

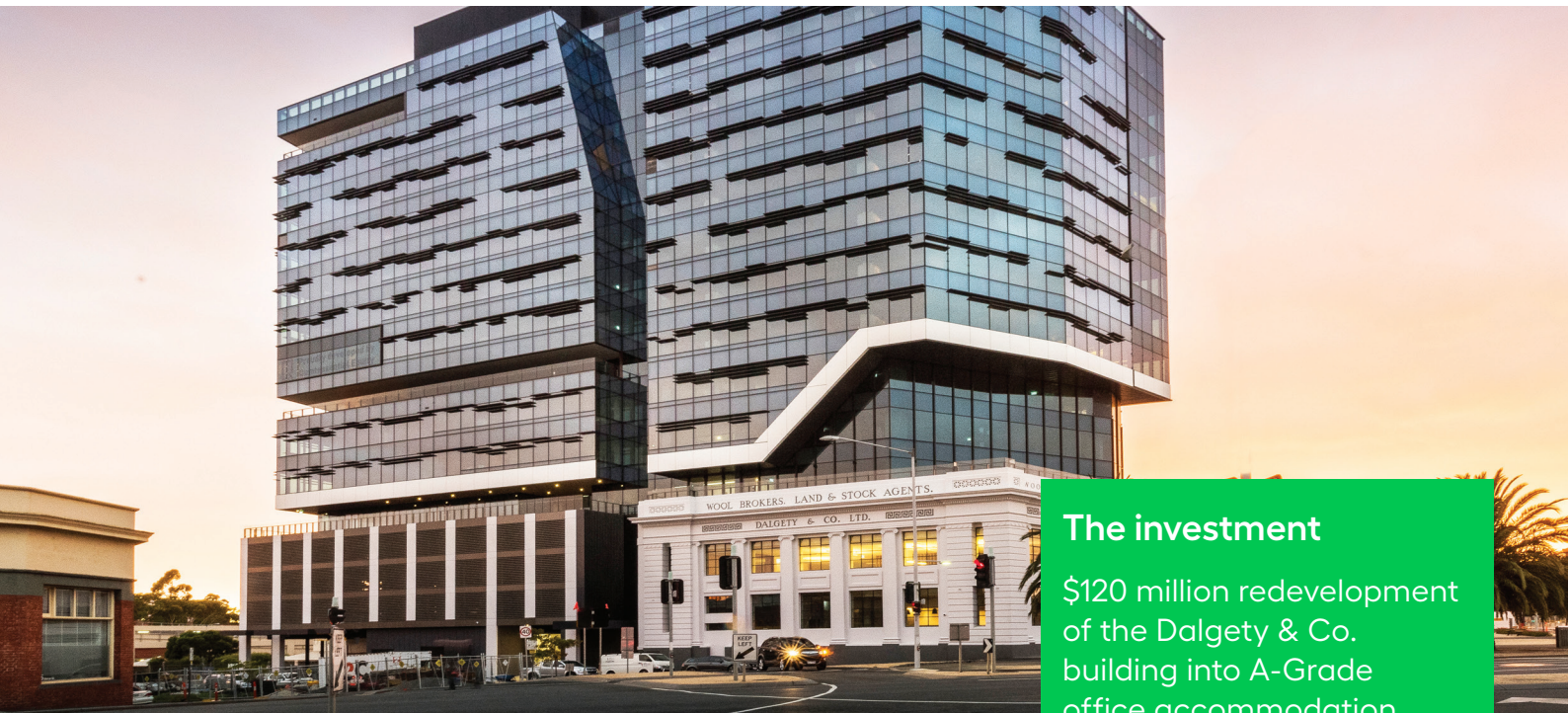


Australian Government



Clean energy and commercial property

How can clean energy technologies make a difference in office developments in Australia's property sector? This report provides practical insights, drawing on the work of the CEFC and Quintessential Equity, in the clean energy transformation of Geelong's iconic 1 Malop St office development.



