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FUND**

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**The Hon. Greg Hunt, MP**  
Minister for the Environment  
PO Box 6022, House of Representatives  
Parliament House, Canberra, ACT, 2600.

Friday, 21 February 2014

Dear Minister,

**RE: Emissions Reduction Fund Green Paper**

Sustainable Melbourne Fund (**SMF**) welcomes the opportunity to provide its views to the Australian Government's Department of Environment on the Emissions Reduction Fund Green Paper (**Green Paper**).

SMF provides its submission to the Green Paper with over a decade of investment experience into energy efficiency, climate change and sustainability projects and businesses. SMF's major focus has been upon retrofitting commercial buildings. Through this submission, SMF's on the ground experience can inform the development of the Emissions Reduction Fund (**ERF**) so that the likelihood of meeting its stated objectives can be enhanced.

Work undertaken by SMF estimates that in order to unlock an additional 2.42MtCO<sub>2</sub>-e of abatement per annum in Victoria would require capital investment of \$4.5 billion. This however, is an economic opportunity that can also deliver 18,000 jobs for the state of Victoria. Clearly, the scale of this investment is greater than the proposed value of the ERF, but thankfully a form of Statutory Secured Finance - Environmental Upgrade Agreements (**EUAs**) and Building Upgrade Finance (**BUF**) can unlock this capital through 100% private investment. A well designed ERF can increase the likelihood of such capital investments actually being made, provided its design is targeted at overcoming the barriers, which are well documented, to energy efficiency within non-residential buildings (both commercial and industrial stock).

The submission attached primarily focuses upon how the operation of the ERF should be designed to work in tandem with EUAs to accelerate the deployment of private capital through EUAs.

ERF on its own is estimated to offer a nominal net incentive of up to 3% of the capital required to deliver an energy efficiency project. This may not be enough incentive to overcome the effort required to prepare a bid for the ERF. However, partnered with EUAs, ERF funding could potentially accelerate commercial retrofitting behaviour and increase the likelihood of success of the ERF.

ClimateWorks Australia estimates that commercial buildings offer up to 29 MtCO<sub>2</sub>-e in 2020 of additional abatement. Energy efficiency is generally considered to be a negative cost opportunity, i.e. profitable, but this investment is not being made by the private sector. With private capital available to EUAs and the ERF precisely targeted to overcome the transactional barriers to energy efficiency, combined they could not only stimulate abatement, but also stimulate local investment and job creation opportunities the economy currently needs.

SMF welcomes the opportunity to assist in achieving the vast opportunity offered by EUAs and a well design ERF.

Yours sincerely,

Robert Jamieson  
Chairman  
Sustainable Melbourne Fund

Scott Bocskay  
Chief Executive Officer  
Sustainable Melbourne Fund



# SUSTAINABLE MELBOURNE FUND

## Sustainable Melbourne Fund

Submission to Australian Government Department of Environment on the Emissions Reduction Fund

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## Executive summary

- Achieving emission reductions through energy efficiency in the commercial built environment represents a key opportunity for the Emissions Reduction Fund (**ERF**).
- Environmental Upgrade Agreements (**EUAs**) provide the government with a significant opportunity to increase the likely success of the ERF.
- The ERF should explicitly include EUAs as a recognised method
- **Key changes to the proposed ERF design:**
  - Declaring energy efficiency projects which are accompanied by an EUA to be automatically additional – similar to being on the positive list in the current CFI.
  - Develop an ERF method, based upon EUA legislation
  - Publication of the benchmark price to enable early price discovery and allow appropriate business cases to be developed prior to the commitment of upfront capital expenditure.
  - Allowing advanced payments based on "deeming" of emissions reductions, similar to those that have been used effectively in the State-governed energy efficiency schemes. Without such a provision, the already small incentive of the ERF becomes even smaller and this increases the challenge for aggregation of many small to medium-sized energy efficiency projects.
  - Including a "make good" provision which allows participants to use ACCUs to address under-delivery of agreed emission reductions.

