Retrofit Melbourne financial incentives for commercial buildings

Scheme guidelines 2026 – 2027



CITY OF MELBOURNE

Acknowledgement of Traditional Owners

The City of Melbourne respectfully acknowledges the Traditional Owners of the land we govern, the Wurundjeri Woi-wurrung and Bunurong Boon Wurrung peoples of the Eastern Kulin and pays respect to their Elders past, present and emerging.

We acknowledge and honour the unbroken spiritual, cultural and political connection the Wurundjeri, Bunurong, Dja Dja Wurrung, Taungurung and Wadawurrung peoples of the Eastern Kulin have to this unique place for more than 2000 generations.

We are committed to our reconciliation journey, because at its heart, reconciliation is about strengthening relationships between Aboriginal and non-Aboriginal peoples, for the benefit of all Victorians.

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21 July 2026

Guidelines

Purpose and scope

City of Melbourne is committed to achieving its target of becoming a zero-carbon city by 2040. Improving the energy performance of existing buildings is a critical step in our Retrofit Melbourne Plan, given that the commercial building sector contributes approximately 40% of the municipality's greenhouse gas emissions.

Our Retrofit Melbourne Financial Incentive Scheme ('the scheme') is designed to support building owners and managers in improving their building's energy performance by providing reimbursements for key activities. Eligible activities include energy performance benchmarking, developing action plans for energy-saving improvements, and implementing energy-saving works; encompassing energy efficiency upgrades, electrification, emissions reduction and overall environmental performance.

The scheme aims to incentivise environmental upgrades in office buildings by reducing financial barriers and supporting informed decision-making throughout the upgrade process. It is particularly focused on underperforming mid-tier office buildings that often face significant challenges in identifying, prioritising and delivering energy efficiency improvements.

The scheme targets privately owned office buildings with a small to medium floor area that are more than 15 years old and either demonstrate poor energy performance through a NABERS Energy rating or have never been NABERS rated. By supporting building owners to better understand their building performance and implement eligible upgrades, the scheme seeks to accelerate emissions reductions, improve energy efficiency, and enhance the overall quality and competitiveness of the office building stock.

The purpose of these guidelines is to provide clear and practical information about the scheme, explaining its intent, the activities supported by the scheme, what is required of applicants and the conditions under which eligible buildings can access financial reimbursements. They also illustrate how the scheme aligns with broader council objectives.

Why financial incentives for energy efficiency improvement?

Improving the energy performance of commercial buildings is a critical pathway to our goal of becoming a zero-carbon city by 2040. By incentivising upgrades that reduce energy consumption and emissions, we're accelerating the transition to a low-carbon economy and supporting the delivery of a resilient, sustainable urban environment. Commercial building upgrades also help create a healthier, more comfortable and competitive city in which to live, work, study and do business, delivering benefits for building occupants, businesses and the broader community.

Enhancing building performance is not only an environmental imperative but also a strategic business decision. Energy-efficient buildings have lower operational costs, improved asset value, attract and retain tenants and ensure compliance with evolving regulatory frameworks. Retrofitting can also help building owners remain competitive in a changing market as tenant expectations, investor preferences and performance standards continue to evolve.

Despite these benefits, many smaller commercial buildings face significant barriers to undertaking retrofit projects, including upfront costs, limited resources and competing investment priorities. To help overcome these challenges and ensure all parts of the market can participate in the transition, the City of Melbourne is providing targeted financial incentives for building upgrades. By supporting smaller, older buildings to improve their performance, the program aims to accelerate emissions reduction, strengthen the competitiveness of Melbourne's commercial building stock, and ensure an equitable pathway to a zero-carbon future.

Scheme overview

The scheme enables building owners and managers of existing commercial buildings to apply for reimbursements for energy performance improvement activities. These activities reflect the key steps that typically occur throughout a commercial building's emissions reduction journey:

Activity A: benchmarking
Benchmarking involves using the National Australian Built Environment Rating System (NABERS) to assess building energy use and emissions, establishing a clear baseline, and measuring improvement outcomes.

Activity B: action planning
Action planning involves the development of a structured roadmap for energy and carbon performance improvement and electrification. This activity equips building owners with a clear, evidence-based plan to inform investment decisions and plan capital works.

Activity C: implementation
Implementation focuses on physical building upgrades through capital works, such as replacing or upgrading heating, cooling and ventilation systems and gas consuming equipment with high efficiency electric alternatives, installing high-efficiency lighting, improving insulation and integrating renewable energy technologies as well as metering and monitoring systems that facilitate better building tuning and retrocommissioning activities.

Together, these steps deliver tangible energy-savings, reduce emissions and support long-term sustainability goals, aligning with the City of Melbourne's vision for a zero carbon future. **Figure 1** illustrates an overview of the scheme incentivised activities.

