate to a reduction greater than 70 per cent from current levels, significantly more than the proposed reduction of approximately 22 per cent.

Part 21D

There were two stakeholder submissions supporting the continued inclusion of Part 21D without a discount, stating the higher cost of these products prevents their uptake. Continued VEU incentives would assist in upgrading 12 volt halogen lamps where LED lamps are incompatible due to older control gear and or dimming. Four more submissions challenged the additionality of 21D activities. These submissions noted that Part 21D products are unlikely to be covered by the proposed halogen phase out.

Part 27 – Public Lighting

Outcomes

Part 27 – Public lighting activities

31 January 2023

- Mercury vapour lamp upgrades will be removed from the VEU program.

The Department is committed to supporting councils and road management authorities upgrade existing public lighting to efficient LED products. The Department has reviewed the submissions provided by councils and greenhouse alliances and consulted with Distribution Network Service Providers (DNSPs). While there are significant barriers to the bulk replacements of public lighting, DNSPs have proposed that almost all non-decorative mercury vapour lamps will be removed from service by 2026. To address this rapidly decreasing additionality, it is still necessary to remove mercury vapour lamp upgrades from the VEU program. To assist with currently planned mercury vapour lamp upgrades, the date for the removal of mercury vapour lamps will be delayed until 31 January 2023. This date will allow for the sourcing of funding and completion of significant projects that are being planned.

Stakeholder feedback

Mercury vapour upgrades

Mercury vapour lamp upgrades were proposed to be removed from Part 27 due to the Minamata Convention on Mercury limiting the supply and manufacture of these lamps. There was strong stakeholder opposition to this proposal with 11 submissions from councils and greenhouse alliances stating that mercury vapour lamps were still being replaced like for like by DNSPs and that many councils have or are in the process of securing funding for upgrades over the next 24 to 36 months. Submissions also outlined the challenges and barriers associated with public lighting upgrades including funding issues, the long lead time from project inception to completion and the fact that the Minamata Convention is yet to be ratified by Australia. The submissions requested an extension of 24 to 36 months to allow for the completion of pre-existing bulk public lighting upgrade projects. The submissions stated that without the VEU incentives for mercury vapour lamp replacements, these projects will likely lose their funding.

One submission supported the removal of mercury vapour lamp upgrades from Part 27, noting that ratification of the Minamata Convention by international production countries has made these lamps prohibitively expensive and difficult to source.

The future of Part 27

It was proposed that Part 27 would remain to provide incentives for upgrading public lighting. There were 18 consultation submissions, including those from councils and greenhouse alliances that supported Part 27 remaining to support councils with the upgrade of public lighting.

Part 34 – J6 Building Based Lighting Upgrades

Outcomes

Part 34 J6 Building based lighting upgrades

31 March 2021

- Part 34 J6 Building based lighting upgrades will be aligned with the illumination power density requirements within the National Construction Code 2019.

31 January 2023

- J6 building based lighting upgrades will be removed from the VEU program.

The Department has decided to align Part 34 J6 activities with the National Construction Code (NCC) 2019. This will be done by updating the Part 34 Specifications to align the baseline calculations with the NCC Illumination Power Density (IPD) requirements. This change will be implemented on 31 March 2021. The revised date allows for a transition period following the publication of this response to consultation. J6 building based lighting upgrades will remain until 31 January 2022, when they will be removed from the program.

The 2016 NCC IPD requirements are easily achieved, leaving a significant opportunity for GHG reduction by installing LED lamps in the program. Despite this, the level of incentive has not been enough to deliver much uptake or interest in the Part 34 J6 activity.

There is currently limited scope for improvement over the 2019 NCC IPD requirements while also meeting the illumination requirements set out in the respective standards. Many space types will be required to install high efficacy LED lamps and control devices to comply, leaving minimal opportunity to create incentives through the VEU program. For other space types it may be possible to install less efficient LED lamps, which will mean there is some additionality that can be gained through the long lifetime of these LED products. The project timeframes for Part 34 J6 upgrades can be significantly longer due to the associated building works. Part 34 J6 will be retained for ten months until 31 January 2022 to incentivise upgrades that go beyond the minimum requirements set out in the NCC 2019. This provides a transition for established projects that have been in place but would be required to meet the NCC 2019 requirements to be completed.

Stakeholder feedback

Part 34 J6 building based lighting upgrades were proposed to be removed from the Specifications in August 2020 as a result of the more stringent Illumination Power Density (IPD) requirements in the National Construction Code (NCC) that came into effect on 1 May 2020.

