



Review of Ceiling Insulation and the Victorian Energy Efficiency Target

Victorian Department of
Economic Development, Jobs,
Transport and Resources

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Executive Summary

There are significant benefits associated with incentivising the retrofit of insulation in Victoria such as savings in energy, costs and greenhouse gases. Across the State, there are approximately 98,000 households for which ceiling insulation would be cost effective to install. Retrofitting insulation is also considered to have the greatest savings impact, saving an average of \$596 per household per annum in Victoria, relative to an average \$299 per household per annum across the other states and territories of Australia.¹

The Victorian Government is currently considering the reintroduction of ceiling insulation into the Victorian Energy Efficiency Target (VEET) scheme. The objective of this study has been to recommend any relevant controls to address risks relevant to the reintroduction.

This has been done through desktop review of relevant insulation program reviews and stakeholder consultation. There has been a specific focus on the management of occupational health and safety issues and consumer protection issues.

The outcome of the study is a range of recommendations that are designed to address the gaps identified through this process.

The recommendations are:

1. The Essential Services Commission (ESC) should report to the Department on its performance in relation to approvals of products and accredited persons and compliance activities in relation to the activity of ceiling insulation.
2. Deem insulation products which contain foil to be ineligible for approval under the VEET through an explicit statement in the VEET scheme documents.
3. Update the reference to Australian Standard AS3999-2015 in Schedule 11 of the VEET Regulations.
4. The ESC should ensure that its Audit and Compliance team has the appropriate resources and knowledge to undertake investigations to assess the compliance of ceiling insulation installation against scheme requirements.
5. Undertake risk-based spot inspections of the installation of ceiling insulation in the first year of its reintroduction to ensure that installers have completed the mandatory training and they are installing in accordance with relevant Australian Standards.
6. Require the following mandatory training requirements for installers:
 - o Work safely in the construction industry (CPCCOHS1001A)
 - o Work safely at heights (CPCCM2010B)
 - o Apply OHS requirements, policies and procedures in the construction industry (CPCCOHS2001A)
 - o Install ceiling insulation (CPCCPB3027A)
 - o Install batt insulation products (CPCCPB3014A).

Each of the recommendations were then considered in terms of the level, type and timeframe of resourcing required to be implemented and who the primary organisation/s responsible for, or involved in, implementation would be.

¹ The Value of Insulation Based Residential Energy Savings Measures in Australia, 2012, Energy Efficient Strategies

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1 Introduction

1.1 Overview of the Victorian Energy Efficiency Target

The Victorian Energy Efficiency Target (VEET) scheme ('VEET' or 'the scheme') commenced on 1 January 2009 with the aim of encouraging the uptake of energy efficiency activities for Victorian households and businesses.

Also known as the Energy Saver Initiative, it is established in the Victorian Energy Efficiency Target Act 2007 (the VEET Act), and associated regulations and guidelines.

The scheme is due to continue to the end of 2029 and is administered by the Essential Services Commission (ESC). Policy related to the scheme is managed by the Department of Economic Development, Jobs, Transport and Resources.

Eligible activities create one Victorian Energy Efficiency Certificate (VEEC) for each tonne of carbon dioxide equivalent of abatement over the lifetime of the activity. The VEECs are then purchased by large electricity retailers to fulfil their obligations under the VEET.

Ceiling insulation was an eligible activity under the scheme from its commencement, but was suspended from July 2009 to avoid duplication of incentives under the Federal Government's Home Insulation Program (HIP). This was done by applying a zero discount factor to ceiling insulation. The zero discount factor for installation of ceiling insulation is due to expire on 31 December 2015.

1.2 Objectives of the engagement

The Victorian Government is currently considering the reintroduction of ceiling insulation into the VEET scheme.

The objective of this engagement is to recommend any relevant controls to support the reintroduction of ceiling insulation into the VEET scheme. The aim is to ensure ceiling insulation is correctly installed in existing homes and any occupational health and safety and consumer protection issues are appropriately managed.

The outcome of the project is this report, which provides input into the consideration of reintroducing ceiling insulation in the VEET scheme.

While this report has identified recommendations to address relevant risks, it is acknowledged that with the implementation of controls, come added compliance costs and scheme complexity which may ultimately create excessive barriers to the uptake of ceiling insulation. The ultimate aim of the VEET is to increase the energy efficiency of Victorian households and businesses. As part of this, the environmental integrity of the current scheme requirements are also considered alongside health and safety, and consumer protection.

1.3 Project overview

There were four key steps involved in the project, from which recommendations have been derived. These steps were:

1. Identify key issues

Through desktop review and stakeholder consultation, the key issues were identified that could impact on the correct installation of ceiling insulation, as well as any occupational health and safety issues and consumer protection issues.

The following documents were reviewed, in agreement with the Department of Economic Development, Jobs, Transport and Resources (the Department):

- The current Victorian Energy Efficiency Target scheme documents and requirements in relation to ceiling insulation
- The Victorian Energy Efficiency Target Ceiling Insulation Issues Paper (February 2014)
- Ceiling Insulation Due Diligence Review Final Report for the Department of Primary Industries – Victoria (May 2012)
- Responses to stakeholder consultation on the VEET and the NSW Energy Savings Scheme
- The Value of Ceiling Insulation, Insulation Council of Australia and New Zealand (September 2011)
- Report of the Royal Commission into the Home Insulation Program (September 2014)
- The Australian National Audit Office Report (October 2010).

No data on the incidence of problems relating to the installation of ceiling insulation in Victoria was identified through a process of desktop research and consultation with relevant stakeholders.

In addition to desktop review, stakeholder consultation was undertaken with the Department, the ESC and Energy Safe Victoria.

The issues that were identified through this process were compiled into an issues register which considered each issue as high, medium or low impact in relation to the project's objectives.

2. Assessment of the adequacy of risk mitigation measures

An impact and control matrix was developed which contains all the high impact findings identified from the desktop review and consultation undertaken in the first step.

One of the key concerns for this project, driven by issues arising through the design and implementation of the HIP, a due diligence review of the VEET and stakeholder consultation, was the lack of adequate standards and training in relation to the installation of insulation. As such, this was an area of greater focus for this project and an in-depth assessment of the appropriateness of standards and training was undertaken.

The medium and high impact issues were then considered in relation to the controls that are currently in place either through the current design of the VEET scheme, and industry or government regulatory frameworks which are designed to mitigate risks.

Each of these issues were then given a residual rating of high, medium or low.

3. Development of recommendations

Following the evaluation of the effectiveness of controls and the development of a residual risk rating, any gaps in the current risk mitigation framework were identified. Each gap was used to inform recommendations to improve the Scheme from either a policy or implementation perspective.

Recommendations have been developed which are designed to mitigate any outstanding risks to the proper installation of insulation, including any health and safety or consumer protection issues. These will either address issues associated with ceiling insulation installation under the VEET, or more broadly as an activity undertaken by households outside of the VEET scheme.

4. Resourcing analysis

The recommendations arising from the project were analysed in terms of resourcing, both financial and non-financial, that would be required for implementation. This provides an analysis of the recommendations to assist decision-making on cost, timeframes and ongoing needs. This resourcing analysis is provided in section 4.

1.4 Scheme governance

Currently, the governance of VEET involves two organisations – the Department and the ESC.