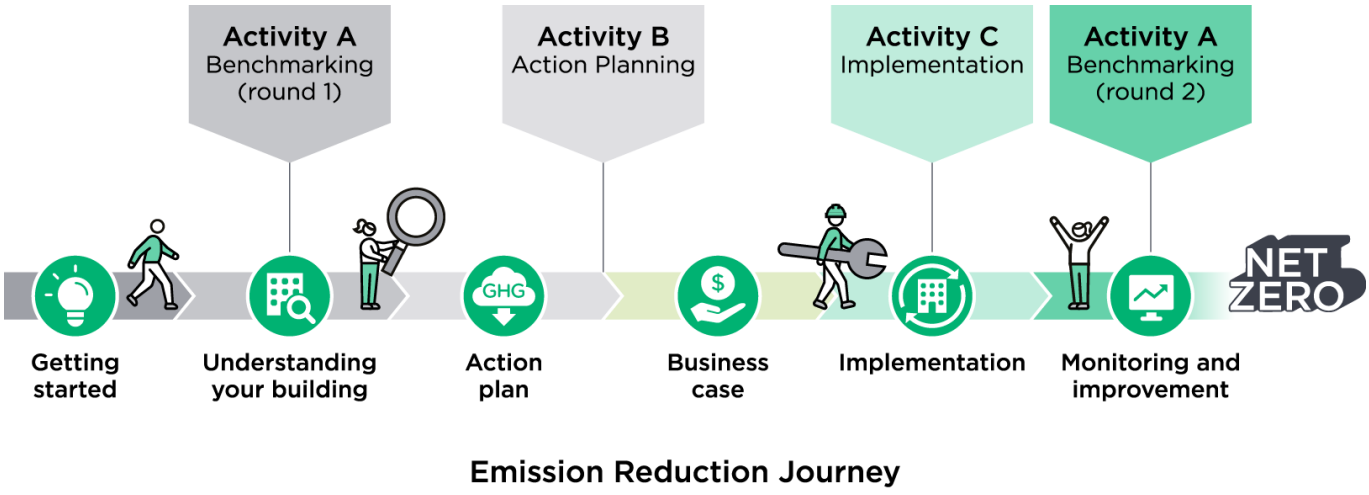


Figure 1. Overview of scheme activities

Through the scheme, building owners may be able to secure more than $50,000 in total funding for an eligible building where they undertake multiple activities and meet the relevant eligibility requirements. This approach is designed to support a staged pathway to improved building performance, electrification and emissions reduction. **Table 1** provides information of the maximum available reimbursement for each eligible activity.

Table 1. Maximum available reimbursement for each eligible activity

Activity	Description	Reimbursement amount
Activity A (round 1)	**Benchmarking**	50% of the total cost or up to $2,500 (whichever is lower)
Activity B	**Action planning**	50% of the total cost or up to $7,500 (whichever is lower)
Activity C	**Implementation**	50% of the total cost or up to $40,000 (whichever is lower)
Activity A (round 2)	**Benchmarking**	25% of the total cost or up to $1,250 (whichever is lower)

Funding availability and reimbursement

Funding under the Retrofit Melbourne Financial Incentive Scheme is limited and subject to Council's approved budget. Applications will be assessed in order of receipt until available funding has been allocated. The City of Melbourne reserves the right to vary funding allocations, amend program dates, suspend new applications or close the scheme where funding is fully allocated or otherwise unavailable.

Who can apply

To be eligible for funding, the applicant must:

- be the owner or authorised to act on behalf of the owner of a commercial building, located within the City of Melbourne municipality. *Note: Reimbursements will be provided to building owners.*

The owner must:

- be a private owner (including institutional investors, private investors, corporations, trusts, individual owners and not-for-profit organisations) or an Owners Corporation. *Note: Government entities, government agencies and government corporations are not eligible.*
- have a current Australian Business Number (ABN)
- have been operating for at least 12 months
- provide evidence of Public Liability Insurance ($20M minimum)
- have no outstanding acquittals or debts with the City of Melbourne
- meet the minimum co-contribution requirements of the scheme
- provide all mandatory information and supporting documentation requested in the Expression of Interest (EOI) and reimbursement forms.

The commercial buildings must:

- be more than 15 years old
- be predominantly used as an office or '*fit for office use*'[1]
- have a Net Lettable Area[2] between 1,000 m^2 and 20,000 m^2
- have never received a NABERS energy rating, or demonstrate poor energy performance as evidenced by a NABERS Energy rating below or equal to 4 stars.

Buildings required to disclose energy performance under the Commercial Building Disclosure (CBD) Program are not eligible for Activity A. However, they remain eligible to participate in all other scheme activities.

[1] As per NABERS Energy and Water for Offices rules, '*fit for office use'* is defined as fit for continuous occupation as an office, with adequate lighting and with suitable ventilation (such as air conditioning, natural ventilation or mixed-mode operation) of a similar or higher standard of service to the bulk of the office.

[2] Buildings with smaller floor areas may also be considered eligible, on a case-by-case basis.

How the scheme works

The scheme allows eligible commercial building owners to receive a partial reimbursement for costs associated with planning and implementing energy performance improvements. The process and reimbursement amounts will vary depending on which of the incentivised activities the applicant has undertaken, but follows a standard process:

- obtain a minimum of 2 quotes and select a qualified service provider
- submit an EOI for an eligible activity and obtain approval by the City of Melbourne
- complete the relevant activity
- submit your reimbursement form within 4 to 9 months of completion, depending on the activity
- receive your reimbursement

For Activities A and B, projects must be completed within 4 months. For Activity C, approved projects must be completed within 6 to 9 months, depending on the scale of the project. For large-scale projects, longer timeframes may be considered. This timeframe excludes the additional 18-month period required to conduct a NABERS Energy performance assessment after completion. **Figure 2** illustrates the start to end process.



Figure 2. Start-to-end process

This is a three-year pilot, years 2 and 3 are subject to Council Budget approval. The guidelines will be reviewed and updated annually. Activities A and B will commence in the first year of the pilot. EOIs for Activity C are expected to open in early 2027, with reimbursement for eligible projects in July 2027, subject to approval and the availability of Council funding. **Figure 3** illustrates the scheme timeline. EOIs are expected to open in early 2027.

