

EUA Finance for the Regions:

The economic benefits of retrofitting Victoria's building stock through Environmental Upgrade Agreements

December 2013

An joint initiative of the Eastern and Western Greenhouse Alliances



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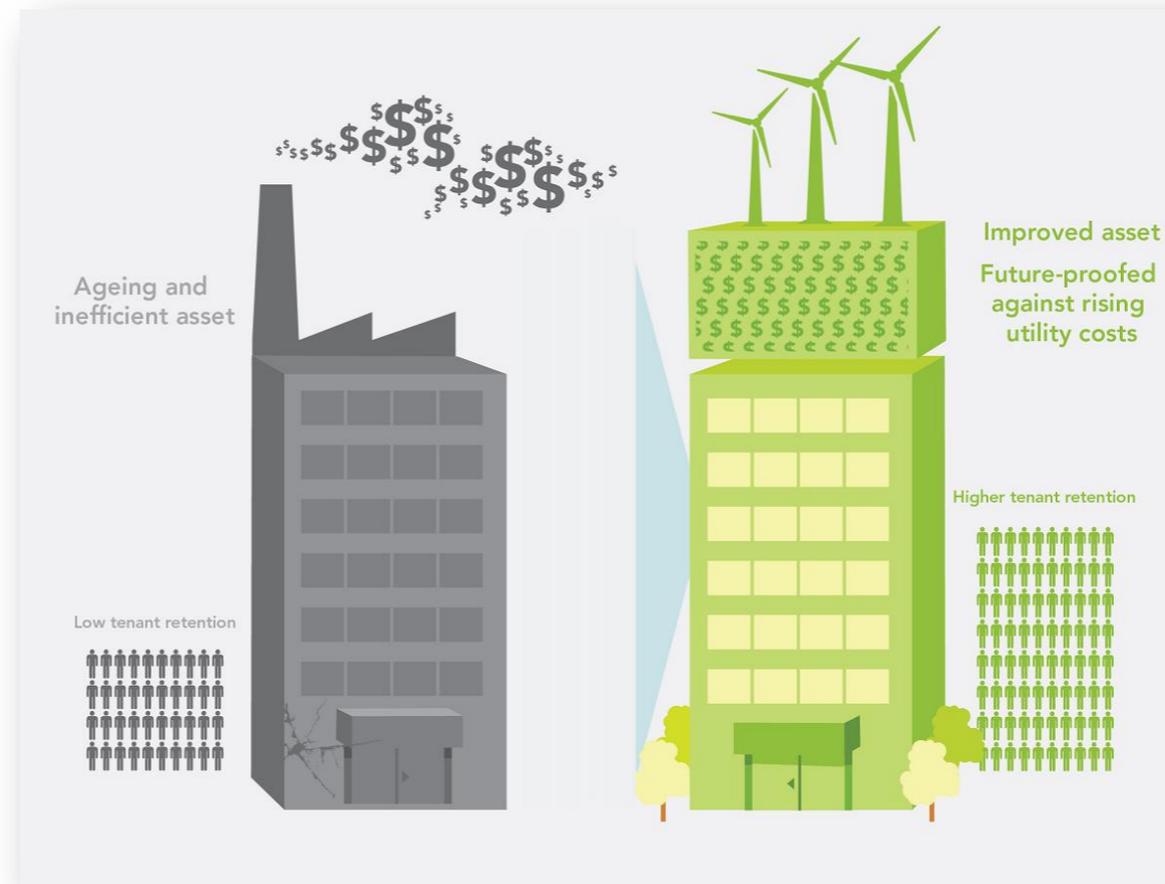
Summary

- This report quantifies the economic benefits that may flow from facilitating access to EUAs: **+\$4.5B of investment and +18,000 jobs across Victoria.**
- Retrofitting buildings for energy efficiency is one of the lowest cost means of reducing greenhouse gas emissions.
- Environmental Upgrade Agreements (EUAs) are a mechanism for building owners to access attractive finance for retrofitting.
- EUAs are available in the City of Melbourne as the key financing tool for the 1200 Buildings program (and are also available in some New South Wales municipalities).
- A change in the Local Government Act would enable other Victorian councils to implement EUAs.
- EUA finance can overcome structural and market barriers to retrofits, resulting in greater financial investment and increased employment in Victoria's regions.



Objectives and Scope

- This study quantifies the potential direct economic benefits that may be unlocked though allowing access to EUAs for each region in Victoria.
- The report makes recommendations to local government about how to support the necessary changes to the *Local Government Act*.
- The study does not include an assessment of indirect economic benefits (energy savings, product demand or indirect jobs) or a preferred administration model for the EUA mechanism.