Policy

The Department is responsible for the maintenance of the policy, Act and Regulations for the VEET.

Administration

The role of the ESC is the general administration of the VEET Act. The VEET Act specifies the functions of the ESC as including:

- Accreditation of persons who may create certificates
- Monitoring and administering the creation, registration, transfer and surrender of certificates
- Enforcing the imposition of energy efficiency shortfall penalties
- Undertaking audits of the creation of certificates by accredited persons
- Monitoring compliance with this Act.

Scheme support

Also of relevance to the scheme's governance in relation to this project is an audit panel which supports the operation of the scheme. The ESC has established a VEET panel of approved auditors which can be nominated to conduct audits of annual returns or statements of scheme participants. There are currently nine organisations on the panel.

2 Key issues

Issues raised through recent reviews that relate to insulation installation, stakeholder consultation and analysis of the scheme were documented in an Issues Register (Appendix A). The Issues Register identifies the key issues that have been raised in relation to the installation of insulation and do not consider any mitigating controls associated with the current design of the VEET that may reduce the initial impact rating. Each of these issues have been rated as low, medium or high.

Each issue was grouped into one of the following categories:

- Timeframes for implementation
- Resourcing
- Industry consultation
- Program design
- Scheme governance
- Training and standards
- Audit and compliance.

The source of each of the issues is identified in the 'reference' column of the Issues Register at Appendix A, the Impact and Control Matrix at Appendix B and Impact of recommendations on VEET scheme at Appendix C.

The next step was to further consider each of the issues considered to be medium or high risk. They were documented in an Impact and Control Matrix (Appendix B).

The matrix includes an overlay of current controls which are applicable to each issue, looking at the current design of the scheme.

Following the identification of existing controls, each of the issues were given a residual rating of low, medium or high.

The gaps in the current scheme design were identified for medium and high residual impact items and recommendations were suggested that would help to mitigate the outstanding issues. Once the recommended action is taken into account, this is considered to reduce the residual impact of the issue to low (Refer to Impact of recommendations on VEET scheme at Appendix C).

No recommendations are provided where there are no outstanding, or residual issues once mitigating controls are considered.

A summary of the issues, and recommendations where relevant, is provided below, by category. The full impact and control matrix, including issues, controls, gaps and recommendations, is available at Appendix B – Impact and control matrix and Appendix C- Impact of recommendations on VEET scheme.

2.1 Timeframes for implementation

The risk associated with unrealistic timeframes for implementation of a program incentivising ceiling insulation include:

- Lack of time for adequate risk identification and consideration
- Lack of thorough consultation
- Inadequate time for thorough decision-making on program design
- Robust audit and compliance regime not fully established.

The VEET commenced in 2009 and has been running smoothly for a number of years. The change to the discount factor for ceiling insulation occurred in 2009 to avoid duplication of incentives between the VEET and the HIP. The reintroduction of ceiling insulation has been considered since the closure of the HIP and has been given sufficient time for consideration including stakeholder consultation, and internal and external risk assessment processes. There were no areas of concern given the controls in place for this issues category.

As such, there are no recommendations with regard to this category.

Recommendations

There are no recommendations for this category.

2.2 Resourcing

There are a range of issues that can impact on the safety, environmental integrity and/or consumer protection associated with incentivising the installation of ceiling insulation if there is a lack of appropriate resourcing. This can relate to inappropriate resourcing in either the administration (the Department, the ESC), implementation (e.g. installers) or the support of the scheme (e.g. audit panel).

The key risks identified in this category were:

- A poorly designed program
- Inability to deliver the program properly
- Inability to implement an adequate audit and compliance regime
- Issues unable to be investigated, or they are investigated insufficiently
- Program cannot be rolled out successfully due to lack of experience/capacity of organisation responsible.

As the VEET has been running for a number of years, the current resourcing levels are considered to be appropriate in terms of their ability to meet the current requirements, and there are no concerns that resources are lacking. However, the additional demand created by the reintroduction of ceiling insulation is not yet known (as the potential number of participants for this activity is not known) and the additional resourcing required to meet future demand will need to be monitored, particularly to ensure the audit and compliance regime is being implemented adequately. This will include the capacity of the ESC to undertake the approval process of additional Accredited Persons (AP) and products, and compliance, associated with the activity of ceiling insulation in a timely manner.

The capacity of the regulators should be monitored to ensure there are enough staff available during critical periods. This is to ensure that issues are able to be thoroughly investigated to identify any possible risks to the Scheme and its participants. This should include analysis of the number and type of complaints that are investigated to ensure issues are sufficiently responded to, and that they are responded to within an acceptable timeframe. Key performance indicators could be designed around the information that is needed to be analysed to monitor capacity, such as number of complaints reported and time taken to respond to the complaint.

Recommendations

1. The ESC should report to the Department on its performance in relation to approvals of products and accredited persons and compliance activities in relation to the activity of ceiling insulation.

2.3 Industry consultation

A lack of industry consultation in relation to ceiling insulation and its installation can result in higher risks during implementation than otherwise would transpire. The potential issues associated with this category are insufficient distribution of information to scheme participants (e.g. industry) leading to a lack of industry buy-in and awareness about scheme requirements, changes, timing, issues, etc.

The Victorian Government has engaged through consultation with existing regulatory agencies, industry and broader stakeholders throughout the process of considering the reintroduction of ceiling insulation in the VEET. This has included public consultation on a Ceiling Insulation Issues Paper.

The level of industry consultation is considered to be adequate for the reintroduction of ceiling insulation.

Recommendations

There are no recommendations for this category.

2.4 Program design

Government's program design shapes and influences the private sector business models established to deliver the program.

The design of the program, and the subsequent business models, is a key element that influences the potential for participation, both from industry and from households.

The program design for incentivising ceiling insulation installation that was originally presented under the HIP proposed delivery via major players in the industry with considerable experience installing insulation (a regional brokerage model). This was one way of dealing with risks such as the personal safety of installers and to provide some assurance that insulation was being installed properly and by properly-trained and/or supervised installers.

The ultimate design of the HIP, 'direct delivery', opened up delivery via a much wider range of organisations, with varying levels of experience, which increased the risks associated with scheme implementation.

The design of the VEET, and ultimately the business models that will deliver it, is sufficiently different to the HIP to address a number of potential risks.

The key issues related to this category are:

- Barriers to entry are too low and the VEET is flooded with applications
- The scheme includes high risk products such as foil
- Program design does not match industry capacity or capability to deliver in the short or medium-long term
- Barriers to entry are too high/onerous and there are no participants.

Each step in the design of the program involves a trade-off between different levels of rigour, cost, barriers to entry, risk and likelihood of take-up, and there are a number of options along the spectrum.

The current design of the VEET with respect to incentivising ceiling insulation is reasonably low risk.

Eligibility of foil

One of the key elements that lowers the risk of the VEET is that currently no foil insulation products have been approved for use in the scheme. The inclusion of foil was a major risk associated with the HIP and removing foil is considered to remove a large component of risk related to materials, as foil is highly conductive. Foil is more appropriate in warmer, northern climate zones as it is designed to resist radiant heat flow due to its high reflectivity and low emissivity (ability to re-radiate heat)², so is less suitable for Victoria and the requirements of the VEET for insulation to meet an R-value of 3.5 (measure of thermal resistance).

