

Victorian Energy Upgrades: Proposed Activity

Building Energy Management Information Systems (EMIS)
Issues Paper



Author

This document has been prepared by the Department of Environment, Land, Water and Planning.

December 2020

Acknowledgment

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

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



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Overview

About the Victorian Energy Upgrades (VEU) program

The Victorian Energy Upgrades (VEU) program is established under the *Victorian Energy Efficiency Target Act 2007* to help Victoria reduce its greenhouse gas emissions, reduce the use of electricity and gas and invest in industries that provide energy demand management technology and services. The program provides subsidies for residential and business consumers to reduce their energy use by upgrading appliances, processes or buildings.

The VEU program works by creating financial incentives for households and businesses to undertake energy saving activities. When accredited businesses (known as accredited providers) undertake eligible energy efficiency improvements in homes or businesses, they create Victorian Energy Efficiency Certificates (VEECs). Each VEEC represents one tonne of greenhouse gas emissions saved over the lifetime of the activity or product installed. VEECs can then be sold to energy retailers who must meet an emission savings target each year based on their annual electricity and gas sales.

The VEU program includes energy saving activities for both households and businesses. Activities currently available for business in the program include lighting upgrades, installation of high efficiency motors, upgrades to gas-fired boilers, and energy efficiency projects whose impacts are measured through project-based activities methods (e.g. measurement and verification).

Purpose of the building Energy Management Information System (EMIS) issues paper

The Department of Environment, Land, Water and Planning (the department) is looking at expanding the range of energy efficiency upgrades (activities) available under the VEU program and is seeking feedback from stakeholders on four potential new activities, including;

- upgrades to the refrigeration equipment of cold rooms
- installation of Energy Management Information Systems (EMIS) in commercial buildings
- upgrades to install lagging (insulation) on pipework for gas systems
- the installation of smart thermostats for residential heating and cooling systems.

The purpose of this document is to set out options to introduce the installation of EMIS in commercial buildings as an activity in the VEU program and to seek the views of interested stakeholders.

Have your say

Stakeholders can submit their feedback on the four potential new activities using the **new activities consultation response template and/or the survey**, both available on the [Engage Victoria](https://engage.vic.gov.au/victorian-energy-upgrades-new-activities-consultation) website <https://engage.vic.gov.au/victorian-energy-upgrades-new-activities-consultation>. Please submit your feedback to the questions in the building EMIS issues paper by completing the new activities consultation response template and/or the survey and uploading your submission to the Engage Victoria website. Feedback from stakeholder submissions will be used to guide the creation and implementation of the new VEU activities.

Submissions can also be emailed to energy.upgrades@delwp.vic.gov.au or sent as a hard copy submission to: *Victorian Energy Upgrades, Department of Environment, Land, Water and Planning, PO Box 500, East Melbourne, VIC 8002*. If you make a submission by email or post, please ensure to state whether the department can publish your submission.

This consultation will close on 5 February 2021.

Glossary

Automated System Optimisation (ASO) products: use 'behind the meter' data to obtain disaggregated energy data from one specific energy-using building system and directly control this system to optimise its functioning and efficiency.

Basic EMIS: primarily use data obtained from the building energy meters and energy utility billing to offer generally limited diagnosis of energy use and advice on potential efficiencies.

Building Management System: otherwise known as a building automation system (BAS), is a computer-based control system installed in buildings that controls and monitors the building mechanical and electrical equipment including ventilation, lighting, power systems, fire systems, and security systems.¹

Energy Management Information System (EMIS): Energy Management Information Systems are a broad family of tools that store, analyse, and display energy use or building systems data.²

System EMIS: use 'behind the meter' data to obtain disaggregated energy data from specific energy-using building systems and analyse this data to provide a range of information and services.