Source: Sustainable Melbourne Fund

Methodology

- The work presented is secondary research that draws on key reputable studies (see *Assumptions, Limitations and References* section).
- The research included:
 - quantifying the floor space and number of properties within each municipality (<50m²) using data provided by the Valuer General Victoria
 - a segmentation model of all commercial building stock within each greenhouse alliance's region
 - applying a plausible upgrade scenario (15% additional to business as usual)
 - making conservative estimates of the direct capital investment and employment opportunities resulting from a range of energy and resource efficiency opportunities relevant to EUAs.
- The analysis and underlying assumptions have been peer-reviewed by the following technical experts: Sustainable Melbourne Fund, ARUP, AECOM.



An overview of EUA finance

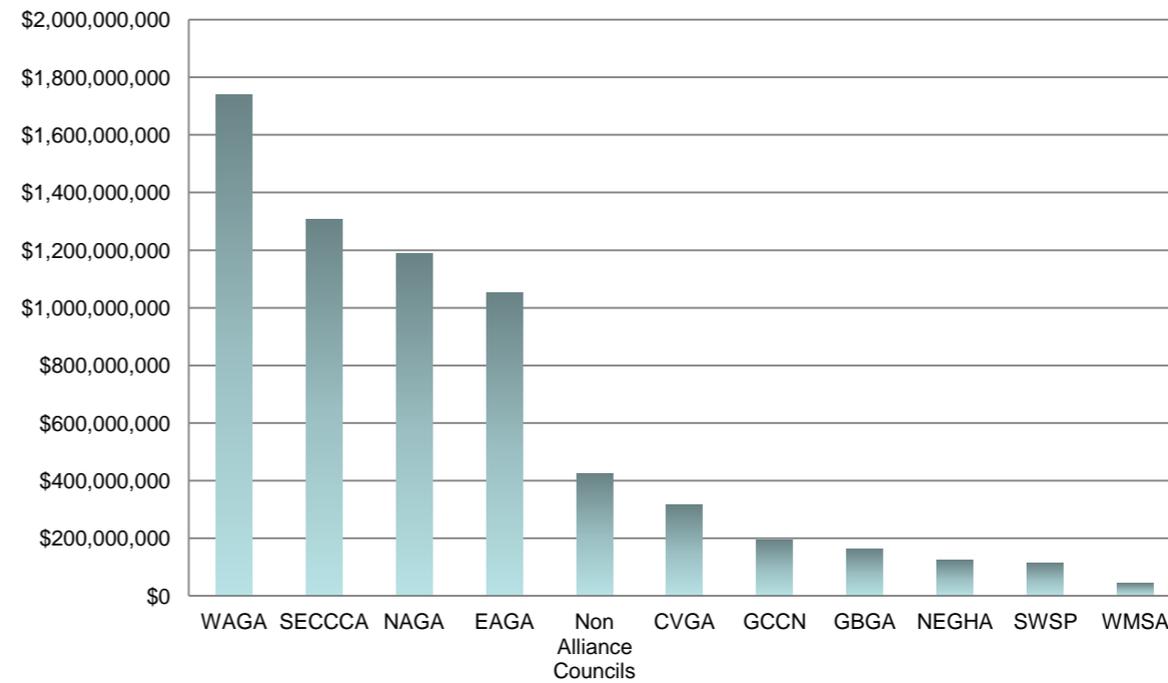
- An EUA is a three-party agreement between a building owner (borrower), a financial institution (lender) and a Local Government Authority (LGA).
- A loan to the building owner for retrofitting is repaid to the lender via the LGA. The EUA links the loan to the building rather than the building owner, enabling loan repayments to be made through a property charge, just as Council rates are paid.
- The property charge can be passed to tenants. This overcomes the 'split incentive' faced by landlords who usually have no incentive to invest in efficiency measures because tenants pay the utility bills.
- Lenders benefit from greater loan security and therefore offer attractive terms.
- Property owners benefit because the loan eliminates the need for upfront expenditure to undertake facility upgrades.
- Tenants benefit from reduced operating costs, offsetting the property charge (see explanatory [video](#))

EUA finance can unlock +\$4.5B of investment and create +18,000 jobs across Victoria