Given the risky nature of foil insulation (due to it being highly conductive) and the inappropriateness of it as an insulating material in the Victorian climate relative to bulk insulation, it would add further comfort if the VEET scheme documents were to explicitly state that foil products are not eligible in the VEET. This will remove any doubt amongst stakeholders about the potential for foil products to be approved for use in the scheme.

Proposed additional measures for ceiling insulation reintroduction

Consultation with the ESC identified additional measures that it is currently proposing to further minimise risks associated with the reintroduction of ceiling insulation in the VEET. These include:

- Mandatory safety training – approval of accredited persons to undertake the ceiling insulation activity once documentation has been submitted to verify that the installers are appropriately trained, in line with the VEET mandatory training requirements

² <http://www.yourhome.gov.au/>

- Pre-installation risk assessment – requiring a pre-installation risk assessment, in accordance with AS3999, to be undertaken by a qualified individual
- Post-installation inspections – accredited persons would be required to engage a registered inspector to audit each ceiling insulation inspection to ensure it has been undertaken correctly.

A key consideration for this review has been to balance investment in risk mitigation actions with the avoidance of excessive barriers to the uptake of ceiling insulation. The challenge presented by the VEET is whether aspects of the current scheme design, in conjunction with proposed additional measures, such as post-installation inspections and meetings between the ESC and an accredited person, are going to be significant barriers to participation in the scheme.

While adding to the risk management of the activity, these steps will also add to the cost and complexity of participating in the scheme and could reduce the incentive to provide and undertake ceiling insulation installation relative to the safety mitigation gains. Conversely, an increase in the price of VEECs would increase the overall incentive to an accredited person from the activity of installing ceiling insulation.

The average cost of installation of ceiling insulation in households is estimated to be \$1,760³. The average incentive generated by the installation of ceiling insulation is approximately \$1,327⁴.

The cost of audits can vary depending on the service provider and the scope of the audit, however an estimated indicative range is \$100-\$300. This needs to be considered in conjunction with the potential cost to accredited persons from the range of activities it may be required to do including NATA testing for product approval, undertaking mandatory installer training prior to being approved as an accredited person for the activity of ceiling insulation, pre-installation risk assessments and post-installation inspections.

Recommendations

2. Deem insulation products which contain foil to be ineligible for approval under the VEET through an explicit statement in the VEET scheme documents.

2.5 Scheme governance

Consideration of scheme governance identified the following potential issues associated with the installation of ceiling insulation:

- Policy does not properly consider or understand implementation issues
- Policy does not respond to identified risks, once program is implemented
- Lack of ownership of risks/issues as they arise, resulting in no response

³ Modelling the future VEET certificate market for residential-type measures

⁴ This estimate is based on the average number of VEECs created per household over the period when ceiling insulation was eligible under the VEET (49 VEECs per household) multiplied by the VEEC price on 8 September 2015 of approximately \$27.

- Lack of communication and coordination between organisations involved
- Organisations involved are not aware of their responsibilities.

Unclear scheme governance was a key theme that came out of the Royal Commission Report, however the HIP was a bigger program being implemented in a shorter timeframe compared to the VEET.

Ensuring that there is ongoing, open communication amongst all relevant agencies will increase the likelihood of success in appropriately dealing with any issues that arise during implementation. Currently, the policy and the administrative components of the scheme have a strong interaction and the Department and the ESC have a strong working relationship and meet on a fortnightly basis. Additionally, the ESC, as the administrator, maintains a risk register for any issues arising from the VEET.

The identification and consideration of risks is closely linked to, and dependent on, scheme governance for it to be more effective, and is a key element of risk mitigation for the VEET.

Recommendations

There are no recommendations for this category.

2.6 Audit and compliance

A number of key risks have been identified with a deficient audit and compliance regime. These are:

- Additional health and safety risks on the ground, which are not being identified
- Non-compliance and fraud
- Insulation is not installed properly or does not meet standards, so actual energy savings do not equate to estimated/deemed savings.

The VEET scheme has an existing audit and compliance regime. It is administered by the ESC.

To promote a robust compliance culture, the audit and compliance regime should ensure that compliance activities continue to be undertaken in a timely manner.

Scheme requirements in relation to the installation of ceiling insulation, including audit, are set out across the VEET Act, VEET Regulations, VEET Guidelines and supporting documentation.

The installation of the correct product in the correct manner (in line with required Australian Standard 3999) is currently included as a requirement of the scheme, however the reference in the Schedule 11 of the VEET Regulations must be updated to refer to the current version of the Australian Standard (AS3999-2015).

The safety and environmental integrity of the VEET is strongly related to Accredited Persons' compliance with scheme requirements.

The ESC Audit and Compliance team is largely responsible for assessing the compliance of an Accredited Person in relation to the installation and performance of ceiling

insulation. This is initially undertaken during the accreditation process when someone applies to become an Accredited Person under VEET, under a particular Schedule.⁵

Accredited Person compliance with VEET requirements is also assessed through the checking of the content of submitted paperwork for a quantity of activities that are chosen using random selection and a series of risk flag indicators. The risk rating that an Accredited Person holds will feed into the quantity and frequency of these checks.

The explanatory note in relation to creating VEECs from prescribed activities states that once an activity is completed the ESC will base their assessment on the validation of the information provided by an Accredited Person based on considerations such as whether:⁶

- The VEECs are being created in respect of prescribed activities that correspond with the information provided at time of accreditation
- There are any anomalies in the installation patterns of the activities
- The addresses at which the activities are undertaken are residential premises or business premises.

Under section 19A of the VEET Act, the ESC can require an Accredited Person to 'obtain, at the intervals determined by the ESC, independent audits of the person's compliance with the Act and the regulations in relation to certificates created by the person in the period specified by the ESC'.

Strongly promoting and monitoring an Accredited Person's compliance with the scheme requirements for insulation, including adherence to AS3999-2015 and meeting performance requirements under AS/NZS 4859.1:2002, would further contribute to the environmental (carbon abatement) and safety integrity of the ceiling insulation activity under the VEET. This could be achieved by undertaking spot checks on a random basis to ensure that proper procedures are being used by Accredited Persons. In addition to spot checks occurring during the installation, post-installation inspections could also be conducted. The ESC have advised that to ensure both the safety of a premises (i.e. infrastructure and occupants) and the competency and safety of an installer involved in a Schedule 11 activity, the ESC may propose pre and post installation checks by a third party engaged by the Accredited Person using a listing of qualified individuals. It is noted that the ESC has jurisdiction over an activity undertaken within the VEET.

The ability of the ESC's Audit and Compliance team to identify improper installation or products that do not meet the standard is also not clear.

The recommendation for audit and compliance issues is to focus on the capacity and ability of the ESC to detect insulation-specific non-compliance as part of post-completion checks. Specifically, this recommendation relates to the consideration of:

- Testing the capability of team members on their awareness and knowledge of correct installation in accordance with VEET scheme requirements

⁵ ESC consultation - 21 September 2015

⁶ Explanatory Note – Creating Victorian Energy Efficiency Certificates from Prescribed Activities - Version 5.22 – 31 July 2015

- The need for specific training for team members in relation to identifying the outcomes of an installation of insulation.