¹ Wikipedia definition- download 26/3/2020

² Granderson, J., Lin, G. and Hult, E. (2013) 'EMIS: Crash Course', Lawrence Berkeley National Laboratory, <https://betterbuildingssolutioncenter.energy.gov/sites/default/files/attachments/emis-crash-course.pdf>

Introduction

Building Energy Management and Information Systems (EMIS)

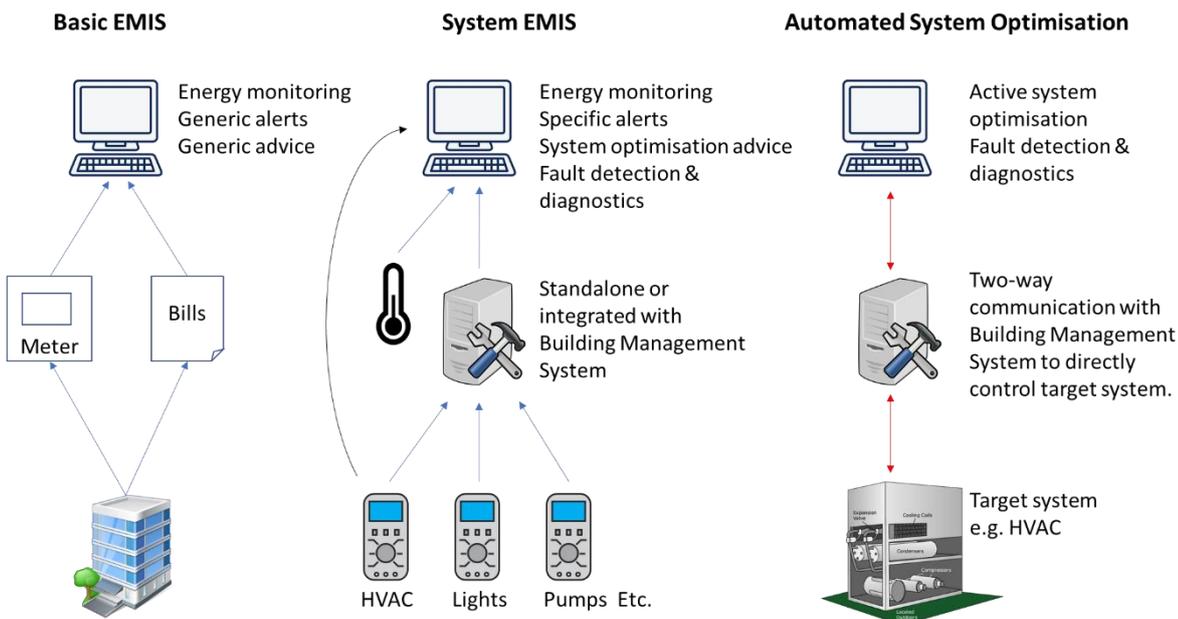
Building EMIS are hardware and software platforms that store, analyse, and display energy use or building systems data. By providing enhanced data, visualisation and analytics, EMIS allows for improved monitoring of energy using systems throughout building and facilities and enables individuals and organisation to take effective actions to manage their energy use.

Characteristics of a building EMIS

An EMIS can be used in a commercial or residential building. This paper focuses on commercial buildings only. Their functionality can range from basic energy monitoring and utility tracking/reporting, through to directly monitoring, analysing, guiding and even control of building systems (e.g. HVAC, lighting, pumping, vertical transport). These functions can improve the effectiveness and efficiency of building systems. Increasingly EMIS are incorporating 'smart' technology, machine 'intelligence' and data analytics to continuously and predictively fine tune buildings and optimise their functioning. Fault detection and diagnostics is another service provided by these systems' data analytic capabilities. EMIS can be broadly classified into three types of systems:

- *Basic EMIS* – focus on energy monitoring and reporting at the whole building level using data obtained from the building energy meters and energy utility billing to offer diagnosis of energy use and advice on potential efficiencies
- *Systems EMIS* – use whole-building and sub-metered energy data to provide a range of information and services. They may be integrated into a Building Management System (BMS) or act as standalone systems.
- *Automated System Optimisation (ASO) products* – use 'behind the meter' data to obtain disaggregated energy data from one specific energy-using system within a building and by communicating with a Building Management System (BMS) can control settings to optimise the systems functioning and efficiency. ASO products are often used to optimise Heating Ventilation and Cooling (HVAC) systems.