A majority of additional investment opportunity lay beyond the City of Melbourne



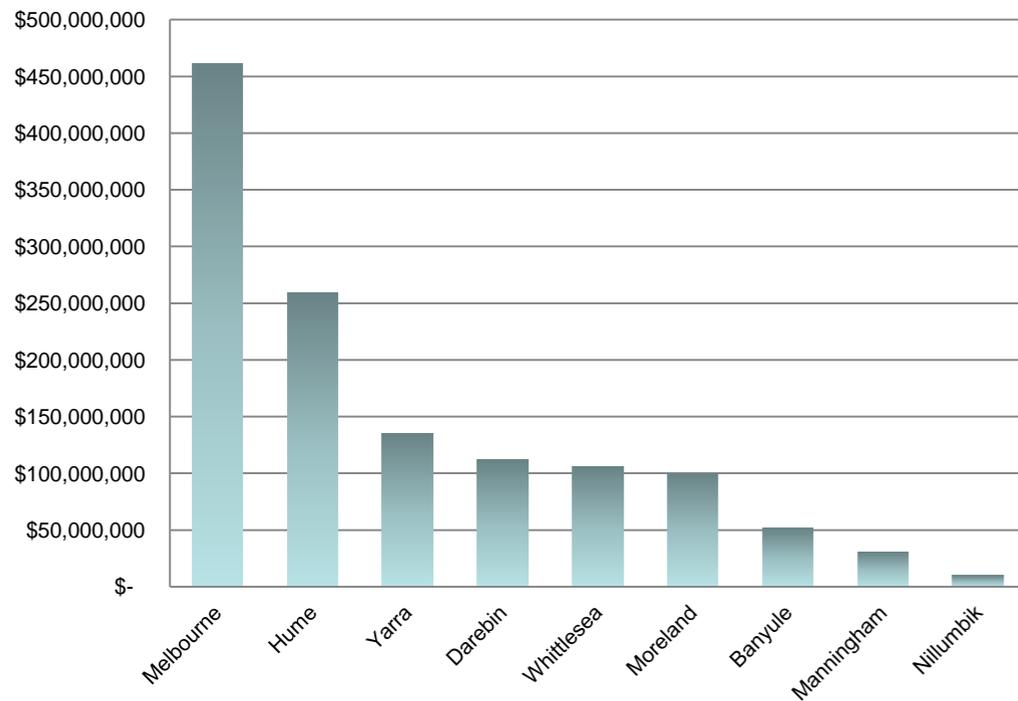
Victoria's regions can capture significant economic benefits through retrofitting existing building stock



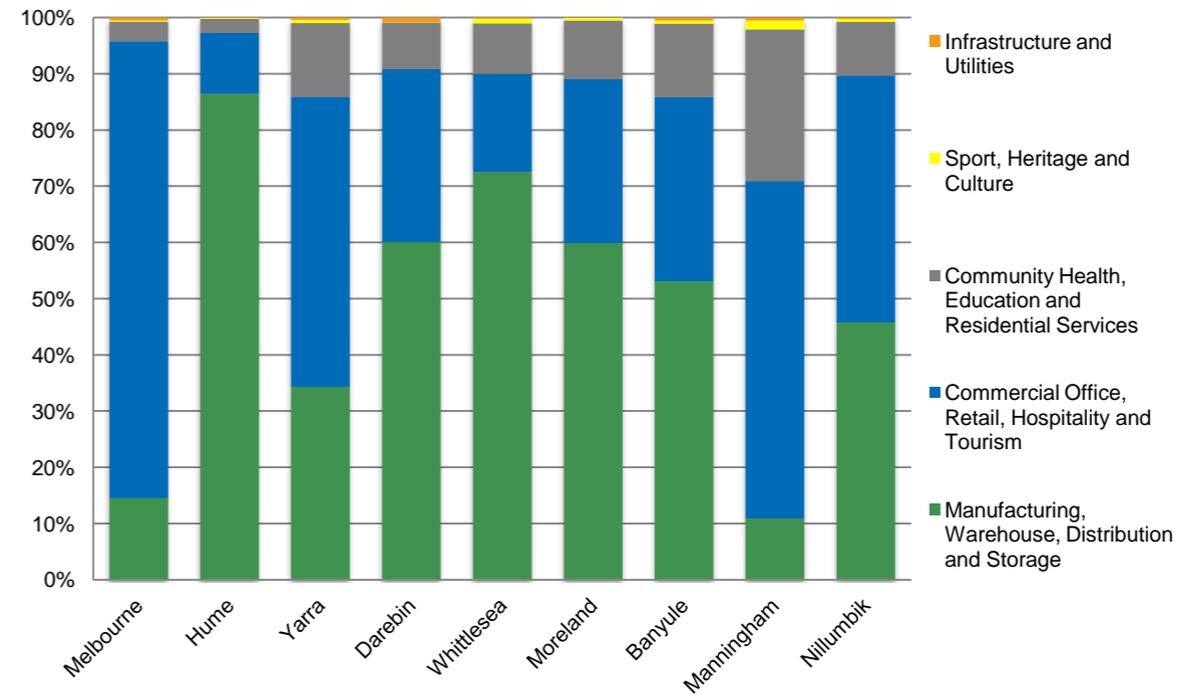
Establishing EUA finance beyond the City of Melbourne provides an opportunity to reduce the risks for building owners and tenants from increasing energy costs, deliver low cost abatement within the buildings sector, stimulate investment and grow the local building retrofit industry.