Recommendations

3. Update the reference to Australian Standard AS3999-2015 in Schedule 11 of the VEET Regulations.
4. The ESC should ensure that its Audit and Compliance team has the appropriate resources and knowledge to undertake investigations to assess the compliance of ceiling insulation installation against scheme requirements.
5. Undertake risk-based spot inspections of the installation of ceiling insulation in the first year of its reintroduction to ensure that installers have completed the mandatory training and they are installing in accordance with relevant Australian Standards.

2.7 Training and standards

The risks associated with insufficient training requirements emerged in a number of findings in the Royal Commission Inquiry into the HIP and are widely regarded as being one of the primary factors which contributed to the program's failure.

With regard to standards, no findings emerged from the Royal Commission Inquiry which indicated that the HIP experience could be linked to inadequate standards however the Royal Commissioner made reference to the significance of standards in providing guidance around safe installation. The inclusion of relevant standards is therefore a consideration for the VEET.

The risks associated with insufficient training and standards are:

- Significant health and safety risks to installers, particularly in increasing the risk of electrocution
- Reputational risks associated with insulation and its installation
- Increased risk of damage to property, including fires.

Following the conclusion of the HIP, the insulation standard 'Bulk thermal insulation - installation' (AS 3999:2015) has been reviewed and updated. This update includes mirroring the requirements of the AS/NZS3000, the Wiring Rules, related to issues such as clearance around lights and turning the power off during the installation.

In addition, an industry training program was rolled out by the fibreglass insulation industry body, ICANZ. ICANZ has also developed an industry handbook which includes installation guidelines. This is a step towards industry self-regulation, the drawback being that it does not reach across the whole sector. For ceiling insulation, there are a number of training requirements and standards which must be met in order for the installer to be compliant. The appropriateness of these requirements have been evaluated through benchmarking.

Standards

Insulation-related standards were considered in relation to their relevance to the VEET, their current requirement under the VEET and the requirements under the New South Wales Energy Savings Scheme (ESS) and the South Australian Retailer Energy Efficiency Scheme (REES). The review of standards is shown in the table in section 2.7.1.

Currently, the VEET Scheme does not make reference to compliance with the Building Code of Australia, whereas this is explicitly required under the ESS and the REES.

Section J1 of the Building Code of Australia states that thermal insulation must comply with AS/NZS 4859.1, compliance with which is already a requirement of the VEET. The VEET scheme also has a requirement for ceiling insulation to meet a specific R-value of 3.5 which reduces the need for the Building Code of Australia requirements in relation to thermal insulation.

The South Australian REES requires compliance with the same standards specified under the VEET however in addition it specifies compliance with 'Electrical installations' (AS/NZS 3000:2007) where applicable. This has been reasonably excluded from the VEET scheme as 'Thermal insulation of dwellings - Bulk insulation - Installation requirements' (AS 3999:2015) has been updated such that it mirrors the relevant electrical installation requirements, where there is overlap.

Training

Current mandatory training requirements for the installation of ceiling insulation under the VEET have been benchmarked against current training requirements under the ICANZ training program, the NSW ESS and the South Australian REES. The comparison of training requirements is shown in the table in section 2.7.2.

It is noted that the training requirements under the ICANZ training program are not necessarily appropriate for other sectors of the industry, such as blow in, or loose fill, products. However, ICANZ is the only industry sector to have a training program, so has been used as a representative set of courses required by industry.

The training requirements under the VEET are less comprehensive than those required under the other schemes or ICANZ training.

Given the focus on risk mitigation in relation to health and safety risks to both installer and households, as well as the environmental performance of installed product, it is recommended that the VEET require a more thorough set of training courses to be undertaken by installers of ceiling insulation.

Training has the potential to considerably reduce the risk profile associated with insulation installation, to a much larger extent than supervision.

The training courses that are recommended to be mandatory for installers are:

Training code	Course name
CPCCOHS1001A	Work safely in the construction industry
CPCCCM2010B	Work safely at heights

CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry
CPCCPB3027A	Install ceiling insulation
CPCCPB3014A	Install batt insulation products

Table 1: Recommended mandatory training requirements for installers of ceiling insulation

We do not recommend that CPCCPB3015A (Install Acoustic and Thermal Environmental Protection Systems) and CPCCCM1015A (Carry out Measurements and Calculations) are made a requirement as they do not relate to the mitigation of work health and safety risks. The exclusion of HLTFA201A (Emergency first aid) as well as a language and literacy test were also deemed acceptable as these competencies are covered off in the included courses, namely CPCCOHS1001A (Work safely in the construction industry) and CPCCOHS2001A (Apply OHS requirements, policies and procedures in the construction industry).

Recommendations

6. Require the following mandatory training requirements for installers:

- Work safely in the construction industry (CPCCOHS1001A)
- Work safely at heights (CPCCM2010B)
- Apply OHS requirements, policies and procedures in the construction industry (CPCCOHS2001A)
- Install ceiling insulation (CPCCPB3027A)
- Install batt insulation products (CPCCPB3014A).

2.7.1 Review of standards

Description	Relevant for the VEET	Required in the VEET	Required in the ESS	Required in the REES
<i>AS 3999 Thermal insulation of dwellings – Bulk insulation installation requirements</i>				
<p>This is the current Standard for bulk insulation installations.</p> <p>Provisions in this standard cover the importance of:</p> <ul style="list-style-type: none"> • Site Inspections prior to proceeding with Installation. • Perimeter edge restraints and protective barriers for down lights, flues, fans etc. for loose fill insulations. • Minimum clearances from ceiling penetrations such as flues, fans and down lights. • Some jurisdictions also refer to provisions in AS/NZS 3000 2007 Clause 4.5.23 for installation of insulation around down lights. • Electric cabling and separators from insulation in stated circumstances. • Snug fitting, butted to timbers and joists. Non-compliance to insulation gaps in AS3999 can cause significant losses in the thermal efficiency of insulation. 	✓	✓	✓	✓
<i>AS/NZS 4859.1 - Materials for the thermal insulation of buildings</i>				
Provides requirements for labelling of products and methods of test for materials that are added to, or incorporated in, opaque envelopes of	✓	✓	✓	✓

Description	Relevant for the VEET	Required in the VEET	Required in the ESS	Required in the REES
buildings designed for human occupancy, to provide thermal insulation by moderating the flow of heat through these elements.				
AS/NZS 3000 - Electrical Installations (known as the Australian/New Zealand Wiring Rules)				
Covers wiring rules for the electrical industry. It includes minimum clearance distance from recessed luminaries, including down lights, electrical equipment and cables. (This standard is relevant for electricians only and reflects the requirement in AS/NZS 3999 for installers. This has been updated since the Home Insulation Program).	x	x	x	✓
AS 4426 - Thermal Insulation of pipe-work, ductwork and equipment - Selection, installation and finish.				
Deals with the selection, installation and finish of thermal insulation for pipework, ductwork, tanks, vessels and equipment in the temperature range of -75°C to +800°C, but excludes manufactured pre-insulated equipment, structural insulation of buildings and cold stores, fireproofing structures, refractory linings of plant, airborne installations and all external underground mains.	x	x	x	x
AS 4508 - Thermal resistance of insulation for ductwork used in building air-conditioning.				
Specifics requirements relating to the optimum thermal resistance of insulation for rigid and flexible ductwork and associated fittings used in	x	x	x	x