Figure 1: Overview of building EMIS types



Basic EMIS

Basic EMIS can be regarded as simpler EMIS which are relatively unsophisticated. Basic EMIS features include data visualisation or dashboard viewing of energy use and utility billing. They focus on energy monitoring and reporting at the whole building level and may provide alerts if energy consumption anomalies occur. This provides insight into whole-building energy performance and may allow for peer to peer energy performance comparisons within a portfolio of buildings.

Key benefits of a Basic EMIS:

- provides insight into whole-building energy performance
- assists in utility billing
- offers peer to peer energy performance comparisons.

Basic EMIS tend to produce relatively small energy savings and are **not the focus of this issues paper**.

Systems EMIS

Systems EMIS are a more sophisticated EMIS and function by analysing whole building and sub-metered energy data in a building. Systems EMIS features include a range of diagnostics capabilities which can be used to improve building energy performance. This includes data visualisation (i.e. through dashboards), of whole building and disaggregated energy usage, system optimisation advice and alerts and in some systems, fault detection and diagnostics, and direct control/optimisation of energy using equipment. Research on the impact of System EMIS installations report a broad range of savings, with estimates from 2.5 to 30 per cent.^{3,4}

A Systems EMIS can be a:

- stand-alone product
- a product that is integrated into a Building Management System (BMS), also called a Building Automation System (BAS)
- part of a BMS system (i.e. as part of the installation of a new BMS or as a software upgrade to an existing BMS).

A BMS is a system that automates and centralises the monitoring and control of building energy using systems. The installation of a BMS can improve the energy efficiency of a building by making it easier to automate and choose appropriate settings for building systems (e.g. the timing of lights operating or operating times and temperatures for HVAC). The difficulty with this approach to building automation is that it is static (i.e. the BMS is set to optimise the building functions at one point in time but it does not respond dynamically to changes in factors that affect building requirements, such as occupancy and weather).

A System EMIS operating with a BMS enables the building operations to be optimised dynamically. For a System EMIS that is not integrated with a BMS to operate as effectively as one that is integrated, the non-BMS version would need to be received energy data via sub-metering on all major energy systems (e.g. lighting, HVAC, plug-loads, security, pumping etc).

A System EMIS analyses and interprets the data collected by energy meters, the BMS and other monitoring equipment, together with external variables such as weather data, weather forecasts and energy cost data. System EMIS can enable buildings to be 'fine-tuned', which can optimise the effectiveness and efficiency of building systems, or to predictively optimise the systems by considering forecasts of weather, energy costs, occupancy and other relevant factors.

A System EMIS may be marketed in a number of different ways which promote non-energy aspects of the system, including tenant management, building operation management and fault detection and diagnostics. These non-energy aspects of building management may be more important to the building operator or owner than the energy savings the EMIS produces.

System EMIS are a low-cost option for improving a building's energy efficiency if a BMS or sub-metering is already installed in a building. They generally can begin operation quickly and usually require little to no additional equipment to be installed.

³ Granderson, J., Lin, G. and Hult, E. (2013) EMIS: Crash Course.

⁴ ACEEE (2018) Intelligent Efficiency in Commercial and Industrial Buildings.

As many EMIS are offered as a service for a regular fee, then the EMIS can be treated as an operational expense (as opposed to a capital expense). This makes it easier for facility managers to trial and pay for the service.

Key benefits of a System EMIS:

- provide granular energy consumption history and usage patterns across building systems
- may normalise energy use for weather and other factors
- enables identification of operational energy efficiency opportunities.