Beyond the City, EUA finance can unlock +\$800M of investment and +3,200 jobs across NAGA

Investment opportunity within NAGA municipalities



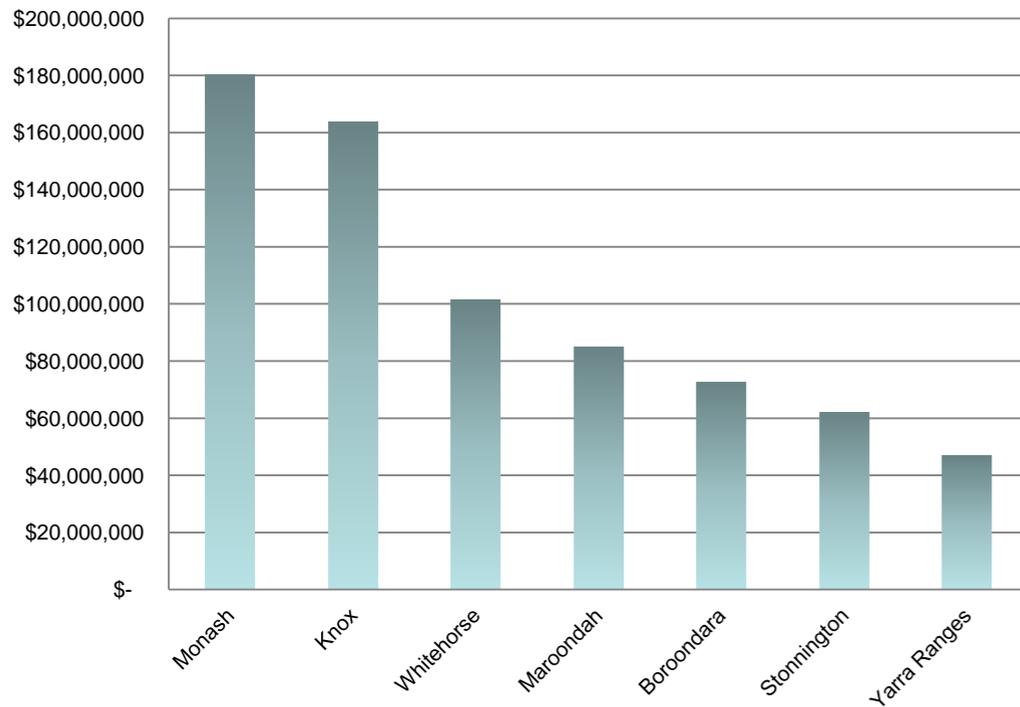
Investment opportunity owners within NAGA municipalities