Description	Relevant for the VEET	Required in the VEET	Required in the ESS	Required in the REES
heating, air-conditioning and evaporative cooling systems of buildings and dwellings.				
National Construction Code – Building Code of Australia – section J1				
This section relates to building fabric.	x	x	✓	✓

2.7.2 Review of training requirements

Training code	Course name	VEET Explanatory Note⁷	ESS Schedules D6-D9	ICANZ accredited training	REES Schedules BS1A – BS1D
N/A	Language, Literacy and Numeracy Pre-apprentice Test	x	x	✓	x
HLTFA201A	Emergency First Aid (Workplace level 1)	x	x	✓	x
CPCCOHS1001A	Work safely in the construction industry	✓ (or CPCCOHS2001A)	✓	✓	✓
CPCCCM2010B	Work safely at heights	✓ (or CPCCCM2010B, CPCCPB3027A,	✓	✓	✓

⁷ Explanatory Note – Creating Victorian Energy Efficiency Certificates from Prescribed Activities - Version 5.22 – 31 July 2015

Training code	Course name	VEET Explanatory Note⁷	ESS Schedules D6-D9	ICANZ accredited training	REES Schedules BS1A – BS1D
		or CPCCCM1006A)			
CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry	✓ (or CPCCOHS1001A)	✓	✓	✓
CPCCPB3027A	Install ceiling insulation	✓ (or CPCCCM2010B, CPCCCM2010A, or CPCCCM1006A)	✓ (D6-D7 only)	✓	✓
CPCCPB3014A	Install batt insulation products	x	✓	✓	✓
CPCCPB3015A	Install acoustic and thermal environmental protection systems	x	-	✓	-
CPCCCM1015A	Carry out measurements and calculations	x	-	✓	-

3 Management of ceiling insulation outside the VEET

Ceiling insulation can be, and is, installed by households outside of the VEET scheme. If households have issues with the installation or the product, depending on the nature of the issue, complaints can be lodged with and/or processed by ESV and/or Consumer Affairs Victoria.

Consultation suggests that ESV has sufficient capacity to investigate complaints and issues relating to the installation of ceiling insulation from an electrical perspective.

There is currently a limited mandate for Consumer Affairs Victoria for this activity, as domestic insulation installation is highly unlikely to meet the \$5,000 threshold above which tradespeople are required to be registered with the Building Practitioners Board.

However, consumers more broadly are protected by the Australian Consumer Law. Under the Australian Consumer Law, Consumer Affairs Victoria deals with complaints and there is an onus on the consumer to pursue any claims. The support for consumers around investigation of safety issues is not as comprehensive as it is for higher value building works.

This is a similar level of protection for households undertaking the installation of insulation in other jurisdictions in Australia, under the Australian Consumer Law.

Currently, South Australia is the only state that requires all insulation installers to have a licence.

To provide safety and environmental integrity to the activity outside of the VEET, it is recommended that households use an insulation installer that is a member of a recognised industry association, complies with Australian standards and has undertaken relevant training. Sustainability Victoria has a health and safety warning in relation to the installation of insulation and recommends that an experienced professional is employed who has the required skills and knowledge to complete the job safely.

4 Resourcing analysis

This section provides an analysis of the estimated amount of effort required for the implementation of the recommendations. It is noted that the analysis only applies to implementing the recommendation and not the implementation of any further needs that might be identified as part of the process or outcome of implementing the recommendation.

This analysis is dependent upon the level of uptake and demand of the ceiling insulation component of the VEET, as well as final decisions around the level of robustness of the VEET with respect to its ongoing administration, governance and compliance arrangements.

Full details on the resourcing of recommendations is in Table 2.

The following aspects were highlighted as part of the analysis:

- *Type of cost (or potential cost) with respect to resources, finances and administration* – The majority of costs are associated resourcing and administration costs
- *Estimate of cost for delivery* – The majority of costs are low
- *Timeframe for delivery* – All the recommendations relate to actions to be taken over the short to medium term
- *Whether it is an ongoing or one-off commitment* – The majority of effort is associated with recommendations that are one-off. Ongoing effort is required around monitoring and assessing the capacity of various elements of the scheme as part of the ongoing implementation
- *Primary organisation responsible* – This is identifying whether responsibility for the recommendation is linked to the VEET and its implementation, or to changes that could be made to enhance the risk mitigation of the activity more broadly.

Recommendation	Type of cost (or potential cost)	Estimate of cost	Timeframe	One-off or ongoing	Primary stakeholders
	<ul style="list-style-type: none"> Administrative (e.g. process, procedures) Resources (e.g. staff) Financial 	Low - less than \$30,000 Medium - \$30,000 to \$150,000 High - more than \$150,000	Short – prior to implementation Medium – in the first 12 months of implementation Long – over the life of the ESS		<ul style="list-style-type: none"> DEDJTR ESC Audit panel Consumer Affairs Victoria
1. The ESC should report to the Department on its performance in relation to approvals of products and accredited persons and compliance activities in relation to the activity of ceiling insulation.	Administrative Resources	Low	Medium	Ongoing	DEDJTR ESC
2. Deem insulation products which contain foil to be ineligible for approval under the VEET through an explicit statement in the VEET scheme documents.	Administrative	Low	Short	One-off	DEDJTR

Recommendation	Type of cost (or potential cost)	Estimate of cost	Timeframe	One-off or ongoing	Primary stakeholders
3. Update the reference to Australian Standard AS3999-2015 in Schedule 11 of the VEET Regulations.	Administrative Resources	Low	Short	One-off	DEDJTR
4. The ESC should ensure that its Audit and Compliance team has the appropriate resources and knowledge to undertake investigations to assess the compliance of ceiling insulation installation against scheme requirements.	Administrative Financial	Medium	Medium (one year)	Ongoing	ESC Audit panel

Recommendation	Type of cost (or potential cost)	Estimate of cost	Timeframe	One-off or ongoing	Primary stakeholders
5. Undertake risk-based spot audits of the installation of ceiling insulation in the first year of its reintroduction to ensure that installers have completed the mandatory training and they are installing in accordance with relevant Australian Standards.	Administrative	Low	Short to medium	Ongoing	ESC

Recommendation	Type of cost (or potential cost)	Estimate of cost	Timeframe	One-off or ongoing	Primary stakeholders
6. Require the following mandatory training requirements for installers: <ul style="list-style-type: none"> • Work safely in the construction industry (CPCCOHS1001A) • Work safely at heights (CPCCM2010B) • Apply OHS requirements, policies and procedures in the construction industry (CPCCOHS2001A) • Install ceiling insulation (CPCCPB3027A) • Install batt insulation products (CPCCPB3014A). 	Administrative Resources	Low	Short	One-off	ESC

Table 2: Resourcing analysis

Appendix A – Ceiling insulation issues register

The Issues Register identifies the key issues that have been raised in relation to the installation of insulation raised through recent reviews that relate to insulation installation, stakeholder consultation and analysis of the scheme. The Issues Register does not consider any mitigating controls associated with the current design of the VEET that may reduce the initial impact rating. Each of the issues below have been rated as low, medium or high.