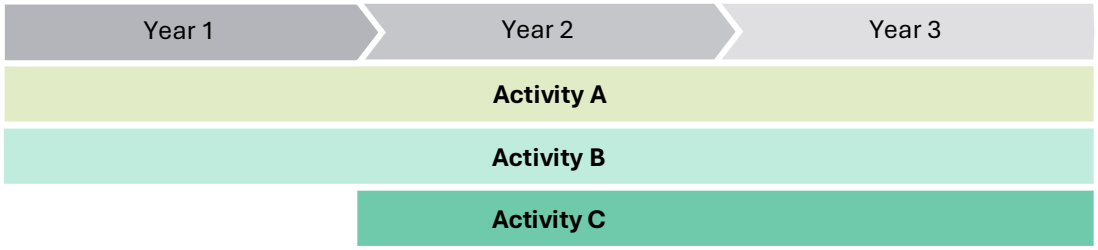


Figure 3. Scheme timeline

Engaging a Qualified Service Provider

Qualified Service Providers are organisations or individuals who have demonstrated the necessary knowledge, skills and experience to deliver the activities outlined under this scheme for commercial buildings. Competency can be shown by:

- appropriate education, qualifications, skills, experience and training
- recognition by appropriate industry associations or other organisations
- relevant technical skills specific to energy efficiency in commercial buildings, and scope and objectives of the proposed or undertaken activity
- knowledge of appropriate legal and other requirements
- knowledge of the requirements of the undertaken activity.

Where a professional accreditations scheme, or equivalent, is available for a proposed activity (i.e. a NABERS Energy rating), service providers should be certified.

Under this scheme, the Qualified Service Providers should:

- facilitate an end-to-end service for the building owner as the nominated single point of contact to manage the project
- understand the financial incentives scheme and guide the building owner to access the funding

- have a track record in delivering successful project outcomes
- take a holistic approach to improving a building's performance.

The Qualified Service Provider may vary depending on whether Activity A, B or C is being implemented.

The City of Melbourne is not responsible for, and accepts no liability in relation to, any advice, recommendations or services provided by third-party professionals in connection with activities co-funded by the City of Melbourne Retrofit Melbourne Financial Incentive Scheme.

Activity A: Energy performance benchmarking

Energy performance benchmarking is the process of measuring and comparing a building's energy efficiency against industry standards or similar buildings. For commercial buildings, NABERS Energy is the nationally recognised rating system that assesses actual energy consumption and greenhouse gas emissions. It provides a star rating (from 0 to 6) that reflects the building's operational energy performance.

NABERS Energy benchmarking ensures that retrofits deliver measurable improvements in energy efficiency. It also provides a transparent and consistent method for tracking progress and verifying eligibility for incentives. Under the scheme, building owners can apply for a reimbursement for a NABERS Energy ratings.

First NABERS Energy Rating – Eligibility and requirements

To be eligible for the reimbursement, the commercial building must:

- have never received a NABERS energy rating, or demonstrate poor energy performance as evidenced by a NABERS Energy rating below or equal to 4 stars, obtained more than 12 months ago.
- not be subject to disclosure requirements under the Commercial Building Disclosure (CBD) program for the validity period of the NABERS Energy certificate.

Second NABERS Energy Rating – Eligibility and requirements

To be eligible for the reimbursement, the commercial building must:

- have implemented energy efficiency improvements under Activity C of the scheme
- not be subject to disclosure requirements under the CBD program during the validity period of the NABERS Energy certificate.

How to apply

For this activity, the applicant must take the following steps in order:

- obtain a minimum of 2 quotes and select a Qualified Service Provider, specifically a NABERS Energy for Offices Accredited Assessor
- submit an EOI for the proposed activity, including:
    - scope of works
    - cost estimate
- receive approval from the City of Melbourne
- obtain a NABERS Energy rating for the commercial building (base building or whole building) within 4 months of receiving approval, completed by a NABERS Energy for Offices Accredited Assessor
- submit a reimbursement form, including:
    - a copy of the NABERS Energy certificate and report
    - the executed invoice for the service provided.

Once the reimbursement application is approved, based on the requirements of scheme being met, applicants will receive reimbursements of up to $2,500 or 50% of the total cost (whichever is lower) for receiving the first NABERS Energy rating, and up to $1,250 or 25% of the total cost (whichever is lower) for receiving the second NABERS Energy rating, completed by a NABERS Accredited Assessor.

Activity B: Action planning

Action planning involves developing a structured roadmap to improve a building's energy efficiency and reduce emissions. It identifies practical steps, timelines, costs, savings and responsibilities to achieve measurable outcomes. Under the scheme, eligible activities include:

- energy and carbon improvement plan
- electrification feasibility assessment

These activities ensure that building owners have clear, evidence-based strategies to guide upgrades and inform their asset plans.

Eligibility and requirements

To be eligible for the reimbursement, the commercial building must:

- demonstrate previous poor energy performance evidenced by a NABERS Energy rating[3] below or equal to 4 stars obtained within the previous 12 months.

How to apply

For this activity, the applicant must take the following steps in order:

- obtain a minimum of 2 quotes and select a Qualified Service Provider
- submit an EOI for the proposed activity, including:
  - scope of works
  - cost estimate
- receive approval from the City of Melbourne
- undertake one of eligible activity within 4 months of receiving approval, completed by a Qualified Service Provider
- submit a reimbursement form, including:
  - a copy of the report and associated information of the undertaken activity
  - the executed invoice for the service provided.

Once the application is approved, based on the conditions of funding being met, applicants will receive a reimbursement of up to $7,500 or 50% of the total cost (whichever is lower) for completing one of the eligible activities listed above.