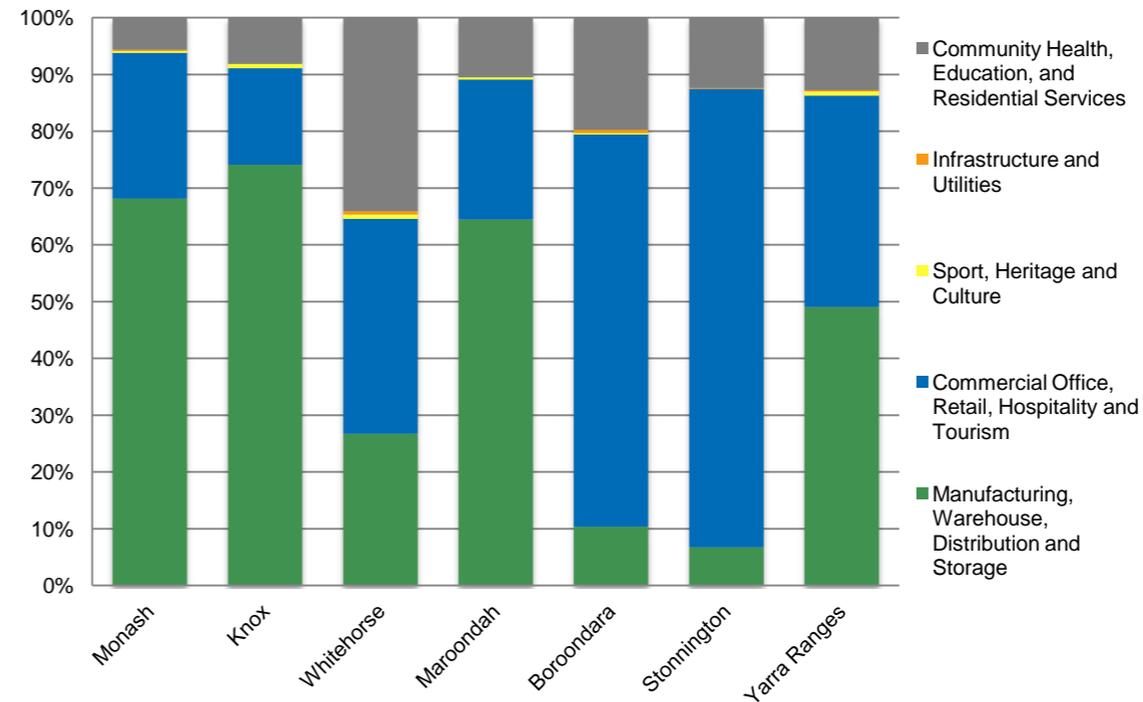
Estimates for the City of Melbourne vary significantly. [Deloitte's report on the 1200 Buildings Program](#) used a more ambitious upgrade scenario (70% of all commercial offices) and estimated the investment potential at ~\$2B and 8,000 jobs. Under either scenario, municipalities beyond Melbourne's CBD stand to benefit from EUA finance.

EUA finance can unlock over \$700M of investment and create +2,800 jobs across the EAGA Region

Investment opportunity within EAGA municipalities



Investment opportunity owners within EAGA municipalities

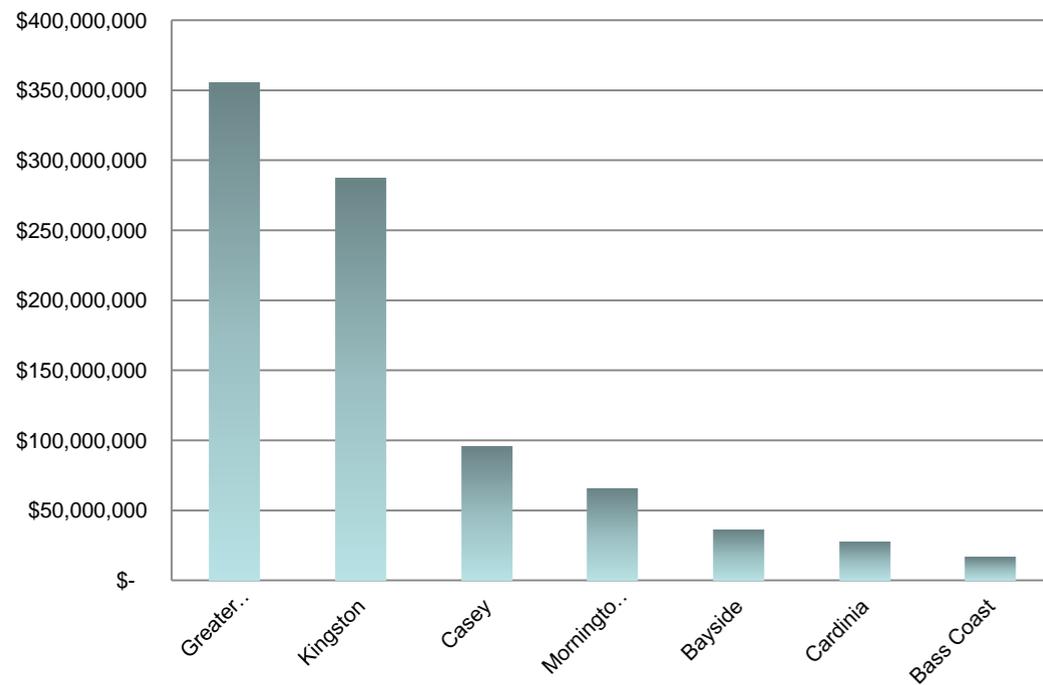


EAGA's region covers approximately 3,000km², extending from densely populated urban areas in the west to less populated rural areas in the east. The industrial areas in Knox, Maroondah and Monash are a major contributor to Victoria's manufacturing sector and could enjoy significant productivity outcomes through building upgrades.