Issue	Reference	Issue category	Potential implication for VEET	Impact rating ⁸
Lack of time for adequate risk identification and consideration	Royal Commission Report ⁹	Timeframes for implementation	Unrealistic timeframes and a lack of appropriate resources have the potential to detrimentally impact the effectiveness of the implementation process and prevent risks from being appropriately managed.	High
Lack of thorough consultation	Royal Commission Report	Timeframes for implementation	A lack of industry consultation has the potential to reduce the credibility, efficiency and appropriateness of project design. According to the Royal Commission Inquiry into the HIP a consultation with the electrical industry could have resulted in the prevention of three of the deaths.	Medium
Inadequate time for thorough decision-making on program design	Royal Commission Report	Timeframes for implementation	A lack of time for proper consideration of scheme design can result in inadequate or missing elements of the program, which could raise implementation issues such as safety or fraud.	High
Poorly designed program	Royal Commission Report	Resourcing	Lack of update and implementation issues.	Low
Inability to deliver program properly	Royal Commission Report	Resourcing	Poor implementation resulting in poor uptake, concerns around safety, fraud or environmental integrity.	Low
Inability to implement an adequate audit and compliance regime, leading to potential non-compliance and fraud being undetected	Royal Commission Report	Resourcing	Instances of fraud and non-compliance lead to a poor reputation for the scheme and a lack of environmental integrity.	High
Poor program design that does not incorporate industry context and impacts	Royal Commission Report Ceiling Insulation Due Diligence Review ¹⁰	Industry consultation	The scheme may be less successful due to excess demand relative to industry capacity.	Low
Insufficient distribution of information to scheme participants (e.g. industry) leads to lack of industry buy-in and awareness about scheme requirements, changes, timing, issues, etc.	Royal Commission Report	Industry consultation	The scheme may be less successful due to excess demand relative to industry capacity.	Medium

⁸ Impact ratings: (High – Controls require improvement and consider not proceeding with activity until impact is reduced, Medium – Review and improve controls, Low – Maintain / proceed with controls).

⁹ <http://www.homeinsulationroyalcommission.gov.au/Documentation/Documents/ReportoftheRoyalCommissionintotheHomeInsulationProgram.pdf>

¹⁰ <http://www.energyandresources.vic.gov.au/energy/about/legislation-and-regulation/energy-saver-incentive/activities/ceiling-insulation-due-diligence-review>

Issue	Reference	Issue category	Potential implication for VEET	Impact rating ⁸
Insufficient communication about the scheme to potential scheme participants (residential), leading to a lack of awareness and participation in the scheme	Scheme assessment Ceiling Insulation Due Diligence Review	Industry consultation	The scheme may not achieve the same energy efficiency outcomes as anticipated due to a lack of awareness or take up of the scheme.	Low
Barriers to entry are too low and the VEET is flooded with applications	Royal Commission Report Stakeholder consultation	Program design	If the scheme is very easy to participate in and there are good incentives, then there will be very strong demand and potential fraud.	Medium
Barriers to entry are too high/onerous and there are no participants	Scheme assessment Ceiling Insulation Due Diligence Review	Program design	The scheme may not achieve the same energy efficiency outcomes as anticipated due to the difficulty to participate and consequent low take up of the scheme.	Medium
Includes high risk products such as foil	Ceiling Insulation Due Diligence Review Royal Commission Report	Program design	Increases the risk of safety issues.	High
Design does not match industry capacity or capability to deliver in the short or medium-long term	Ceiling Insulation Due Diligence Review Royal Commission Report	Program design	Mismatched scheme demand and supply could result in damage to scheme reputation, potential fraud and increased risks to safety.	High
Policy does not properly consider or understand implementation issues	Royal Commission Report	Scheme governance	A lack of understanding of implementation issues could result in poorly designed policy to support the scheme.	Low
Policy does not respond to identified risks, once program is implemented	Royal Commission Report	Scheme governance	This could lead to risks around implementation such as safety, environmental integrity, fraud.	High
Lack of ownership of risks/issues as they arise resulting in no response	Royal Commission Report	Scheme governance	This could lead to risks not being appropriately considered and dealt with.	High
Lack of communication and coordination between organisations involved	Royal Commission Report	Scheme governance	This could lead to risks not being appropriately considered and dealt with.	High
Organisations involved are not aware of their responsibilities	Royal Commission Report	Scheme governance	This could lead to risks not being appropriately considered and dealt with.	High
Lack of industry regulation	Stakeholder consultation	Scheme governance	A lack of regulation may put additional pressure on organisations involved to regulate the industry, and may lead to additional risks.	Low
Significant health and safety risks to installers, particularly in increasing the risk of electrocution	VEET scheme documents Ceiling Insulation Due Diligence Review Royal Commission Report Stakeholder consultation	Training and standards	The absence of a sufficient requirements for training has significant implications especially with regard to the health and safety of inexperienced practitioners. Training has the potential to considerably reduce the risk profile associated with insulation installation, to a much larger extent than supervision.	High
Reputational risks following the HIP	Royal Commission Report	Training and standards	The poor reputation surrounding the HIP may discourage some households to consider participating in the scheme.	Low

Issue	Reference	Issue category	Potential implication for VEET	Impact rating⁸
Fire and electrical safety risks arising from the improper installation of ceiling insulation	VEET scheme documents Royal Commission Report Ceiling Insulation Issues Paper Ceiling Insulation Due Diligence Review Stakeholder consultation	Training and standards	The absence of a sufficient requirements for training has significant implications especially with regard to safety risks.	High
There are additional health and safety risks on the ground, which are not being identified or managed	Royal Commission Report Ceiling Insulation Issues Paper Ceiling Insulation Due Diligence Review Stakeholder consultation	Audit and compliance	Poor audit and compliance of health and safety issues can lead to inadequate identification or management of these issues.	High
Non-compliance and fraud	VEET scheme documents Royal Commission Report Ceiling Insulation Issues Paper	Audit and compliance	This would impact scheme integrity and reputation of the organisations involved in the scheme.	High
Insulation is not installed properly or does not meet standards, so actual energy savings do not equate to estimated/deemed savings	Stakeholder consultation	Audit and compliance	This would impact on the environmental integrity of the scheme, which is the key objective, and make the scheme less effective.	High

Appendix B – Impact and control matrix

The impact and control matrix contains all the findings that have been initially considered as having a medium or high impact on the scheme, in relation to safety, consumer protection and/or environmental integrity. The initial impact rating does not include the consideration of any controls that are currently in place either through the current design of the VEET scheme, and industry or government regulatory frameworks which are designed to mitigate risks. The 'control' column identifies the relevant controls that currently apply to the issue, either through the design of the VEET or through other regulatory frameworks. These issues were then given a residual impact rating of high, medium or low, depending on the extent of mitigation provided by the control.

The outstanding gap, and a recommendation to address the gap (and thereby reduce the residual impact rating to low), is then identified for all the issues that are considered to have a residual impact rating of medium and high.