Activity C: Implementation

This involves carrying out physical upgrades and installations that improve a building's energy efficiency and reduce emissions. Capital works may include, but are not limited to:

- replacing or upgrading heating, cooling and ventilation systems and gas consuming equipment with high efficiency electric alternatives
- installing high-efficiency lighting, improving insulation and integrating renewable energy technologies
- metering and monitoring systems that facilitate better building tuning and retrocommissioning activities.

These measures deliver tangible energy-savings, enhance building performance, and support long-term sustainability goals under the scheme.

Eligibility and requirements

To be eligible for the reimbursement, the commercial building must:

- demonstrate previous poor energy performance evidenced by a NABERS Energy rating[4] below or equal to 4 stars obtained within the previous 12 months.
- have previously completed one of the listed activities of Activity B and received reimbursement under this scheme, or demonstrate equivalent prior work that meets the scheme requirements.

How to apply

For this activity, the applicant must take the following steps in order:

- select a Qualified Service Provider to supervise works

[3] Exceptions may be considered on a case-by-case basis for buildings that are ineligible for a NABERS Energy rating but can demonstrate poor energy efficiency.

[4] Exceptions may be considered on a case-by-case basis for buildings that are ineligible for a NABERS Energy rating.

- submit an EOI for the proposed activities, including:
    - scope of works, supported by relevant documentation[5]
    - capital cost plan and estimates for the proposed scope, supported by relevant documentation[6]
    - calculations demonstrating the estimated NABERS Energy performance uplift of at least 0.5 stars[7]
- receive approval from the City of Melbourne
- undertake the proposed capital improvements to achieve an estimated NABERS Energy uplift of at least 0.5 stars within 6 to 9 months[8] of receiving approval, supervised by a Qualified Service Provider
- submit a reimbursement form, including:
    - evidence that the works were successfully completed
    - executed invoice(s) for the works undertaken
    - commitment to submit a copy of the NABERS Energy rating, and associated information, within 18 months time following completion of works.

Once the application is approved, based on the conditions of the funding agreement being met, applicants will receive a reimbursement of up to $40,000 or 50% of the total cost (whichever is lower) for completing the approved capital improvements.

[5] Relevant documentation may include Request for Proposal and/or tender design documents such as specifications, drawings and/or contractor tender submittal.

[6] Cost planning should be supported by at least 2 contractor quotes or a cost plan prepared by a licensed quantity surveyor.

[7] The current NABERS Energy online calculator should be used, and the prediction tool where electrification is proposed as part of the works.

[8] For large-scale project, longer timeframes may be considered.

What won't be considered for funding

The following projects or activities will not be eligible for funding:

- Projects that do not meet the eligibility criteria of the scheme
- Projects not located within the City of Melbourne municipality
- Projects that are being undertaken in order to comply with regulations (e.g. Commercial Building Disclosure program, fire safety, accessibility)
- Applications submitted after the closing date and time
- Requests for retrospective reimbursements, where projects are completed or have commenced prior receiving approval by the City of Melbourne
- Business investment and financing advice, and facilitation of financing beyond supporting the energy and carbon improvement plan and electrification feasibility
- Projects that focus on routine or cyclical maintenance works, commercial aesthetic upgrades or non-energy related sustainability improvements
- Projects that involve the repair of facilities damaged by vandalism, fire or other natural disasters where the damage should be covered by insurance
- Ongoing operational costs such as, but not limited to, salaries, electricity, water and other utilities
- Projects that do not clearly demonstrate a need for City of Melbourne support
- Projects that do not demonstrate good value for money
- Projects which will not be completed within the program timelines.
    - Projects under Activity A and B must be completed within 4 months of receiving approval by the City of Melbourne.
    - Projects under Activity C must be completed within 9 months of receiving approval by the City of Melbourne. This excludes 18-month period required to obtain a second NABERS Energy rating
- Works that are not completed in accordance with the scheme guidelines (e.g., not completed by a Qualified Service Provider)
- Upgrades to building assets which are owned or operated by government entities
- Tenant related improvements where the tenant is a separate entity and undertakes this work within its own tenancy boundary. Any electrification or energy efficiency improvement of tenant infrastructure by the landlord will be considered for funding.

Relevant schemes and programs

Additional funding may be readily accessible via other schemes and programs using documentation prepared for this scheme. Two schemes with the greatest alignment include the Victorian Energy Upgrades (VEU), provided by the Victoria Government, and commercial property loans, provided by retail banks.

Further detail is provided below, for information.

Victorian Energy Upgrades

Eligible upgrades are discounted through the creation of Victorian Energy Efficiency Certificates (VEECs). The VEU program offers businesses two distinct pathways for incentives and understanding them both is important to selecting the best approach to your energy efficiency upgrades.

Deemed activities

Through the deemed activities, applicants can receive a rebate for an upgrade by selecting an approved product, registered on the VEU Register of Products, to be installed. Deemed activities are designed for standardised and simpler upgrades compared to project-based activities, however, they provide a conservative approach to the amount of greenhouse gas emissions reduction an upgrade may be responsible for over the lifetime of the upgrade. These deemed activities are offered as an 'upfront' discount on the total cost of the upgrade and often utilise a list of eligible products that may be installed.

Deemed activities include but are not limited to the following:

- Commercial lighting upgrades (Part 34)
- A suite of commercial gas efficiency improvements (Part 37 – 42)
- Commercial and industrial heat pump water heating (Part 44)
- Commercial and industrial solar photovoltaic systems (Part 47)

For more information, please visit the Victorian Government's website.