Automated System Optimisation (ASO)

A specialised version of a System EMIS are Automated System Optimisation (ASO) products which apply EMIS capabilities to optimise the functioning and efficiency of one specific energy-using system (e.g. HVAC systems). The distinguishing feature of ASO tools is that they are capable of modifying BMS control settings. When integrated with an existing BMS, they can directly control the system they are optimising to minimise energy use. These ASO products can produce 10-30 per cent energy savings in the system they are controlling, but this can vary with the system.

Key Benefits of an Automated System Optimisation (ASO):

- can be used to dynamically change BMS settings to optimise energy use for specific systems.

Potential market and benefits

System EMIS and ASO products are more likely to be installed in larger buildings where benefits for the installations are justified by the energy and maintenance cost savings and improved operation of the building. Research indicates that the number of larger commercial buildings in Victoria include (at a minimum) approximately⁵:

- 1,000 large office buildings greater than 2,000 m² with a mean area of 5,150 m²
- 300 retail shopping centres
- 200 large hospitality, health care and accommodation buildings.

All of these larger buildings are likely to be spending over \$50,000 per annum on energy, so the potential energy saving from installing an EMIS could justify the investment in EMIS alone, ignoring the other benefits that EMIS can create such as improved fault detection. Despite these benefits only a minority of large buildings have an EMIS installed. This suggests there is a potential market for over 1,500 EMIS installations in Victoria.

The history of energy efficiency in the commercial sector suggests this market contains several barriers to the uptake of more efficient energy management. These include split incentives (e.g. building managers or owners controlling buildings energy systems but tenants paying energy bills), a lack of appropriate knowledge and skills, and energy management having low business operation priority.

Overcoming these barriers to the adoption and ongoing use of EMIS will be important if these technologies are to achieve their full potential in reducing commercial building energy use. A VEU incentive for the installation of EMIS may help to overcome these barriers and help drive a cultural change in the management of energy in the commercial building sector.

There are approximately 10-15 suppliers of EMIS in Victoria. The services offered by these suppliers range from basic EMIS that focus on monitoring and reporting, through to sophisticated data analytic systems that interface with BMS used in large buildings or that directly control building systems (e.g. HVAC). There are also suppliers of BMS whose systems already incorporate EMIS features. All of these suppliers and products could potentially be involved in supplying EMIS under the VEU program.

5. Pitt and Sherry, 2012, Baseline Energy Consumption and Greenhouse Gas Emissions- in Commercial Buildings in Australia, <https://www.energy.gov.au/publications/baseline-energy-consumption-and-greenhouse-gas-emissions-commercial-buildings-australia>

Why should the VEU support EMIS installations

As explained in the proceeding sections, the installation of EMIS in commercial buildings can be a low-cost method of improving significant energy efficiency savings with important additional benefits, including fault diagnosis. However, the uptake of EMIS remains low, partly due to EMIS being relatively new to the market and because of barriers in the commercial building market to the uptake of energy efficiency improvements. The current low uptake of EMIS suggests that introducing the installation of EMIS as a VEU activity may encourage the uptake of a useful energy efficiency activity.

Consultation questions:

1. Is there a potential market for commercial building Energy Management Information Systems (EMIS) products and services in Victoria?
 - a. Yes / No
 - b. Please explain your response.
2. Do you agree with the EMIS classifications (type of system) used?
 - a. Yes / No
 - b. If not, please suggest an alternative classification (type of system).

Building EMIS as a potential VEU activity

Overview

A building EMIS activity in the VEU program would focus on improving the efficiency of energy use in commercial buildings. There are two types of EMIS installation being considered:

1. Installing a Systems EMIS into a commercial building, *excluding* supermarkets.
2. Installing a building Automated System Optimisation product to control and optimise the energy system of a commercial building, *including* supermarkets.

The range of large commercial buildings where these activities could be implemented includes office, retail, hospitality, health care, accommodation and education buildings. The System EMIS activity excludes supermarkets as a major driver of energy use in these buildings is refrigeration, which will not be directly affected by the installation of System EMIS. However, the installation of an Automated System Optimisation product in a supermarket (for example to improve HVAC operation) could be permitted.