Issue #	Issue category	Issue	Reference	Initial impact rating ¹¹	Control	Residual impact rating	Gap	Recommendation
1	Timeframes for implementation	Lack of time for adequate risk identification and consideration	Royal Commission Report	High	The consideration of reintroducing ceiling insulation into the VEET has involved a long lead time - since the completion of the Home Insulation Program (HIP), and there has been a clear timeframe for the expiry of the zero discount factor.	Low		
2	Timeframes for implementation	Lack of thorough consultation	Royal Commission Report	Medium	The consideration of reintroducing ceiling insulation into the VEET has involved a number of elements of consultation, including a 'Ceiling Insulation Issues Paper', a due diligence review, and consultation with the Essential Services Commission.	Low		
3	Timeframes for implementation	Inadequate time for thorough decision-making on program design	Royal Commission Report	High	The consideration of reintroducing ceiling insulation into the VEET has involved a long lead time - since the completion of the Home Insulation Program (HIP), and there has been a clear timeframe for the expiry of the zero discount factor.	Low		
4	Resourcing	Inability to implement an adequate audit and compliance regime	Royal Commission Report	High	A robust audit and compliance regime was set up when the scheme commenced and has been running since then. The additional resourcing requirements in relation to the reintroduction of ceiling insulation is unknown and therefore the future capacity of the ESC to implement the audit and compliance regime is unknown.	Medium	The capacity of the ESC to implement the audit and compliance regime is unknown as the future additional requirements, due to the reintroduction of ceiling insulation, are unknown.	The ESC should report to the Department on its performance in relation to approvals of products and accredited persons and compliance activities in relation to the activity of ceiling insulation.

¹¹ Impact ratings: (High – Controls require improvement and consider not proceeding with activity until impact is reduced, Medium – Review and improve controls, Low – Maintain / proceed with controls).

Issue #	Issue category	Issue	Reference	Initial impact rating ¹¹	Control	Residual impact rating	Gap	Recommendation
5	Industry consultation	Insufficient distribution of information to scheme participants (e.g. industry) leads to lack of industry buy-in and awareness about scheme requirements, changes, timing, issues, etc.	Royal Commission Report	Medium	Information has been provided to scheme participants and their input sought through a discussion paper. Industry has been engaged throughout the VEET, including their previous involvement when ceiling insulation was an activity eligible to generate certificates.	Low		
6	Program design	Barriers to entry are too low and the VEET is flooded with applications	Royal Commission Report Stakeholder consultation	Medium	The VEET scheme has stronger barriers to entry than the HIP, including minimum training requirements and an approved person process, which will uphold the standards for the installers. The VEET scheme requires co-funding from households which will result in a smaller uptake relative to the HIP. Additionally, this scheme is in Victoria only and is not national which limits the geographic scope and potential scheme participants.	Low		
7	Program design	Includes high risk products such as foil	Royal Commission Report	High	The VEET scheme requires products to be approved prior to their eligibility in the scheme. Currently, no foil products have been approved. However, there is no ban on foil products applying for approval.	Medium	The VEET scheme is not clear on whether foil products could potentially be submitted for approved and/or approved as eligible products	Deem insulation products which contain foil to be ineligible for approval under the VEET through an explicit statement in the VEET scheme documents.
8	Program design	Design does not match industry capacity or capability to deliver in the short or medium-long term	Royal Commission Report	High	The program design is sufficiently different to the HIP to mitigate issues around insufficient capacity within the industry to deliver the program in the short or medium term. The VEET requires some training. A range of industry-specific training courses have recently been rolled out across Australia, however it has had limited take up so far. The requirement for training under the VEET may see greater take-up, however it is unlikely to create a large demand that can't be met by Registered Training Organisations.	Low		

Issue #	Issue category	Issue	Reference	Initial impact rating ¹¹	Control	Residual impact rating	Gap	Recommendation
					Additionally, the lower incentive under the VEET (relative to the HIP), and the process for households to access the support is more onerous so is likely to see lower take up of the VEET than the HIP.			
9	Program design	Barriers to entry are too high/onerous and there are no participants	Scheme assessment	Medium	There is currently nothing to mitigate the potential of barriers to entry that are too high. Changes proposed to the scheme by the ESC, designed to further enhance the robustness of the scheme, may add further complexity and cost to participation which may discourage participants in the ceiling insulation activity of the scheme. The impact of this issue, however, on environmental integrity and/or safety is low.	Low		
10	Scheme governance	Policy does not respond to identified risks, once program is implemented	Royal Commission Report	High	The VEET scheme is administered by the Essential Services Commission (ESC) which has a VEET risk register to identify and respond to risks. There is also a strong working relationship between the administrator and the policy agency (the Department) to allow for communication of issues, including fortnightly meetings between agencies.	Low		

Issue #	Issue category	Issue	Reference	Initial impact rating ¹¹	Control	Residual impact rating	Gap	Recommendation
11	Scheme governance	Lack of ownership of risks/issues as they arise resulting in no response	Royal Commission Report	High	The VEET scheme is administered by the Essential Services Commission (ESC) which has a VEET risk register to identify and respond to risks. There is also a strong working relationship between the administrator and the policy agency (the Department) to allow for communication of issues, including fortnightly meetings between agencies. The ESC has processes to identify and undertake enforcement of compliance issues.	Low		
12	Scheme governance	Lack of communication and coordination between organisations involved	Royal Commission Report	High	The VEET scheme is administered by the ESC which has a VEET risk register to identify and respond to risks. There is also a strong working relationship between the administrator and the policy agency (the Department) to allow for communication of issues, including fortnightly meetings between agencies. Development and administration of the scheme only involves two agencies, so this limits the potential for lack of coordination and communication.	Low		
13	Scheme governance	Organisations involved are not aware of their responsibilities	Royal Commission Report	High	The VEET scheme is administered by the ESC and the policy is managed by the Department. They are both highly aware of their responsibilities in relation to the scheme.	Low		
14	Training and standards	Significant health and safety risks to installers, particularly in increasing the risk of electrocution	VEET scheme documents Ceiling insulation due diligence review Royal Commission Report Stakeholder consultation	High	The VEET scheme involves some minimum training requirements.	Medium	There are additional training requirements that would further mitigate any health and safety issues for both installers and households.	Require the following mandatory training requirements for installers: <ul style="list-style-type: none"> • Work safely in the construction industry (CPCCOHS1001A) • Work safely at heights (CPCCM2010B) • Apply OHS requirements, policies and

Issue #	Issue category	Issue	Reference	Initial impact rating ¹¹	Control	Residual impact rating	Gap	Recommendation
								<p>procedures in the construction industry (CPCCOHS2001A)</p> <ul style="list-style-type: none"> • Install ceiling insulation (CPCCPB3027A) • Install batt insulation products (CPCCPB3014A).
15	Training and standards	Fire and electrical safety risks arising from the improper installation of ceiling insulation	VEET scheme documents Royal Commission Report Ceiling Insulation Issues Paper Stakeholder consultation	High	The VEET scheme involves some minimum training requirements around installation. However, the current lack of approved foil products greatly reduces the health and safety risks to installers.	Low		
16	Audit and compliance	There are additional health and safety risks on the ground, which are not being identified or managed	VEET scheme documents Royal Commission Report Ceiling Insulation Issues Paper Stakeholder consultation	High	The audit regime currently involves an assessment of the creation of VEECs by the ESC. The explanatory note indicates that the assessment does not necessarily involve a full compliance check of the Accredited Person against the scheme requirements as outlined in Schedule 11 of the VEET Act. The audit and compliance regime does not involve an independent audit over the installation of ceiling insulation and does not involve physical checks at any locations to identify any health and safety risks.	High	Non-compliance and potential health and safety risks are not being picked up at the time they are occurring.	Undertake risk-based spot audits of the installation of ceiling insulation in the first year of its reintroduction to ensure that installers have completed the mandatory training and they are installing in accordance with relevant Australian Standards.