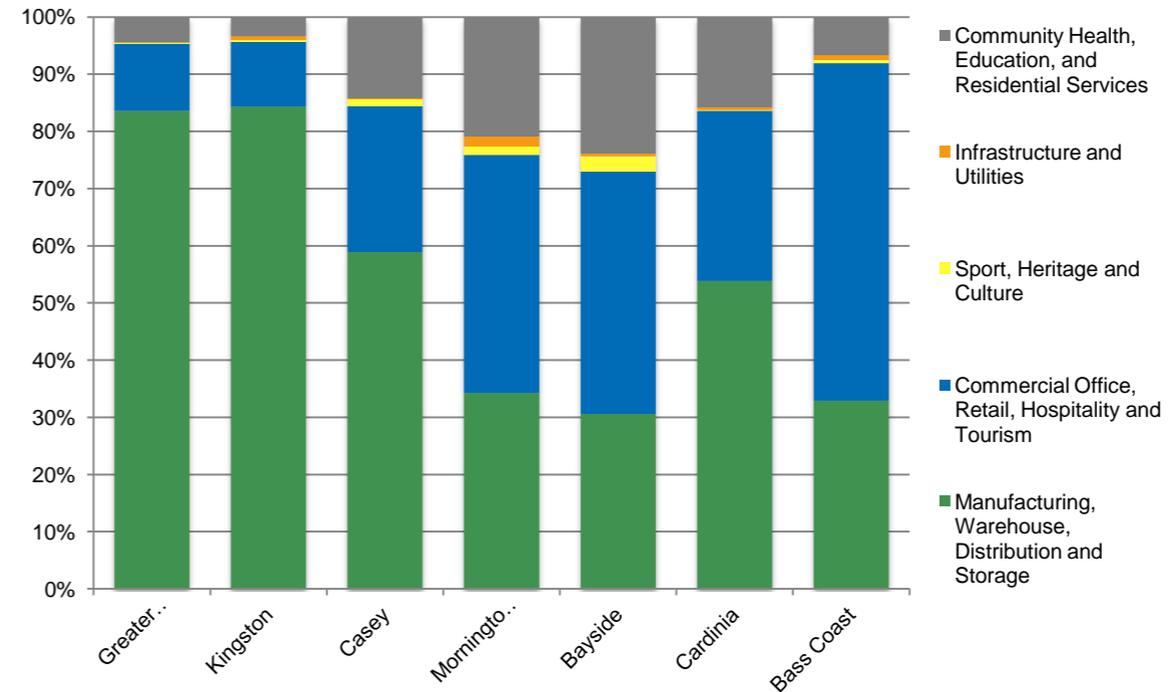


In the SECCCA region, EUA finance can unlock over \$880M of investment and create +3,500 jobs

Investment opportunity within SECCCA municipalities



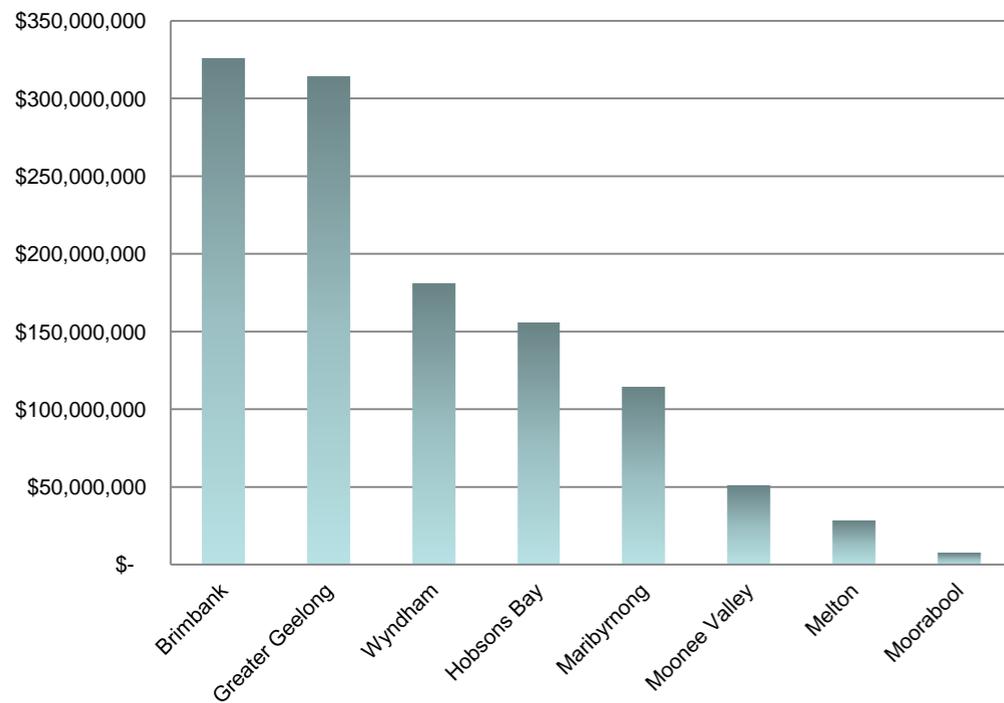
Investment opportunity owners within SECCCA municipalities