System EMIS

A Systems EMIS is a product which uses 'behind the meter' data to obtain disaggregated energy data from specific energy-using buildings systems. The EMIS analyses this data to provide regular reports on energy use by building systems and provides advice and alerts which promote the better management of building systems and on energy.

This activity could be undertaken in a building or facility by:

- *installing a System EMIS* – by installing a System EMIS as a separate product which can collect energy data from sub-meters on all major energy-using systems, or installed as a product that is integrated with an existing BMS
- *installing a BMS which includes System EMIS functionality* – by installing a BMS which incorporates System EMIS functionality
- *upgrading a BMS to include System EMIS functionality* – by installing an additional software or other features to an existing a BMS so it is upgraded to incorporate System EMIS functionality.

System EMIS are generally offered as a 'software as a service' (SaaS) product for a regular fee, noting there may be an initial installation cost. The payback period for System EMIS, based on typical energy savings and system costs, is generally less than one year for an average large office building although this will vary. In addition, System EMIS can produce other benefits in the form of reduced building maintenance costs, better building system operation and improved thermal comfort. These non-energy benefits may justify the installation of the System EMIS without energy savings even being considered.

Automated System Optimisation

This activity could be undertaken by installing an automated system optimisation product to control and optimise a specific energy using system in a building or facility. The installation can be done in an existing or new building that has a BMS in place.

The nature of the energy using system chosen will influence the nature of the automated system optimisation product installed, which will influence the magnitude of the potential energy savings. Depending of the EMIS cost to buy or subscribe to, the payback period for the EMIS can be less than one year.

Automation System optimisation products can also produce other non-energy benefits in the form of reduced building maintenance costs, better building system operation and improved building service or comfort. These non-energy benefits may justify the EMIS service costs without energy savings being considered.

Energy savings and VEEC incentives

Deemed energy savings or Project-based Activities?

There are currently two main ways that VEECs may be created in the VEU program – through ‘deemed’ activities and through the Project-based Activities (PBAs):

- Deemed activities using an estimate of the average energy saving and operating life of a specified activity to determine what number of VEECs will be ‘deemed’ to be created for each implementation of the activity of that specified type over the life of the activity.
- PBA methods include using a measurement and verification process to determine the energy saving from each energy upgrade project and create VEECs according to the measured energy savings.

The PBA process is a more accurate way of determining energy savings and VEECs but has the disadvantage that it is generally more time consuming, costly and administration-heavy than a deemed activity. Typically, PBA process may involve \$5,000-\$10,000 being spent on measurement, verification and reporting.

The two proposed EMIS activities are expected to produce predictable minimal energy savings in the short term. Research suggests a minimum of 10 per cent energy saving can be achieved from installing System EMIS or Automation System Optimisation. Given their predictable savings, this means the two activities may be suitable as potential deemed VEU activities. However, there are several issues which complicate the estimation of deemed energy saving, including:

- energy savings will depend on pre-installation energy use, so it will be necessary to establish a baseline energy use even if a deemed approach to determining energy saving is used
- it is unclear how long these savings will last, as none of the research appears to have looked at the longer-term impact of these systems
- if the EMIS service is subscription based, then there is no guarantee the EMIS installation will continue beyond the initial subscription period
- much of the energy savings from System EMIS installations comes from changed behaviour (e.g. responding to alerts to undertake system maintenance and repairs) and it is uncertain how long these behaviours will continue
- in some situations, savings larger than 10 per cent of pre-installation energy use may be obtained which could mean it would be more cost effective for a business to use a measurement and verification approach to determine their VEEC allocation from the project.

The uncertainty about the length of time the EMIS service will be provided and produce energy savings, and the need to continue to encourage the use of EMIS outputs to maintain energy savings, both suggest that a traditional deeming approach to these activities may not be suitable. However, given the anticipated cost of using the PBA approach, the PBA method may consume most of the VEEC incentive that would be generated from all but the largest of commercial buildings. Additionally, a PBA method could not be used to forward create VEECs past the length of the current subscription of the EMIS, which limits its value. This means the PBA method is likely to be less attractive to stakeholders.

