



The **thinking** behind
our everyday essentials

Victorian Energy Efficiency Target – Energy Saver Incentive

Submission Guidelines for the creation of new activity categories

August 2009

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1. Introduction

The Victorian Government is committed to taking strong action on climate change. The Government is implementing a range of initiatives to help Victorians cut greenhouse emissions and their energy costs.

The Energy Saver Incentive is an innovative new scheme to support households to become more energy efficient, and is one of the first mandatory energy efficiency target schemes in Australia. The target itself - the Victorian Energy Efficiency Target (VEET) - is a legislative requirement for energy retailers under the Victorian Energy Efficiency Target Act 2007 ('the Act').

The objectives of the Act are to:

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

Section 15 of the Act describes conditions by which Regulations may prescribe eligible activities to be undertaken. Activities must result in a reduction in greenhouse gas emissions that would not have otherwise occurred.

The Energy Saver Incentive (ESI) scheme commenced on 1 January 2009 and is administered by Victoria's Essential Services Commission (ESC). The first phase of the scheme, to be completed by the end of 2011, will save 8.1 million tonnes of greenhouse gas from being emitted.

The Opportunity

ESI sets a target for greenhouse abatement resulting from the implementation of energy efficiency activities, initially in the residential sector. It requires energy retailers which have more than 5000 customers to meet their specified target through energy efficiency "activities" that are set out in the Regulations. The targets allocated to each retailer are based on their acquisitions of electricity and gas in a given year.

Under Section 75 of the Act, Regulations can be made to determine a range of matters essential to the operation of the scheme, such as eligible activities. The Victorian Energy Efficiency Target Regulations 2008 ('the Regulations') were made for this purpose in December 2008..

Current eligible VEET activities can be accessed from the Energy Saver Incentive section of the website at www.saveenergy.vic.gov.au.

Assessing eligible activities

The VEET Regulatory Impact Statement ('RIS') (September 2008) provided a process for assessing new activities that could be included in the VEET, post the scheme's initial establishment.

To meet this undertaking, the Department of Primary Industries ('DPI') has established a VEET Activities Review Panel to assess applications for potential new activities. If activities are considered suitable for inclusion, recommendations to amend the Regulations will be made.

DPI invites interested parties to provide submissions for activities which may be eligible for inclusion in the VEET Scheme, based on the criteria contained in these Guidelines. These criteria have been based on the objectives of the Act and Regulations, and practical administrative considerations.

Eligible activities under the VEET Scheme are *generic energy efficiency measures*, and do not relate to a specific product (as identified by a brand or model number) or product type. Any new activities must be based on a generic energy efficiency measure, and be justified as representing a gap in the current Scheme or because existing Regulations do not adequately accommodate the activity.

Prior reading

Interested parties are advised to consider the following documents in preparing their submissions:

- *Victorian Energy Efficiency Target Act 2007*
- *Victorian Energy Efficiency Target Regulations 2008*
- *Victorian Energy Efficiency Scheme Guidelines December 2008*

The VEET RIS will also provide useful background on the rationale underpinning the Regulations, and can be downloaded from the DPI website at <http://www.dpi.vic.gov.au/energysaverincentive>

No representation or warranty

By accepting an application, DPI makes no representation or warranty that a new activity will be approved for the purposes of the VEET.

Cost of preparing submissions

Parties are responsible for the cost of preparing and lodging a submission and all other costs arising out of the preparation process, including independent testing and the costs of any third persons engaged by the party.

Publishing of submissions

Parties should be aware that DPI may publish a submission and associated relevant information in either printed or electronic form. DPI understands the need to keep commercial matters confidential in appropriate circumstances. If any elements of a submission or associated information are to be regarded as confidential to the submitting party, that information should be clearly identified to DPI.

Independent testing

In lodging a submission, parties acknowledge DPI's right to engage consultants and contractors to assist it in the assessment process, and to disclose information (that might otherwise be identified as confidential by a party) to such persons for those purposes.

Use of these submission guidelines

Submitting parties should provide the information requested in the format outlined in these guidelines, and enclose additional information when required. Submissions should address:

- Section 2 – Summary Details
- Section 3 – Claims Against Assessment Criteria
- Section 4 – Additional Criteria

Further information

DPI may ask parties who have lodged a submission to provide further information, or to clarify the information provided.

How to lodge a submission

Parties should send a copy of their completed submission material to:

Victorian Energy Efficiency Target (VEET) Activity Submission
Energy Sector Development Division
Department of Primary Industries
GPO Box 4440
Melbourne Vic 3001

Alternatively, an electronic copy can be provided to DPI via email at:
energysaverincentive@dpi.vic.gov.au

2. Summary details

Identity of interested party

- Name
- Company Name (if applicable)
- ABN/ACN (if applicable)
- Address

Contact person

- Name
- Telephone – including mobile
- Email

Summary of proposal

Explain why the activity should be included in VEET as a new prescribed activity.

- Briefly describe the activity (maximum 100 words)
- Explain how this activity meets the key objectives of VEET and the requirements for prescribed activities (refer to Section 15 of the Act).