The investment

\$120 million redevelopment of the Dalgety & Co. building into A-Grade office accommodation, setting new standards in commercial office sustainability. The CEFC provided \$68 million in debt finance.

Key facts

1 Malop St Geelong

\$120m

development

14 levels

premium office space

15,000sqm

office accommodation

The goal

- Deliver regional Victoria's first multi-storey 5.5 star NABERS energy rated building
- Secure a 25 per cent reduction in greenhouse gas emissions compared to the project's initial design
- Create an exemplar green building as the new home for WorkSafe Victoria

The investors

Quintessential Equity:

Unlisted property fund manager and developer providing syndicated investment opportunities across Australia, specialising in the commercial and industrial sectors.

Clean Energy Finance Corporation:

Extensive investments across the built environment through the Sustainable Cities Investment Program, which aims to cut emissions while supporting economic growth.

Project overview

Located at one of Geelong's most iconic sites, the 1 Malop Street project has merged the original heritage Dalgety & Co. building into a landmark property consisting of some 15,500 square metres of CBD PCA A-Grade office accommodation.

The 14-storey building is the first multi-storey Victorian commercial office building outside of the Melbourne CBD to achieve a 5.5 star NABERS energy rating. The main tenant is WorkSafe Victoria. Quintessential Equity is the project developer with design and construction undertaken by Built.

Sustainability initiatives

Highly efficient façade system

- The façade used thermally-broken windows, employing cutting edge design in Australia, to achieve the required energy efficiency levels and occupant comfort targets for the development
- Façade performance characteristics: whole-of-window U-value 1.9 and solar heat gain co-efficient of 0.23

Air leakage testing

- Targeting and achieving Best Practice Air Leakage rates of $2 \text{ m}^3/\text{hr}/\text{m}^2$ @ 50 Pa, demonstrated through whole building airtightness testing at practical completion
- Design development modelling undertaken for this project showed this could save up to 5-10 per cent of the annual energy use when compared with standard design and construction practices

Highly efficient lighting system and controls

- Highly efficient lighting controls with an addressable lighting system, dimmable, occupancy sensors and after-hours control
- Latest LED technology and controls to also include 50m² zones and a lighting power density of 4-5 w/m²

Onsite energy generation

- Extensive research into the most appropriate type of onsite energy generation
- A 90kW solar array covering almost the entire upper roof area was installed on this project
- On-site solar expected to provide 15 per cent of base building energy, delivering a 17.5 per cent reduction in energy costs

CEFC financing model

High quality urban design will become increasingly important as the population densities of our cities grow.

This is especially important since many commercial buildings can have a lifespan of more than 40 years.

The financing is part of a broader CEFC focus on working with building owners and developers to provide financing solutions across a range of property sub sectors to help drive higher industry-wide energy efficiency standards.

The CEFC was the sole debt financier for the project. Funding of the incremental capital costs to support the enhanced ESD initiatives was supported by the CEFC through the provision of a construction and term facility with a 5-year tenor, a fixed base rate and a concessional margin.

The CEFC finance allowed the project to be designed and constructed to achieve a 5.5 Star NABERS Energy Base Building rating (excluding Green Power), representing a 25 per cent reduction in emissions. The CEFC finance also included reporting obligations to share knowledge about the project outcomes and key lessons learned.

Certification and awards

The development has received widespread recognition.

The Platinum Core and Shell WELL Certification are the highest certifications for occupant health and wellbeing, from the International WELL Building Institute.

It also received recognition from leading industry organisations, including:

- Architecture & Design sustainable buildings awards
- Consult Australia's sustainability in design awards
- Engineers Australia (Victoria) engineering excellence awards
- Urban Developer awards for excellence in sustainability.



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Our 1 Malop Street development will set a new gold standard for near city office accommodation, providing a high quality, bespoke workspace designed specifically around the ethos of Live, Work, Play. It will be a legacy project which will form the centrepiece of the next phase of growth and development in Geelong. The opportunity to work with the CEFC has created a genuine win-win outcome for Quintessential Equity, WorkSafe, the CEFC and the city of Geelong.”