Hybrid approach to determine energy savings

Instead of using the PBA approach to determine the VEECs created by a building EMIS installation, it is proposed that a variation to the deemed approach be used. The proposed method is a hybrid deemed/measurement approach that involves additional measurement, but with the measurement components being much simpler than required for the PBA process. This would involve creating VEECs using a deeming approach one year at a time, with some verification requirements being met each year before the next year of VEECs would be approved.

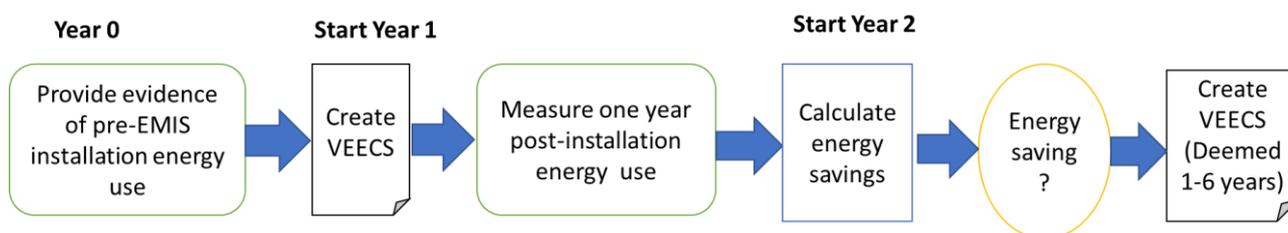
The hybrid deemed/measurement method proposed would involve:

- providing evidence of energy usage for one year/multiple years from metering or billing data
- create VEECs for one year of deemed savings when the EMIS installed
- review whether energy savings occurred after year one, using a simple measurement approach

- create 1-6 years of VEECS if savings occurred, depending on the length of the EMIS service contract or if the EMIS is purchased outright.

These steps are presented in Figure 2 below.

Figure 2: Hybrid deemed/measurement VEEC creation steps



The detail of the steps involved in creating the deemed VEECs could include:

Year 1:

- Determine and document a 12-month period of energy use based on the energy utility records for the facility, including listing all energy meters found at the physical address of the facility. This will involve determining a total electricity use and total gas use for the building for a twelve-month period prior to the installation. Where a specific energy system is to be enhanced by installing an ASO product, obtain the previous 12-months of energy use based for the specific energy system to be optimised using sub-metering data.
- Provide evidence that the EMIS has been installed and has a minimum of a 12-month service contract, OR provide evidence of the purchase and installation where an outright purchase of an EMIS occurs.
- Estimate the annual energy saving based on deemed 10 per cent saving from the previous 12-months of energy use and created the VEECs accordingly, to a maximum of 250 VEECs annually.

Year 2 and future years:

- At the end of 12-months post-EMIS installation period, provide EMIS reports of the energy savings produced by the EMIS installation OR document the energy saving using the previous 12-months of energy billing data and pre-installation data.
- Provide evidence that the EMIS has a further minimum 12-month service contract, if not purchased outright.
- If the EMIS reports or billing data show energy savings have occurred, additional VEECs can be created for the number of years of the remaining life of the EMIS service contract, to a maximum of three years, or six years for outright purchases of the EMIS.
- This VEEC creation process could be repeated when the period when the deemed energy saving finishes (e.g. annually or after 2 or 3 years) until the maximum operating life of the EMIS is reached, estimated to be 7 years.

The measurement of the existing energy use for a building may appear to be an unusual requirement compared to what most deemed VEU activities involve, but it is not without precedence. Several existing deemed VEU activities require measurements to be undertaken which are used in calculating the VEECs the activity creates.