3. Claims against assessment criteria

3.1 Estimate of average energy & greenhouse savings

In this section you will need to establish the basis for the claimed energy and greenhouse saving resulting from the proposed activity. To assist interested parties, an example of a response, for purposes of this section, is included at Appendix A.

- Provide details of relevant recognised test standards¹ which can be used to assess the energy performance of any products relevant to this activity, or the energy saving achieved by the activity. If a recognised test standard is not currently available, please outline your proposed methodology for assessing the energy performance of products and the energy saving achieved by the activity by comparing it to the average energy consumption prior to undertaking the activity.
- Provide your estimate of the annual and lifetime energy savings which are achieved for the average Victorian household each time this activity is implemented. Explain how you have arrived at this estimate, including any assumptions relating to fuel type, products, product life, and usage of products or other human behaviour. If a product is involved, describe how the savings can be verified through supporting data.
- You may provide an estimate of the number of VEET certificates generated by the activity, by providing an estimate of the annual and lifetime greenhouse savings which are achieved, based on greenhouse coefficients (indicative coefficients can be obtained from the VEET RIS). Please describe any algorithms you have used, and indicate any discount factors to account for uncertainties associated with the size of the energy savings. (*Note that if the proposed activity is accepted any final algorithm used may not be the same as the one you have proposed.*)
- In presenting your assumptions, please carefully consider eligibility under Section 15 of the Act. This should include consideration of current or proposed regulatory requirements or other policy measures which could affect the level of savings achieved under this activity.

3.2 Implementation of the proposed new VEET activity

This section is used to consider issues around how the activity may be implemented in residences.

- Most VEET activities require evidence of installation of a device, item of equipment, appliance, product, building material, etc. This is to provide certainty that the activity has been undertaken and to assist with auditing requirements. Please provide details of the level of qualification, certification or other appropriate evidence required to implement the proposed activity.
- Please identify any occupational health and safety issues associated with this activity, and how they would be addressed. Please provide supporting evidence to demonstrate this process will effectively address any OHS issues.

¹ These could be Australian Standards, widely used international standards, or standards and tests used as the basis of certification schemes in Australia or other countries.

3.3 Likely cost-effectiveness of the activity and market potential

Your response to this section will provide the panel with information regarding the cost of implementing the activity and the likely uptake.

- Please provide your estimate of the likely cost of implementing this activity (including capital costs and installation costs) and the proportion of this cost that you anticipate the householder will be prepared to pay.
- Please provide your estimate of the likely take-up² of this activity in the context of the VEET scheme. This should include your estimate of the total size of the potential market (eg total number of installations possible), as well as the expected number of installations during a one-year period. Please provide supporting evidence to show that your expected level of take-up is realistic.

3.4 Innovation and industry development

This section analyses the positive impacts on industry

- Please discuss any product or service innovation, or any industry development that might arise from the inclusion of this activity in VEET, including any likely investment or employment creation in Australia/Victoria. Please provide evidence to justify any claims made.

3.5 Compliance and verification

Verification of savings is an important element of VEET. For consideration as a new activity, proposals must identify that compliance is verifiable from a practical perspective.

- Please explain how you anticipate that it will be possible to verify compliance with the proposed activity, and the likely administrative costs of this.
- Please explain how you anticipate that energy savings associated with the product can be objectively measured.

² Take-up refers to the total number of times the activity is implemented.

4. Additional considerations

DPI will also assess each proposal against three criteria that examine the holistic impact of proposals on the scheme. Parties may choose to make further claims against each of the criteria.

4.1 Quality standards

- Please describe existing defined standards that underpin quality assurance and consistency of performance.
- Where defined standards do not exist, please discuss the risk of quality expectations not being met and the impact on the reputation of the scheme.

4.2 Consistency with other schemes

- Please provide information regarding any links to activities and specifications eligible in similar schemes in other state jurisdictions, to promote consistency wherever possible.

4.3 Risks

- Please provide details of any other benefits or risks associated with the proposed activity.

5. Declaration

All information in the submission for a new VEET activity must be accompanied by a Statutory Declaration from the interested party using the form set out below, to declare that the information contained in the submission is true and correct to the best of the party's knowledge, information and belief.

Where the party is a body corporate, evidence of the relevant authority of the declarant to sign on behalf of the body corporate must also be provided to DPI.

Statutory Declaration

I.....,
(full name)

of.....,
(address)

....., do solemnly and sincerely declare that:-
(occupation)

the information contained in this Application for a new energy efficiency activity under the VEET Scheme is true and correct to the best of my knowledge information and belief.

I acknowledge that this declaration is true and correct, and I make it with the understanding and belief that a person who makes a false declaration is liable to the penalties of perjury.

Signature

Signature of person making the declaration

(To be signed in front of an authorised witness. Where the party is a body corporate, the declaration must be made by a person authorised by body corporate to sign on its behalf)

Declared at:this day of200..