Project-based activities – Benchmarking rating method

This activity is available for large and custom energy efficiency upgrades, similar to those described in Activity C. The benchmarking project-based activity requires:

1. **Project and scoping plan** (pre-implementation of capital works) – A proposal document should be submitted prior to undertaking works (Activity C). The plan should outline the project scope, scale, and proposed measurement and verification approach.
2. **Impact report** (post-implementation of capital works) – This final report is prepared following completion of the upgrade works (Activity C) and the acquisition of a second NABERS Energy Rating (second round of Activity A). The impact report includes the following components, which are already prepared through the present scheme:
    - A baseline rating certificate and data summary, which can be obtained with the NABERS Energy rating under Activity A of this scheme.
    - A post-upgrade rating data summary after implementation of upgrades, derived from the second NABERS Energy Rating completed after implementation of the upgrades, under Activity A of this scheme.

The main additional component required is the abatement and VEEC calculation which uses energy consumption data detailed in the first and second NABERS Energy ratings. **Figure 4** illustrates the process that needs to be followed for the creation of VEECs through the benchmarking rating method.

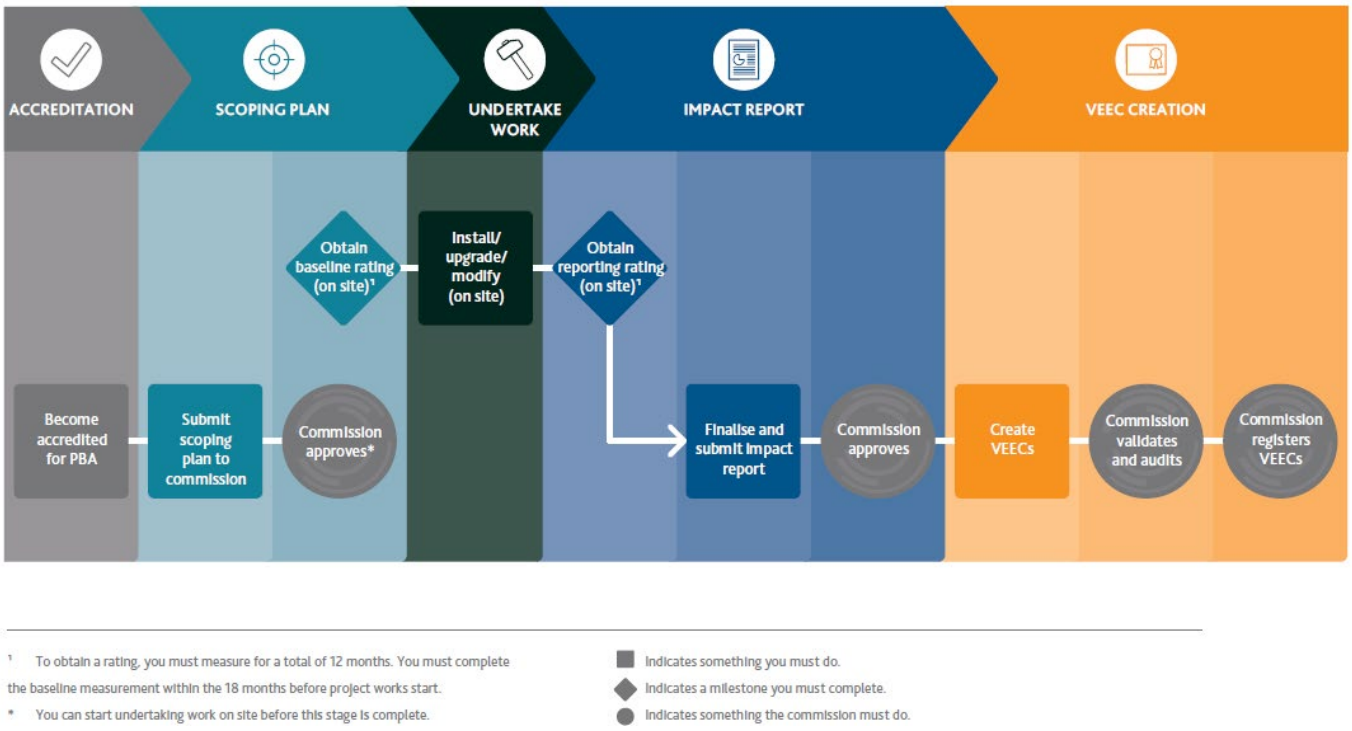


Figure 4: VEU project-based activity – benchmarking – process map (Source: Essential Services Commission)

It is important to note that some Qualified Service Providers are also accredited to create certificates under the VEU program. Engaging one of these providers may streamline the administrative process and facilitate access to additional financial incentives available through the VEU program. Accredited professionals for project-based activities measurement and verification can be found on the Public Registry, PBA M&V Professionals tab.

For more information, please refer to the Victorian Energy Upgrades scheme website.

Commercial property loan

Discounted loans and equipment leases may be accessible for projects meeting green loan criteria. The Clean Energy Finance Corporation (CEFC) partner with various banks and finance providers to offer these discounted rates.

The following data and reports can be used as a guide for what may be required, however this will vary between programs. The following are already collected by applicants as part of this scheme:

- Baseline and post-implementation NABERS Energy ratings, obtained from Activity A
- Energy and carbon improvement plan or electrification feasibility assessment consultant report showing proposed improvements, obtained from Activity B
- Project budget, obtained from Activity B and preparation for Activity C

Additional requirements might include:

- Minimum NABERS Energy rating improvement or a minimum target of 5-star NABERS post-upgrade, Green Star certification or net zero carbon certification
- Minimum 30% energy efficiency improvements
- Maintaining energy performance over a specified period

NABERS has developed the Sustainable Finance Criteria to guide green lending for buildings. For upgrade projects, the criteria typically require a minimum 30% reduction in emissions, demonstrated through improved NABERS ratings. While rating uplift is an important component, the criteria do not prescribe a universal minimum target such as achieving a 4-star NABERS Energy rating; rather, performance thresholds depend on the applicable pathway and project context.