An alternative variation of the hybrid deemed/measurement approach could be to create the VEECs for the full service-contract life of the EMIS from the initial installation (e.g. for 1, 2 or 3 years, to a maximum of 250 VEECs per annum). After this, if the building owner or accredited provider wished to create further VEECs then they would need to submit proof that the EMIS was creating energy savings and that a new service-contract had been signed. This alternative approach would create more VEECs initially, which could further encourage the take-up of the EMIS, but it increases the risk that VEECs were being created without evidence of energy savings.

Capping the use of the Hybrid method

Due to the potential inaccuracies of the hybrid method, especially the use of a deeming method to calculate annual energy savings, it may be wise to cap the number of VEECs created that can be made via this method per annum. A cap of 250 VEECs is considered appropriate.

If buildings have larger potential energy savings from installing building EMIS, then they would be encouraged to use the PBA method to participate in the VEU program.

Consultation questions:

3. Do you support the use of a hybrid deemed/measurement approach to creating VEECs for EMIS activities?
 - a. Yes / No
 - b. If yes, how should this approach work?
 - c. If no, can you provide an alternative approach?
4. Do you agree that there should be a review of energy savings after one year, prior to awarding VEECs for the rest of the service contract?
 - a. Yes / No
 - b. If yes, how should this approach work?
 - c. If no, can you provide an alternative approach?
5. Should there be a cap on the amount of financial incentive created from this method?
 - a. Yes / No
 - b. If yes, at what level should this incentive be capped?
 - c. If no, please explain your response.
6. What do you think are the potential barriers to implementing an EMIS activity into the VEU program?

Implementation

Identification of System EMIS activities

The System EMIS activity will involve the installation and commissioning of a Systems EMIS in a commercial building, excluding supermarkets. The System EMIS can be defined as a software product or service that:

- Collects and analyses data on the energy use and operation of all major energy-using systems in a building, with the data being obtained from a Building Management System or sub-metering of energy systems and other building sensors and monitoring.
- Provides regular reports on the aggregated building energy use and the energy use of individual building systems.
- Provides advice and alerts which promote better management of building systems and efficient use of energy, or directly controls building systems to improve the effectiveness and efficiency of the building systems.

This activity can be undertaken in a building or facility in the following ways:

- *Installation of a System EMIS* – by installing a System EMIS as a separate product which can collect energy data from sub-meters on all major energy-using systems or installed as a product that is integrated with an existing BMS.
- *Installing a BMS which includes System EMIS functionality* – by installing a BMS which incorporates System EMIS functionality.
- *Upgrading a BMS to include System EMIS functionality* – by installing an additional software or other features to an existing a BMS so it is upgraded to incorporate System EMIS functionality.

The energy savings from installing a System EMIS is assumed to be a 10 per cent reduction in total energy use of the building in which it is installed, compared to the total energy use in the 12 months prior to the installation of the System EMIS.

Identification of Automation System Optimisation activities

The Automated System Optimisation (ASO) activity will involve the installation and commissioning of an ASO activity in a commercial building, including supermarkets. The ASO can be defined as a software product or service that:

- collects and analyses data on the energy use and operation of a specific, targeted energy-using system in a building, with the data being obtained from a Building Management System or sub-metering of energy systems and other building sensors and monitoring
- provides regular reports on the energy use and operation of the targeted building system
- is integrated with an existing BMS to directly control the targeted building system to improve the effectiveness and optimise operation.

This activity will be implemented by installing the ASO as a separate product that integrates with the existing BMS control systems of the targeted major energy-using system and enables the ASO to control and optimise the operations of the energy-using system.

The energy savings from installing an ASO is assumed to be a 10 per cent reduction in the energy use of the specific building system in which it is installed, compared to the energy use in the months prior to the installation of the ASO. The ASO activity will require measurement of the energy used by the building system being optimised prior to the activity being undertaken, which may require the installation of sub-meters on the building system.

Consultation questions:

7. Are there upgrade activities that have not been identified that should be included in an EMIS activity?
 - a. Yes / No
 - b. If so, what are they?
8. What energy saving features should a System EMIS include?
9. What energy saving features should an Automated System Optimisation include?
10. Are there publicly available equipment standards or definitions which can be referred to in the definition of the System EMIS or Automated System Optimisation activities?