Before

me:.....
(Signature of authorised witness)

The authorised witness must print or stamp his or her name, address, and title under section 107A of the Evidence Act 1958 [Vic.] (eg. Justice of the Peace, Pharmacist, Police Officer, Court Registrar, Bank Manager, Medical Practitioner, Dentist)

Appendix A

Example of response for 3.1 Estimate of average energy & greenhouse savings - Low Flow Shower Rose

1. Provide details of recognised standards

The Australian Standard *AS/NZS 3662:2005 Performance of Showers for Bathing* specifies performance requirements for shower roses, and *AS/NZS 6400:2005 Water Efficient Products – Rating and Labelling* specifies requirements for the rating of products for water efficiency, and includes the associated registration, labelling and, where applicable, minimum performance requirements.

This activity is based on the replacement of an existing un-rated (or non-low flow) shower rose with a shower rose which complies with the requirements of AS/NZS 3662:2005 and has a Water Efficiency Rating of at least 3-Stars under the WELS scheme, as measured by AS/NZS 6400:2005.

2. Provide an estimate of the annual and lifetime savings achieved by the average Victorian household

Input Data/Assumptions

| | |
|---|------|
| Av. number of people per household | 2.41 |
| Av. number of showers per day per person | 0.9 |
| Av. flow rate of existing unrated shower rose (L/min) | 12 |
| Av. time for shower - existing shower rose (mins) | 6.7 |
| Av. flow rate for 3-Star shower rose (L/min) | 8.1 |
| Average shower time for 3-Star shower rose (Mins) | 6.9 |
| Cold water temperature – T _c (°C) | 14.5 |
| Hot water temperature - T _h (°C) | 60 |
| Average shower temperature - T _s (°C) | 40 |
| Assumed life of the saving (Yrs) | 10 |
| Discount factor (to take into account BAU uptake) | 80% |

Victorian water heating penetrations
& performance

| Type of water heater | Av. Stock Conversion Efficiency | Penetration |
|-----------------------------|---------------------------------|-------------|
| Electric | 98% | 28.9% |
| Solar electric or heat pump | 230% | 1.0% |
| Natural gas | 82% | 67.9% |
| LPG/other | 82% | 1.5% |
| Solar gas | 215% | 0.1% |
| Wood | 55% | 0.6% |

Estimated annual water saving for installing LF shower rose
 $= 2.41 \times 0.9 \times 365 \times [(12 \times 6.7) - (8.1 \times 6.9)]$
 $= 19,404 \text{ Litres/year at } 40 \text{ }^\circ\text{C}$

% of water saving which is hot water
 $= (T_s - T_c) / (T_h - T_c) \times 100\%$
 $= (25.5 / 45.5) \times 100\%$
 $= 56\%$

Estimated annual hot water saving for installing LF shower rose
 $= 19,404 \times 56\%$
 $= 10,866 \text{ Litres/year at } 60^\circ\text{C}$

Base energy saving (MJ/Yr)
 $= [\text{Litres} \times (T_h - T_c) \times 4.186] / 1000$
 $= 10,866 \times 45.5 \times 4.186 / 1000$
 $= 2,070 \text{ MJ/Yr}$

The annual energy savings for the average Victorian household are calculated by taking into account the average conversion efficiency of each type of water heater, and the penetration of each type of water heater.

| Type of water heater | Conversion Efficiency | Unit Energy Saving (MJ/Yr) | Penetration | Weighted Saving (MJ/Yr) |
|-----------------------------|-----------------------|----------------------------|-------------|-------------------------|
| Electric | 98% | 2,112 | 29% | 612.5 |
| Solar electric or heat pump | 230% | 900 | 1% | 9.0 |
| Natural gas | 82% | 2,534 | 68% | 1,716.3 |
| LPG/other | 82% | 2,534 | 2% | 50.7 |
| Solar gas | 215% | 963 | 0.1% | 1.0 |
| Wood | 55% | 3,764 | 1% | 37.6 |
| Total Saving | | | | 2,427.1 |

Estimated lifetime savings
 $= 2,427.1 \times 10$
 $= 24,271 \text{ MJ}$

Estimated lifetime saving taking into account the discount factor
 $= 24,271 \times 80\%$
 $= 19,417 \text{ MJ}$

3. Estimate the number of VEET certificates

To estimate annual greenhouse savings the weighted annual savings for each type of water heater are multiplied by the greenhouse coefficient for the relevant fuel.

| Type of water heater | Weighted fuel saving (MJ/Yr) | Greenhouse Coefficient (kg/MJ) | Greenhouse Saving (kg/Yr) |
|-----------------------------|------------------------------|--------------------------------|---------------------------|
| Electric | 612.5 | 0.2675 | 163.8 |
| Solar electric or heat pump | 9.0 | 0.2675 | 2.4 |
| Natural gas | 1,716.3 | 0.0573 | 98.3 |
| LPG/other | 50.7 | 0.065 | 3.3 |
| Solar gas | 1.0 | 0.0573 | 0.06 |
| Wood | 37.6 | 0.014 | 0.5 |
| | | | 268.4 |

Estimated lifetime greenhouse abatement
= 268.4×10
= 2,684 kg = 2.684 Tonnes

Estimated lifetime greenhouse abatement, taking into account the discount factor
= $2.684 \times 80\%$
= 2.15