Before you apply

Applicants should review and complete the following steps prior to submitting their application:

Step 1 – Confirm that your organisation is eligible to apply. Refer to section '*Who can apply*'

Step 2 – Check the steps of the process for your chosen activity in section '*How the scheme works*'

Step 3 – Read the minimum requirements for the incentivised activities in section '*Appendix A – Minimum requirements for the funded activities*'.

Step 4 – Review the EOI forms of the scheme via the City of Melbourne's SmartyGrants platform.

Step 5 – Familiarise yourself with the application process via the City of Melbourne's SmartyGrants platform.

Key dates

For Activities A and B:

EOIs open on **10 August 2026** and close on **30 June 2027**, or earlier if funds are fully allocated. Year 2 and 3 application rounds are subject to Council budget approval.

For Activity C:

EOIs are expected to open in **early 2027**. EOIs will be assessed in order of receipt and will remain open until available funding has been fully allocated. Reimbursements for approved Activity C projects will commence on **1 July 2027,** subject to Council budget approval.

For more information

Email zerocarbonbuildings@melbourne.vic.gov.au and quote the Retrofit Melbourne Financial Incentive Scheme in the subject line.

Appendix A – Minimum requirements for the funded activities

NABERS Energy rating (base building or whole building)

The rating must be carried out by a NABERS Accredited Assessor and submitted to NABERS for official certification.

The scope of the rating must be either base building or whole building.

Site visit, data collection and analysis must comply with the latest NABERS Energy and Water for Offices Rules.

An official NABERS Energy Certificate must be issued by NABERS upon successful completion of the assessment.

Energy and carbon improvement plan

Overview

The energy and carbon improvement plan provides an integrated framework to assess, plan and prioritise actions to improve energy performance, reduce energy costs and operational carbon emissions. The plan aligns technical analysis, ratings improvement (including but not limited to NABERS Energy rating) and decarbonisation pathways into a single, coordinated exercise that supports informed decision making and staged implementation.

The energy and carbon improvement plan is to be underpinned by the AS3598.1 2014 Energy Audit methodology for data collection, analysis, benchmarking and opportunity identification. Thus, the plan must comply with the requirements of AS3598.1:2014 and be carried out by a Qualified Service Provider as defined in the standard. The audit type – Type 1 or 2 – should be selected based on the organisation's needs, operational issues, building complexity, energy use, data availability, and budget limitations. **Table 2** provides an indication on some building characteristics that would be expected to utilise a Type 1 or Type 2 energy audit.

Table 2. Indicative energy audit type required, based on building characteristics.

	Type 1 Energy Audit	Type 2 Energy Audit
Building form	Low-rise (up to 3 storeys) NLA < 5000m^2	Mid- and high-rise (4 storeys and more) NLA ≥ 5,000m^2
Heating and Cooling Plant	• Likely to be Direct Expansion split system air conditioning, or possibly naturally conditioned spaces • Likely to be low-rise – no lifts • Minimal common area lighting • Low fan energy consumption	• Cooling Plant Size > 750kW • Central air conditioning plant with air handling units • Likely to be mid-rise with lifts • Common area lighting • Ducted systems with higher fan energy
Metering and historical data	Main authority metering data only	Some sub-metering data that provides insights for end use breakdown

The energy and carbon improvement plan must establish clear, measurable energy and emissions reduction targets. To support the achievement of these targets, the plan should identify and prioritise a suite of short-, medium- and long-term intervention measures. Short-term measures are expected to align with the timeframe for Activity C funding, where applicable, and should be developed to a sufficient level of detail consistent with AS3598.1:2014 requirements. Medium- and long-term measures may be presented at a higher level but should be logically sequenced and coordinated to support strategic planning, future investment decisions, and the overall decarbonisation pathway.

Expected outcomes

The energy and carbon improvement plan should deliver the following outcomes:

- Establish a clear pathway to 'zero carbon ready' (operational carbon) by 2040 (including Scope 1 and Scope 2 carbon emissions as a minimum), with annual targets aligned with a Paris aligned benchmark trajectory, such as Carbon Risk Real Estate Monitor (CRREM), Science Based Targets and Green Star.
- Quantify and prioritise measurable reductions in energy consumption, fossil fuel use and operational carbon emissions, through energy efficiency and fuel switching prioritised, ahead of offsite renewable energy procurement and offsetting.
- Align the emissions reduction pathway with NABERS energy performance star rating improvements in accordance with the NABERS Energy and Water for Offices Rules, using the current NABERS Energy online calculator, or the NABERS prediction tool where electrification is an intervention measure.
- Provide a staged, implementable roadmap that balances energy performance improvement, carbon reduction, cost effectiveness, asset lifecycle considerations and operational resilience and risk.
- Generate a metering and monitoring strategy to support ongoing performance monitoring, reporting and improved energy performance and NABERS outcomes.
- Where available, identify opportunities to access incentives under the Victorian Energy Upgrades (VEU) or other State and Federal programs, enabling applicants to maximise the financial benefits and additional revenue available through the scheme.