The proposal to remove Part 34 J6 from the Specifications received six submissions generally supporting the removal of Part 34 J6 while four submissions opposed it. Submissions that opposed the removal of Part 34 J6 felt that the activity would be useful to drive the efficiency of lamps beyond what is required to meet the building code.

Part 34 – Non-J6 Building Based Lighting Upgrades

Outcomes

Part 34 – Building based lighting upgrades

31 March 2021

- Discount factor applied to HID upgrades (including mercury vapour).

31 January 2022

- Further discount factor applied to HID upgrades (including mercury vapour).

31 January 2023

- All lighting upgrades removed from Part 34, excluding linear and circular fluorescent upgrades (T5, T8 and T12) and non-integral ballast CFLs.
- The lamp lifetime for linear fluorescent lamp upgrades will be reduced from 5 years or a maximum of 5 years, to 4 years or a maximum of 4 years.
- Minimum efficacy requirements introduced.

The Department received a significant stakeholder response to the proposed changes to Part 34 Non-J6 building based lighting upgrade activities. The Department will delay all changes to Part 34 activities, with the first reduction to incentives being made on 31 March 2021. A further reduction to incentives will be made ten months later on 31 January 2022. Further changes to Part 34 will occur 12 months later on 31 January 2023. These changes are discussed in detail below.

High Intensity Discharge (HID) lamps – discount factor

The Department acknowledges that there may be a larger pool of opportunity than what was modelled, and that there may be factors other than market saturation that are causing the decline in the number of HID lighting upgrades through the VEU program. These factors however do not impact on the additionality of the activity.

While replacement lamps will remain available (with the exception of mercury vapour lamps impacted by the Minamata Convention), these will become increasingly difficult to source and expensive due to a rapidly declining market share. This ongoing change, along with decreasing LED costs and an improving business case for upgrading, increase the likelihood that a premises will upgrade incumbent lamps in the near future.

The Department will delay the changes to the incentives for Part 34 HID lighting upgrades until 31 March 2021. From 31 March 2021 HID technologies will be discounted by a factor of 0.6 (currently this factor is 0.7). A further reduction to the incentive for Part 34 HID lighting upgrades (a factor of 0.4) will occur on 31 January 2022. HID lighting upgrades will be removed on 31 January 2023. This allows accredited providers to complete the installations that they have planned, attract remaining businesses that have been reluctant to upgrade and slowly transition their business model as the market becomes more saturated.

Mercury vapour upgrades

Mercury vapour lamp upgrades will remain eligible under Part 34, similar to other HID replacements. These lamps will remain at current levels of incentive until 31 March 2021. From 31 March 2021, mercury vapour lamps will be discounted by the same discount that has been proposed for the other HID technologies, a factor of 0.6 (currently this factor is 0.7). Mercury vapour lamp upgrades will again be discounted by the same discount that has been proposed for the other HID technologies on 31 January 2022, a factor of 0.4. Mercury vapour lamp upgrades will remain until 31 January 2023, when they will be removed from the program.

Aligning the requirements for mercury vapour lights with other HID lamps will prevent some of the job scoping and administrative concerns that stakeholders raised during the consultation.

The two mercury vapour LCP values included for 2021 were not included as part of the initial consultation in the Issues Paper. These values have been calculated using the same calculation methodology used to apply the discount factors to the LCP for other HID lamps. The LCP values for 2022 have been calculated using the same method as those for 2021, resulting in a discount factor of 0.4.

Part 34 Non-J6 changes:

- the lamp circuit power (LCP) for mercury vapour, metal halide and high-pressure sodium lamp upgrades will be reduced using the equations given below:

Type of incumbent or upgrade light source	2021 Lamp Circuit Power (0.6 discount factor)	2022 Lamp Circuit Power (0.4 discount factor)
Metal halide lamp with magnetic ballast -	$NLP \times 0.772 + 13.1$	$NLP \times 0.656 + 11.2$
Metal halide lamp with electronic ballast -	$NLP \times 0.8 + 0.7$	$NLP \times 0.68 + 0.6$
High pressure sodium lamp with magnetic ballast -	$NLP \times 0.767 + 9.5$	$NLP \times 0.631 + 7.8$
Mercury vapour lamp with ballast -	$NLP \times 0.754 + 8$	$NLP \times 0.609 + 6.5$
Self-ballasted mercury vapour lamp -	$NLP \times 0.73$	$NLP \times 0.59$

Removal of some Part 34 activities

Following feedback provided in the consultation, the removal of some activities from Part 34 will be delayed by 24 months until 31 January 2023.