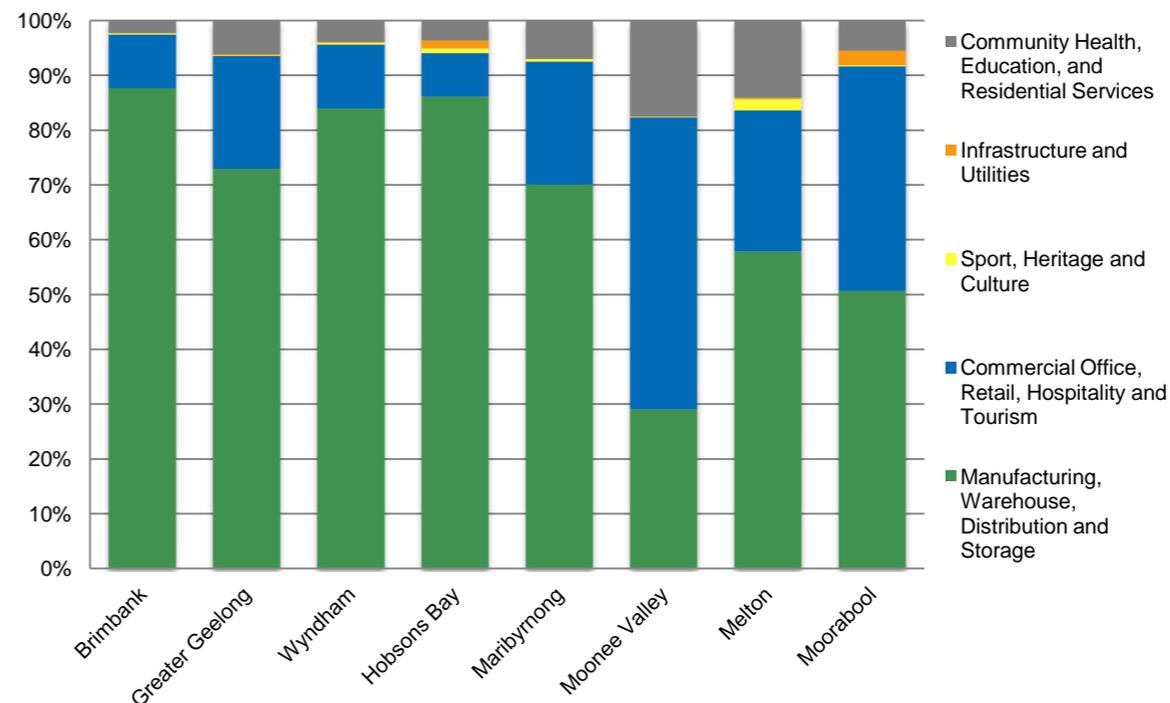
SECCCA's Councils cover a diverse and widespread region, with world-class tourist destinations, major retail and commerce centres, rich agricultural land and a burgeoning residential growth corridor. It is also home to one of Australia's major and most dynamic manufacturing hubs.

EUA finance can unlock over \$1.1B of investment and create +4,700 jobs across the WAGA Region

Investment opportunity within WAGA municipalities



Investment opportunity owners within WAGA municipalities



The identified potential in municipalities west of Melbourne is consistent with the findings of WAGA's 'Big Roofs' project, a study which mapped the largest roofs across the region and identified some 14km² of industrial roof space that could be used to harvest water and energy.