Data collection

Data collection, for the purpose of the energy and carbon improvement plan, should include:

- Clearly define the asset boundary, including operational boundaries for energy, emissions and NABERS assessment, with documented inclusions, exclusions and the tenant/base building delineation and assumptions.
- Collect historic energy and fuel consumption data for a minimum of 12 months (24 months recommended), including:
    - utility billing data
    - Building Management System (BMS) and/or Energy Monitoring System (EMS) data to develop an end use breakdown.
- Compile refrigerant inventories and relevant asset registers to support emissions accounting.
- Collect available information of the existing building envelope, including architectural drawings and specifications. This should capture key characteristics such as construction type, insulation levels, glazing systems and thermal performance, assumed or tested air tightness, and the presence and effectiveness of external shading devices. The review should also identify any known envelope upgrades, deficiencies, or constraints that may influence future improvement opportunities or building performance outcomes.
- Collect detailed information on existing building services systems, including system type, capacity, fuel source, age, condition and remaining useful life.
- Collect NABERS-relevant building and operational data, including rated area, occupancy levels, operating hours and equipment counts where required.
- Collect supplementary information such as:
    - equipment configurations
    - operational schedules
    - maintenance practices
    - previous studies or audits
    - known constraints and future capital or tenancy plans.
- Undertake site inspections and interviews with facilities and asset management personnel to understand energy use under varying operating conditions, such as building operation in response to user schedules, occupancy and any special tenant requests.

Analysis

Analysis, for the purpose of the energy and carbon improvement plan, should include:

- Quantify the current operational energy and carbon baseline, using transparent methodologies and defined emissions factors.
- Analyse end-use energy consumption at system and asset level, including annual and sub-annual breakdowns to develop an energy balance, as per the requirements of AS3598.1 2014.
- Develop 24-hour load profiles for major energy sources to assess demand patterns against operational use.
- Normalise historic energy use for climate, occupancy and operating hours, where appropriate.
- Establish and benchmark energy performance against comparable assets and rating benchmarks.
- Assess current NABERS Energy performance (under Activity A) and estimate future NABERS Energy ratings, using the NABERS reverse calculator and prediction tools.
- Identify and assess technical and operational energy and emissions reduction pathways, including:
    - thermal performance and energy efficiency improvements
    - electrification of building services
    - on-site renewable energy supply.
- Evaluate the impacts of proposed pathways on energy consumption, carbon emissions, NABERS Energy performance, electrical capacity and demand and operational resilience and risk.

Opportunity identification and evaluation

Opportunity identification and evaluation, for the purpose of the energy and carbon improvement plan, should include:

- Identify and develop a comprehensive list of energy and carbon reduction opportunities across:
    - operational improvements
    - energy efficiency, building fabric and plant upgrades

    - electrification measures
    - renewable energy procurement and supply.

- Assess opportunities across short-, medium- and long-term horizons, aligned with plant replacement cycles, planned capital works and tenant movements, where feasible.
- Quantify the impacts of individual and combined measures, including:
    - energy-savings
    - emissions reduction
    - expected NABERS Energy rating improvement
    - capital and implementation costs
    - operational impacts.
- Evaluate opportunities using consistent metrics, including:
    - operational cost savings
    - payback period
    - carbon abatement potential
    - tariff and time-of-use impacts
    - deliverability and disruption risk
    - other non-energy benefits.
- Prioritise measures into a logical and sequenced implementation plan, aligned with asset strategies and budget limitations, where present.
- Develop a consolidated energy and carbon improvement roadmap, summarising:
    - recommended initiatives
    - indicative timing
    - implementation steps
    - data confidence and accuracy levels.

Electrification feasibility assessment

Overview

An electrification feasibility assessment in a commercial building should investigate avenues and strategies to remove natural gas consuming services and appliances. These are likely to include space heating, domestic hot water and cooktops. A strategy to replace them with high efficiency electric alternatives needs to consider the items in the sections below and be presented to support strategic planning and future investment decisions.

The feasibility assessment must be undertaken by Qualified Service Provider(s) in the fields of mechanical and electrical engineering with demonstrated relevant experience.

Expected outcomes

The electrification feasibility assessment should deliver the following outcomes:

- A feasible electrification pathway for the building's key gas services, including space heating, domestic hot water and any gas cooktops for both tenant and landlord services.
- A comparison of various electrification options and an assessment of all impacts, including NABERS Energy, operations continuity, spatial, costs and existing electrical infrastructure constraints as a minimum.
- A roadmap aligned to plant replacement timeframes and any planned upgrade works.
- Indicative budget construction costs for the preferred and alternate options.
- A design concept including sketches of a suitably sized electrical plant that meets the needs of the building's heating demand, validated by either historical thermal or electrical data or accurately calculated loads undertaken by an experienced HVAC engineer.
- A high-level cranage or installation strategy for mid- and high-rise buildings (> 4 storeys).
- Where available, opportunities to access incentives under the Victorian Energy Upgrades (VEU) or other State and Federal programs, enabling applicants to maximise the financial benefits and additional revenue available through the scheme.

Data collection

Data collection, for the purpose of the electrification feasibility assessment, should include:

- Visual site inspection(s) of all accessible areas relevant to electrification works.
- Review of available documentation for relevant existing systems and electrical infrastructure.
- Building Management and Control System (BMCS) data, where available, to understand current loads and inform plant sizing.
- Metering data, including electrical and thermal, where available, to support understanding of energy consumption and loads during winter design days and available electrical capacity.
- Operation and maintenance information with respect to all components (pipework, heat exchangers, coils, etc.) that make up the heating and domestic plant.
- Electrical maximum demand allowances to the site, as part of the site's supply agreement.
- Where possible, winter testing trend log data of the performance of heating plant components (off-coil temperatures) at alternative heating hot water supply temperatures, representative of potential heat pump replacement options

Analysis

The analysis, for the purpose of the electrification feasibility assessment, should include:

- Sizing assessment, including current gas plant and appropriate electric equivalents, using BMCS data and a winter morning design day test data.
- Assessment of electrification impacts on:
    - NABERS Energy rating, based on current and future energy and emission rates using the NABERS prediction tool.
    - Building operations and operational continuity measures.
    - Existing infrastructure and how electric plant can work alongside the existing gas boiler system during transition.
- Electrical capacity and infrastructure assessment (substation and switchboard capacity, load impacts and relevant to upgrades required).