T5 linear fluorescent lighting upgrades will remain, along with upgrades involving T8 and T12 lamps. Non-integral ballast compact fluorescent lamp (CFL) upgrades will also remain as an eligible activity.

Linear and Circular Fluorescent Lamps

The initial justification for the focus on T8 and T12 lamp upgrades was to focus activity on small to medium businesses that do not undertake regular building renovations. The high savings opportunity and the challenges in reaching this sector provided adequate justification for the upgrades to remain with a 10 year lifetime.

The Department generally agrees with stakeholder feedback that there are still savings available for upgrades involving the replacement of T5 lamps and that the removal of this as an eligible upgrade will negatively impact the replacement of some T8 and T12 lamps. As a result, T5 lamps will remain as an eligible baseline in the VEU program along with T8 and T12 lamps.

CFLs

Like for other non-LED products, the additionality of integral ballast CFL upgrades in non-residential premises is decreasing as LED installations become increasingly common place. For example, while replacement integral ballast CFL products can still be purchased, these products will become more difficult to source and likely more expensive as the market shifts to LED replacements. Non-integral ballast CFLs are more complex and expensive to upgrade, making it less likely that a replacement to an LED product will occur.

The Department will remove integral ballast CFL upgrades from the VEU program on 31 January 2023. Non-integral ballast CFLs will remain as an eligible baseline in the VEU program to bring forward the replacement of these products.

As with all upgrades, the remaining time until a retrofit continues to decrease, at which point a full LED upgrade is likely to occur. To address the declining additionality, non-integral CFL products will need a market leading efficacy requirement to ensure products continue to provide benefits to the program.

Other lighting types

The removal of activities that incentivise LED lamp upgrades with more efficient LED lamps will also occur on 31 January 2023.

Lamp lifetime discount

Lamp lifetime discounts will still be applied, however the implementation of these will be delayed to 31 January 2023 to coincide with the removal of other lighting upgrades. The lamp lifetime for linear fluorescent lamp upgrades will be reduced from 5 years or a maximum of 5 years, to 4 years or a maximum of 4 years.

Efficacy requirement

It is proposed to introduce efficacy requirements for linear fluorescent lamp and non-integral ballast CFL upgrades from 31 January 2023. The minimum level of efficacy and other requirements will be developed through a separate consultation. With the inclusion of T5 lamps, non-integral CFLs and a 10 year lifetime, the efficacy requirements will need to represent market leading levels.

Stakeholder feedback

Preferred Option

Two options were proposed for Part 34. Option 1 included a reduction in incentives for some activities and the removal of some activities from Part 34. Option 2 maintained the level of incentives but brought forward the removal of some activities from Part 34.

Option 2 for Part 34 received 13 stakeholder submissions opposed and four submissions supportive. Option 1 received 11 submissions opposed and 14 submissions offering partial support if there were many small reductions to the level of incentive over a much longer period of time. Many of these submissions suggested that incentives should be slowly reduced through to 2025.

High Intensity Discharge (HID) – Discount factors

The Issues Paper proposed a minor reduction to incentives for metal halide and high-pressure sodium lamp upgrades.

There were seven responses opposed to the discount of incentives and five offering partial support, however these generally suggested the discount be slowly tapered down over a longer transition time. One submission was supportive of the discount and the proposed timing.

Submissions opposed to the proposed changes to HID lamps did not agree that the market is approaching saturation, nor that these upgrades were no longer additional. They argued that without incentive, these lamps will not be upgraded to LED and will be replaced like for like at the end of life. Two submissions noted that adjusting the lamp circuit power (LCP) of the baseline is not the most appropriate way to apply a discount factor.

Mercury vapour upgrades

Mercury vapour lamp upgrades were proposed to be removed from the baseline calculations for Part 34 in August 2020.

Two submissions acknowledged the challenges in determining the lamp types for job quoting where a mixture of HID technologies have been used and the administrative issues as a result of this. One submission noted this would be made worse by removing or discounting one technology while leaving other technologies to remain, such as the removal of mercury vapour lamps.

Removal of some activities from Part 34

It was proposed that all lighting types would be removed from Part 34, except for T8 and T12 linear and circular fluorescent lamps.

A total of 11 submissions opposed the removal of some or all lighting types other than T8 and T12 lamps, while three submissions supported the proposed change and four submissions offered partial support. Submissions that opposed the removal thought warehouse lighting either should not be removed or that it should remain with a reduction to the incentive. Five of these submissions suggested that the incentive be gradually reduced until 2025.