Guy French-Wright

Quintessential Equity Head of Development



Valuation dividend

Higher NABERS ratings can deliver a positive impact on asset valuations, such as:

- Increased asset resilience
- Net income and terminal value gains flowing from energy savings
- Comparable analysis with equivalent rated buildings

Sustainability outcomes

Outcomes targeted at design and construction phase:

- NABERS Energy: 5.5 Star Energy Base Building rating (excluding GreenPower)
- 25 per cent reduction in GHG emissions compared to the project's initial design
- 2,800 tonnes of CO₂-e abatement over a 20-year life
- Green Star: 6 Star Design and As Built Rating
- WELL Building Standard: Platinum Core and Shell Certification
- EV charging incorporated into base building design

Project sustainability insights

Upfront planning to maximise impact

Working with a sustainability consultant in the concept planning phase, before submitting development approvals, can help maximise both the carbon and cost savings that can flow from energy efficiency initiatives. This includes optimising the building façade to suit the climatic conditions with passive design features such as orientation, external shading and window-to-wall ratios. These initiatives can influence decisions on building services systems and the role of renewable energy in providing low carbon electricity.

Building Integrated Photovoltaics

A Building Integrated Photovoltaics (BiPV) system was considered for the project but determined to be unfeasible, primarily due to cost and lower efficiency of the technology. While the BiPV and rooftop PV systems had similar indicative upfront costs, the PV system delivered a threefold increase in installed capacity, at 90kW. As BiPV technology matures it has the potential to offer a more attractive payback compared with existing solar PV systems.

Building air tightness testing

Whole building air tightness testing is rarely undertaken in Australia, with project consulting and construction teams unfamiliar with it. Testing can provide valuable feedback on façade performance. A more air-tight building envelope will deliver efficiency and health benefits. Reducing air leakage means less wasted energy, reducing energy costs and emissions, while improving air quality and thermal comfort for the occupants through limiting infiltration.

Workforce engagement

The 1 Malop St development was delivered on time and on budget, including the additional design requirements to achieve the higher sustainability goals. During construction, Built undertook extensive education and engagement with sub-contractors to ensure the requirements of NABERS, Green Star and WELL ratings were well understood and that all workers on site were aware of the sustainability aspirations of the development.



Clean energy and the built environment

The CEFC has a strong commitment to reducing emissions across Australia's built environment, including the property sector.

CEFC property-related investment commitments focus on 'demonstration' projects with the ability to deliver best-in-class performance around energy efficiency and the integration of renewable energy into new and existing buildings.

CEFC commitments cover hospitals and healthcare, shopping centres, hotels, masterplanned residential communities and commercial-scale precincts. These subsectors all have significant potential to unlock emissions reductions and cost savings through an increased focus on sustainability.

The CEFC invests in property-related projects as part of the Sustainable Cities Investment program, which aims to cut emissions while supporting economic growth.

We see compelling reasons to improve the energy profile of Australia's built environment given the sector's emissions profile.

Energy efficient buildings using proven clean energy technologies:

- Reduce stress on the electricity network
- Lower electricity consumption
- Support a least-cost pathway to net zero emissions, improving health and resilience outcomes for households and businesses.



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This exemplar building demonstrates the considerable attractions of energy efficient and more liveable work environments. Higher rated properties consistently outperform their lower rated counterparts with a range of ongoing benefits.”

Ian Learmonth
CEO, CEFC

About the CEFC

The CEFC has a unique mission to accelerate investment in Australia's transition to net zero emissions. We invest to lead the market, operating with commercial rigour to address some of Australia's toughest emissions challenges. We're working with our co-investors across renewable energy generation and energy storage, as well as agriculture, infrastructure, property, transport and waste. Through the Advancing Hydrogen Fund, we're supporting the growth of a clean, innovative, safe and competitive hydrogen industry. And as Australia's largest dedicated cleantech investor, we continue to back cleantech entrepreneurs through the Clean Energy Innovation Fund. With \$10 billion to invest on behalf of the Australian Government, we work to deliver a positive return for taxpayers across our portfolio.