Register of products

There are two broad approaches the department may take to identify whether an EMIS upgrade meets VEU deemed activity requirements., which are:

- developing a register of approved products, with any relevant installation of these products treated as meeting the activity specifications
- requiring the details of each upgrade be provided to the Essential Services Commission (ESC), who can make the decision at the activity creation stage on whether that specific installation meets the activity specifications.

The advantage of the approved register of products is that all parties have more certainty about whether an installation meets activity requirements. The disadvantage is that product suppliers/accredited providers will need to register products prior to submitting an activity, which can become a barrier to activity uptake.

Consultation questions:

11. Do you think developing a register of approved products is an appropriate approach for the EMIS activities?

Skills and training requirements

It is expected there will be enough currently active professionals to support undertaking the proposed VEU EMIS activity. Stakeholders are encouraged to provide relevant feedback on industry or installer capacity or capability risks and opportunities.

Consultation questions:

12. Are there any skills or training considerations for the proposed activity?

- a. Yes / No
- b. If yes, please provide further information.

Submissions

Summary of consultation questions

1. Is there a potential market for commercial building Energy Management Information Systems (EMIS) products and services in Victoria?
 - a. Yes/No
 - b. Please explain your response.
2. Do you agree with the EMIS classifications (type of system) used?
 - a. Yes/No
 - b. If not, please suggest an alternative classification (type of system).
3. Do you support the use of a hybrid deemed/measurement approach to creating VEECs for EMIS activities?
 - a. Yes/No
 - b. If yes, how should this approach work?
 - c. If no, can you provide an alternative approach?
4. Do you agree that there should be a review of energy savings after one year, prior to awarding VEECs for the rest of the service contract?
 - a. Yes/No
 - b. If yes, how should this approach work?
 - c. If no, can you provide an alternative approach?
5. Should there be a cap on the amount of incentive created from this method?
 - a. Yes/No
 - b. If yes, at what level should this incentive be capped?
 - c. If no, please explain your response.
6. Do you think there are any potential barriers to implementing an EMIS activity into the VEU program?
7. Are there upgrade activities that have not been identified that should be included in an EMIS activity?
 - a. Yes/No
 - b. If so, what are they?
8. What energy saving features should a Systems EMIS include?
9. What energy saving features should an Automated System Optimisation (ASO) include?
10. Are there publicly available equipment standards or definitions which can be referred to in the definition of the Systems EMIS or Automated System Optimisation activities?
11. Do you think developing a register of approved products is an appropriate approach for the EMIS activities?
12. Are there any skills or training considerations for the proposed activity?
 - a. Yes/No
 - b. If yes, please provide further information.

Have your say

Stakeholders can submit their feedback on the building EMIS issues paper using the **new activities consultation response template and/or the survey**, both available on the [Engage Victoria](#) website. Please submit your feedback to the questions in the building EMIS issues paper by completing the new activities consultation response template and/or the survey and uploading your submission to the [Engage Victoria](#) website <https://engage.vic.gov.au/victorian-energy-upgrades-new-activities-consultation>.

Submissions can also be emailed to energy.upgrades@delwp.vic.gov.au or sent as a hard copy submission to: *Victorian Energy Upgrades, Department of Environment, Land, Water and Planning, PO Box 500, East Melbourne, VIC 8002*. If you make a submission by email or post, please ensure to state whether the department can publish your submission.

Next steps

Key milestones in the introduction of the building EMIS activity into the VEU program are:

- Open stakeholder consultation on the proposed activity 18 December 2020
- **Close stakeholder consultation on the proposed activity** **5 February 2021**
- Response to stakeholder consultation on the proposed activity March 2021
- Consultation on Regulations and Specifications for proposed activity Second half 2021
- Finalise Regulations and Specifications Second half 2021
- Building EMIS activity introduced into the VEU program Second half 2021