Case Study: Baptcare

- The data presented in the table is based in recommendations from a detailed energy audit at an aged care facility.
- Due to capital constraints, Baptcare would be unable to finance all of the initiatives recommended in the report.
- The organisation has confirmed that it would proceed with the upgrade to this facility, as well as other sites, should EUAs become available (see letter of support).

	Traditional Debt	EUA
Project size	\$277,990	\$277,990
Loan amount	\$305,789	\$305,789
Interest rate	8.000%	7.000%
Years of loan	3	15
Payments per year	12	4
Payment	(\$9,582)	(\$8,273)
Annual payment	(\$114,988)	(\$33,090)
Annual savings from efficiency measures	\$26,779	\$26,779
Project simple payback	11.4	11.4
Net annual cost	(\$88,209)	(\$6,311)

Progress to date and the outlook for the regions

- The uptake of EUAs is just beginning – the mechanism has been available within the City of Melbourne since April 2011 with five deals so far.
- The rate of uptake is consistent with a depressed market and a sluggish building sector over this period.
- The building sector is largely unaware of EUA finance. Businesses may be sceptical of ‘win-win’ solutions or suffer the perception that EUA agreements are ‘complex’.
- The requirement for ‘tenant consent’ in the City of Melbourne is an additional barrier to uptake in multi-tenanted buildings.
- Beyond the City of Melbourne, the proportion of owner-occupied buildings and facilities is higher, so there are less communication and stakeholder engagement barriers.
- Federally funded [resources and tools](#) are currently available to raise awareness and assist SMEs to capture EUA-related opportunities. These resources could be leveraged to address educational and skill barriers in the regions.



Recommendations for Local Government

- **Provide a letter of support to this study** – Affirm your Council's and Alliance's support for the necessary legislative reform and demonstrate the demand for EUA finance to the Minister for Local Government.
- **Actively engage with the State Government to amend the *Local Government Act* and enable EUA finance** – This study shows clear and significant economic benefits to Victoria from this minor, no-cost legislative change.
- **Advocate for the adoption of a nationally consistent administration model** – [South Australia's Business Case Report](#) evaluates the preferred approach for administering an EUA scheme and recommends adoption of an independent third-party administrator model. This replicable approach could create economies of scale for Councils wanting to voluntarily opt in over time (and consistency for businesses operating over multiple jurisdictions).



Assumptions, Limitations and References

Input	Assumption	Source	Consideration / Limitations
Upgrade scenario	15% uptake or penetration rate	Arup (2012) <i>Quantifying the environment and economic opportunities from retrofitting commercial buildings across SA: SA Segmentation study</i> , p.21	<ul style="list-style-type: none"> A conservative retrofit scenario of 15% above business as usual has been chosen – this is consistent with the low uptake scenario modelled by ARUP in the recent SA study More ambitious scenarios have been used in other studies, including the Deloitte report on the 1200 Buildings Program
Capital investment opportunities (\$)	\$ 288/m ²	Ibid, p.18,19 SGS (2013) <i>Environmental Upgrade Finance: Business Model & Business Case</i> , p. 44,45	<ul style="list-style-type: none"> Investment opportunities relate to upgrade initiatives targeting energy consumption and do not include other retrofitting initiatives (such as cosmetic enhancements) The range of upgrade improvements considered are consistent with measures delivering an increased NABERS rating of 2.5 to 4.5 stars in office buildings. These assumptions have been extrapolated to all non residential building types
New employment opportunities	40% of capital investment opportunity, \$100K average wage	Arup (2012) <i>Quantifying the environment and economic opportunities from retrofitting commercial buildings across SA: SA Segmentation study</i> , p.21	<ul style="list-style-type: none"> Assumes 40% of construction costs represent labour and an average wage of \$100K per employee Does not include an estimation of indirect employment outcomes – these opportunities have been systematically reviewed for the City of Melbourne in the Future job opportunities for Victorian manufacturers: 1200 building retrofitting project stimulus report developed by ARUP
Floor space data	Valuer General Victoria data 2012	Valuer General Victoria, 2012	<ul style="list-style-type: none"> Data provided in accordance with appropriate Australian Valuation Property Classification Codes (AVPCC) Data on building floor area (m²) is aggregated into 50 m² ranges and excludes entries of less than 50 m² Use of the average floor area per range multiplied by the number of entries within the range to give a total floor area per AVPCC code within given a municipality The segmentation model does not include assigning a level of upgrade to a particular building type

Further information

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