Issue #	Issue category	Issue	Reference	Initial impact rating ¹¹	Control	Residual impact rating	Gap	Recommendation
17	Audit and compliance	Non-compliance and fraud	VEET scheme documents Royal Commission Report Ceiling Insulation Issues Paper	High	The audit regime currently involves an assessment of the creation of VEECs by the ESC. The explanatory note indicates that the assessment does not necessarily involve a full check of the Accredited Person against the scheme requirements as outlined in Schedule 11 of the VEET Act. The audit and compliance regime currently does not involve an independent audit over the installation of ceiling insulation which could compromise the ability to pick up non-compliance and fraud.	High	The level of knowledge and skills of the ESC and the audit panel around assessment of ceiling insulation and its installation is unknown. The assessment in the VEEC creation process does not involve site visits, only desktop audits, and does not specifically involve a check of compliance against scheme requirements.	The ESC should ensure that its Audit and Compliance team has the appropriate resources and knowledge to undertake investigations to assess the compliance of ceiling insulation installation against scheme requirements. Undertake risk-based spot audits of the installation of ceiling insulation in the first year of its reintroduction to ensure that installers have completed the mandatory training and they are installing in accordance with relevant Australian Standards.
18	Audit and compliance	Insulation is not installed properly or does not meet standards, so actual energy savings do not equate to estimated/deemed savings	VEET scheme documents Stakeholder consultation	High	Audits are not required in relation to every installation of ceiling insulation. The ESC assesses the eligibility of the creation of VEECs using random selection and a series of risk indicators. The risk rating that an Accredited Person holds determines the quantity and frequency of the checks.	Medium	The level of knowledge and skills of the audit panel around assessment of ceiling insulation and its installation is unknown.	The ESC should ensure that its Audit and Compliance team has the appropriate resources and knowledge to undertake investigations to assess the compliance of ceiling insulation installation against scheme requirements.

Appendix C – Impact of recommendations on VEET scheme

The impact of recommendations matrix contains all the findings that have been initially considered as having a high impact on the scheme, in relation to safety, consumer protection and/or environmental integrity. The initial impact rating does not include the consideration of any controls that are currently in place either through the current design of the VEET scheme, and industry or government regulatory frameworks which are designed to mitigate risks. The 'control' column identifies the relevant controls that currently apply to the issue, either through the design of the VEET or through other regulatory frameworks. These issues were then given a residual impact rating of high, medium or low, depending on the extent of mitigation provided by the control.

The outstanding gap, and a recommendation to address the gap is then identified for all the issues that are considered to have a residual impact rating of medium and high (and thereby reduce the impact rating to low after factoring in the recommendation).

Issue category	Issue	Reference	Initial impact rating ¹²	Control	Residual impact rating	Gap	Recommendation	Impact rating after recommendation
Resourcing	Inability to implement an adequate audit and compliance regime	Royal Commission Report	High	A robust audit and compliance regime was set up when the scheme commenced and has been running since then. The additional resourcing requirements in relation to the reintroduction of ceiling insulation is unknown and therefore the future capacity of the ESC to implement the audit and compliance regime is unknown.	Medium	The capacity of the ESC to implement the audit and compliance regime is unknown as the future additional requirements, due to the reintroduction of ceiling insulation, are unknown.	The ESC should report to the Department on its performance in relation to approvals of products and accredited persons and compliance activities in relation to the activity of ceiling insulation.	Low
Program design	Includes high risk products such as foil	Royal Commission Report	High	The VEET scheme requires products to be approved prior to their eligibility in the scheme. Currently, no foil products have been approved. However, there is no ban on foil products applying for approval.	Medium	The VEET scheme is not clear on whether foil products could potentially be submitted for approved and/or approved as eligible products	Deem insulation products which contain foil to be ineligible for approval under the VEET through an explicit statement in the VEET scheme documents.	Low
Training and standards	Significant health and safety risks to installers, particularly in increasing the risk of electrocution	VEET scheme documents Ceiling insulation due diligence review Royal Commission Report Stakeholder consultation	High	The VEET scheme involves some minimum training requirements.	Medium	There are additional training requirements that would further mitigate any health and safety issues for both installers and households.	Require the following mandatory training requirements for installers: <ul style="list-style-type: none"> • Work safely in the construction industry (CPCCOHS1001A) • Work safely at heights (CPCCM2010B) 	Low

¹² Impact ratings: (High – Controls require improvement and consider not proceeding with activity until impact is reduced, Medium – Review and improve controls, Low – Maintain / proceed with controls).

Issue category	Issue	Reference	Initial impact rating ¹²	Control	Residual impact rating	Gap	Recommendation	Impact rating after recommendation
							<ul style="list-style-type: none"> Apply OHS requirements, policies and procedures in the construction industry (CPCCOHS2001A) Install ceiling insulation (CPCCPB3027A) Install batt insulation products (CPCCPB3014A). 	
Audit and compliance	There are additional health and safety risks on the ground, which are not being identified or managed	VEET scheme documents Royal Commission Report Ceiling Insulation Issues Paper Stakeholder consultation	High	The audit regime currently involves an assessment of the creation of VEECs by the ESC. The explanatory note indicates that the assessment does not necessarily involve a full compliance check of the Accredited Person against the scheme requirements as outlined in Schedule 11 of the VEET Act. The audit and compliance regime does not involve an independent audit over the installation of ceiling insulation and does not involve physical checks at any locations to identify any health and safety risks.	High	Non-compliance and potential health and safety risks are not being picked up at the time they are occurring.	Undertake risk-based spot audits of the installation of ceiling insulation in the first year of its reintroduction to ensure that installers have completed the mandatory training and they are installing in accordance with relevant Australian Standards.	Low

Issue category	Issue	Reference	Initial impact rating ¹²	Control	Residual impact rating	Gap	Recommendation	Impact rating after recommendation
Audit and compliance	Non-compliance and fraud	VEET scheme documents Royal Commission Report Ceiling Insulation Issues Paper	High	The audit regime currently involves an assessment of the creation of VEECs by the ESC. The explanatory note indicates that the assessment does not necessarily involve a full check of the Accredited Person against the scheme requirements as outlined in Schedule 11 of the VEET Act. The audit and compliance regime currently does not involve an independent audit over the installation of ceiling insulation which could compromise the ability to pick up non-compliance and fraud.	High	The level of knowledge and skills of the ESC and the audit panel around assessment of ceiling insulation and its installation is unknown. The assessment in the VEEC creation process does not involve site visits, only desktop audits, and does not specifically involve a check of compliance against scheme requirements.	The ESC should ensure that its Audit and Compliance team has the appropriate resources and knowledge to undertake investigations to assess the compliance of ceiling insulation installation against scheme requirements.	Low
Audit and compliance	Insulation is not installed properly or does not meet standards, so actual energy savings do not equate to estimated/deemed savings	VEET scheme documents Stakeholder consultation	High	Audits are not required in relation to every installation of ceiling insulation. The ESC assesses the eligibility of the creation of VEECs using random selection and a series of risk indicators. The risk rating that an Accredited Person holds determines the quantity and frequency of the checks.	Medium	The level of knowledge and skills of the audit panel around assessment of ceiling insulation and its installation is unknown.	The ESC should ensure that its Audit and Compliance team has the appropriate resources and knowledge to undertake investigations to assess the compliance of ceiling insulation installation against scheme requirements.	Low