- Plant space and layout feasibility, including implications of heat pump space needs and potential options such as duct heaters and reverse cycle/4-pipe systems.
- Peak electrical demand implications and potential peak reduction solutions (e.g., PV/battery as an option prior to seeking additional utility capacity).
- Consideration of the likely acoustic, structural, planning and heritage, or architectural implications, if any.

Opportunity identification and evaluation

Opportunity identification and evaluation, for the purpose of the electrification feasibility assessment, should include:

- Options to replace existing gas systems with high-efficiency electrified solutions, including the following for reference:
    - heat pumps integrated with existing heating systems (series arrangements, changeover strategies)
    - thermal storage
    - solar hot water integration, where appropriate
    - heat recovery and 4-pipe (polyvalent) opportunities to integrate with cooling where feasible.
- Layout (plan) and schematic mark-ups of the various options to indicate location of heat pumps, their spatial impact, cable paths and location of new electrical switchboards.
- Opportunities to optimise electrical infrastructure utilisation, using capacity where available across switchboards.
- Opportunities for peak load reduction (e.g., PV and/or battery) to defer or avoid utility capacity upgrades.
- Gas cooktop and other tenant opportunities: high-level scope to enable tenants to operate fully electric, informed by review of switchboard and metering panels/supplies.
- Evaluation and ranking of options against criteria including:
    - operational continuity and disruption
    - cost (budget construction cost estimates)
    - environmental impact, including refrigerant emissions and NABERS Energy rating impacts
    - maintainability and reliability.

Implementation of capital works

Overview

Implementation of capital works progresses the recommendations of the energy and carbon improvement plan into on-site delivery, ensuring that identified energy efficiency, electrification and carbon reduction measures are executed in a coordinated, cost-effective and low-risk manner. This phase usually includes detailed design development, tendering, procurement, construction planning, installation, commissioning and performance verification to confirm that upgrades achieve the intended operational and emissions outcomes, in alignment with asset plans.

Capital works implementation should be overseen by a Qualified Service Provider, with proven expertise in commercial building upgrades and decarbonisation projects. The supervising provider should ensure works are delivered in accordance with design intent, relevant standards, safety requirements and sustainability objectives, while providing quality assurance, stakeholder coordination and plan for post implementation performance validation. The Qualified Service Provider for Activity C is expected to meet the following requirements:

- Relevant qualification: Degree or diploma in engineering, construction, or project management (or equivalent experience)
- Experience: Demonstrated delivery of building retrofit projects including procurement and managing tender processes
- Core capability: Strong skills in planning, budgeting and risk management
- Technical knowledge: Working understanding of building systems, codes, and construction processes.

If capital works are eligible under the VEU program or other State and Federal programs, it is recommended that applicants engage an accredited provider able to support accessing incentives under those programs.

The following activities include, but are not limited to, measures that can improve energy performance, reduce carbon emissions and support NABERS Energy rating uplift.

Building tuning and retro-commissioning

Building tuning and retro-commissioning works might include:

- re-balancing of all air- and water-based systems
- control loop tuning and BMS optimisation
- lighting controls tuning
- engagement of an energy manager to monitor and oversee tuning management and implementation.

Building systems and controls

Building systems and controls works might include:

- installation or upgrade of a building management system (BMS)
- deployment of energy monitoring systems and any associated analytics platforms
- installation of submetering for major energy-consuming systems
- integration of smart sensors for heating, ventilation and air-conditioning (HVAC)

HVAC upgrades

HVAC upgrade works might include:

- upgrades of inefficient and aged packaged systems with modern high efficiency units
- installation of variable speed drives (VSDs) on fans and pumps with associated BMS and controls upgrades
- air handling unit refurbishments
- fan and pump replacements
- re-zoning and rebalancing of floor plate air conditioning zones
- chiller replacement
- gas boiler electrification
- installation of air-to-air heat recovery systems

Lighting improvements

Lighting improvement works might include:

- conversion to light emitting diode (LED) lighting throughout the building
- installation of daylight, occupancy sensors and dimming controls
- zoning and occupancy-based lighting controls
- installation or upgrade of a lighting controls system

Building envelope thermal enhancements

Building envelope thermal enhancement works might include:

- upgrade of insulation in walls, roofs, and floors
- installation of high-performance glazing and façade systems
- sealing of air leaks and improving building airtightness
- air tightness testing to identify points of leakage

Renewable energy onsite generation and storage

Renewable energy onsite generation and storage works might include:

- installation of solar PV or thermal systems, including solar shading devices
- integration of battery storage for peak demand management

Vertical transport upgrades

Vertical transport upgrade works might include:

- destination control upgrade
- installation of regenerative drives
- motor replacement

Domestic hot water upgrades

Domestic hot water upgrades might include:

- electrification of gas based domestic hot water
- pipework insulation upgrade
- domestic hot water decommissioning

Other energy efficiency measures

Other energy efficiency upgrade works might include:

- installation of power factor correction equipment

Applicants are encouraged to include additional capital improvements in the EOI, provided these measures directly contribute to NABERS Energy performance uplift or electrification of gas services.

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