Ten submissions stated that T5 lamps should remain as an eligible upgrade activity. These submissions noted the significant pool of opportunity in T5 lighting upgrades and that high energy saving that can be achieved. Two submissions noted challenges that would arise by only being able to replace T8 and T12 but not T5, particularly when scoping and quoting jobs.

Five submissions requested the inclusion of CFL lamps as an eligible upgrade. These submissions argued that non-integral ballast CFLs cannot be easily replaced and will be swapped like for like, meaning these products have sufficient additionality to remain in the VEU program.

The removal of activities that incentivise LED lamp upgrades with more efficient LED did not receive specific mention in submissions.

One submission was not supportive of T8 and T12 lighting upgrades remaining in the program.

Lamp lifetime reduction

The Issues Paper proposed a reduction to the lifetime for lamp replacements from 5 years to 4 years alongside the removal of some activities from Part 34.

Four submissions supported the lifetime changes proposed for Part 34 lamp upgrades, while four opposed it. Opposition was generally due to lamp upgrades previously being discounted down to 5 years which effectively removed a large proportion of lamp upgrades from the program.

Four submissions suggested lifetime reductions as an appropriate method to reduce incentive slowly over time for all upgrade types.

Efficacy requirement

A minimum efficacy requirement was proposed to be included for product registrations. This change was proposed to take place in conjunction with the removal of some lighting types from Part 34.

There was little feedback specific to the detail of the proposed efficacy requirement but there were five mentions of support and three indications of partial support.

Part 35 – Non-Building Based Lighting Upgrades

Outcomes

Part 35 – Non-building-based lighting upgrades

31 January 2023

- Mercury vapour lighting upgrades removed from Part 35.

Part 35 will remain an activity in the VEU program. Similar to Part 27 and Part 34, mercury vapour lamps will be removed as an eligible upgrade from 31 January 2023. All other lamp types will remain under Part 35.

Stakeholder feedback

Mercury vapour upgrades

Mercury vapour lamp upgrades were proposed to be removed from Part 35 on 1 August 2020 due to the Minamata Convention limit the supply and manufacture of these lamps.

Stakeholder submissions relating to Part 35 were generally included in broader submissions on mercury vapour upgrades, with six opposed to the proposed changes, two supportive and one offering partial support.

The future of Part 35

It was proposed that Part 35 would remain to provide incentives for upgrading non-building based lighting.

Part 35 did not receive very much stakeholder interest, with four responses supportive of Part 35 remaining and one response opposed.

Appendix 1

Table 3: Summary of Issues Paper proposals and final changes and timelines

Activity	Issues Paper Proposal (Option 1)	Issues Paper Proposal (Option 2)	Response to Consultation change
Part 21	Incentive reduced - 1 August 2020		Incentive reduced - 30 June 2021
	Incentive removed - 1 February 2021	Incentive removed - 1 October 2020	Incentive removed - 31 January 2022
Part 27	Mercury vapour lamp upgrades removed - 1 August 2020	Mercury vapour lamp upgrades removed - 1 August 2020	Mercury vapour lamp upgrades removed - 31 January 2023
Part 34 J6			Align with NCC 2019 IPD - 31 March 2021
	Part 34 J6 upgrades removed - 1 August 2020	Part 34 J6 upgrades removed - 1 August 2020	Part 34 J6 upgrades removed - 31 January 2022
Part 34 Non-J6	Mercury vapour lamp upgrades removed - 1 August 2020	Mercury vapour lamp upgrades removed - 1 August 2020	Mercury vapour lamp incentive reduced - 31 March 2021
			Mercury vapour lamp incentive further reduced - 31 January 2022
	HID incentive reduced - 1 August 2020		HID incentive reduced - 31 March 2021
			HID incentive further reduced - 31 January 2022
	Activities removed (T8 and T12 remain) - 1 February 2021	Activities removed (T8 and T12 remain) - 1 October 2020	Activities Removed (T5, T8, T12 and CFL remain) - 31 January 2023
	Efficacy requirement introduced - 1 February 2021	Efficacy requirement introduced - 1 October 2020	Efficacy requirement introduced - 31 January 2023
Part 35	Lamp lifetime reduced - 1 February 2021	Lamp lifetime reduced - 1 October 2020	Lamp lifetime reduced - 31 January 2023
	Mercury vapour lamp upgrades removed - 1 August 2020	Mercury vapour lamp upgrades removed - 1 August 2020	Mercury vapour lamp upgrades removed - 31 January 2023