## Rationale

- EUAs offer significant opportunity to create additional jobs and investment in Victoria, estimated at an **additional \$4.5 billion and 18,000 jobs**.
- Based upon the EUA signed to date, this scale of investment would offer an estimated 2.42MtCO<sub>2-e</sub> of abatement per annum available to the ERF from Victoria alone.
- Despite a compelling business case, energy efficiency opportunities are still being left on the table and there remain a number of barriers inhibiting take up. ERF funding can help reduce these barriers.
- EUAs are a new concept pioneered in Victoria. Current uptake of EUAs has been slow despite current opportunities offered by EUAs. However, momentum is building with EUA programs expanding across Australia, in NSW, Victoria and South Australia, multiple lenders entering the EUA marketplace and market acceptance of EUAs growing.
- When partnered with the delivery of EUAs, sound design of the ERF can assist in unlocking this economic opportunity for a state such as Victoria (and Australia). A well designed ERF is mutually beneficial to the expansion of EUAs and combined can accelerate the delivery of abatement targeted by the ERF.
- Using an abatement cost of \$12 per tonne CO<sub>2-e</sub>, the ERF only offers a nominal net incentive of **up to 3% of the capital required to deliver a project**. Given that there are likely to be additional costs for an energy efficiency project to bid into the ERF, this marginal benefit may not incentivise potential participants to engage in the ERF.

- In order to finance the capital requirement of energy efficiency projects, **EUAs when partnered with the ERF, offer cash-flow benefits of up to 61%** based upon EUA projects financed to date.
- Sustainable Melbourne Fund (**SMF**) is well-positioned to act as an aggregator on behalf of several small building owners in the City of Melbourne (**CoM**), and Victorian Government tenanted and owned buildings, in relation to energy efficiency projects, with assistance from the ERF, provided the risks of doing so do not outweigh the commercial benefits.
- While energy efficiency offers a large and cost efficient abatement opportunity, without appropriate design of the ERF, including mechanisms to facilitate aggregation of emission reductions from small buildings, SMF believes the Government will have difficulty in recovering the full potential of emissions reductions from the built environment, and indeed meeting the 5% reduction emissions target.
- Based on SMF's assessment, contracts under the ERF for energy efficiency projects will not be bankable (see Appendix 1), without being combined with a proven financing mechanism like an EUA. Therefore, without partnering with effective finance methods, such as EUAs, the ERF is likely to exclude the majority of energy efficiency opportunities available within Australia.
- SMF acts as an independent third party administrator of EUA programs across Australia and is consequently well placed to facilitate the aggregation across multiple channels, being projects sourced from different EUA lenders (such as NAB, bankMECU and ANZ), different municipalities offering EUAs, discrete and individual building owners and project developers. However appropriate design of the scheme for aggregation should alleviate some of the risk associated with this opportunity.

## Introduction

SMF welcomes the opportunity to provide its views to the Australian Government's Department of Environment on the Emissions Reduction Fund Green Paper (**Green Paper**).

SMF is an independent Unit Trust established by the CoM in 2002. SMF directly invests in businesses and projects that deliver innovative approaches to the delivery of sustainability outcomes. It also operates as a third party program administrator for local governments to assist them in delivering streamlined and consistent EUA programs.

SMF is pleased that the Green Paper highlights improving energy efficiency in commercial buildings as a priority area for funding under the ERF and that it emphasises the important role that aggregation can play in unlocking emissions reductions from several smaller sources of emissions. We are also pleased that the Green Paper clarifies that EUAs are eligible for funding under the ERF and in our view, EUAs have a critical role to play in the success of the ERF so far as the energy efficiency sector is concerned.

## Opportunities for SMF under the ERF

It would be a wasted opportunity if the ERF did not support large scale emissions reduction through energy efficiency measures in the commercial built environment in Australia. Numerous studies have recognised that energy efficiency represents the most cost efficiency abatement opportunity.

SMF is exploring its role as an aggregator for several building entities. The types of buildings that SMF has identified as being key opportunities for it to aggregate through ERF funding are:

- Privately owned commercial office buildings in the CoM (80% of buildings, representing 47% of NLA in the CBD, are owned by disparate non-institutional owners) and other non-residential class buildings;
- Victorian Government-owned buildings; and
- Victorian Government-tenanted buildings.

SMF considers ERF funding could greatly assist in expanding the implementation of the EUA model. For Victorian Government owned buildings (which are excluded from EUA funding under legislation), ERF funding could possibly assist SMF to aggregate several projects through Energy Performance Contracts (EPCs).

SMF is well-positioned to act as an aggregator. However, it notes that the costs involved in bringing together several owners and getting to a position where several projects can be bid into the ERF will be significant and it will be important for the ERF to play an enabling role in this respect.

In order for SMF to take on an aggregation role through the ERF, a number of issues need to be resolved and we set out the key issues in this submission.

## Energy Efficiency and Environmental Upgrade Agreements

An EUA is a model whereby a building owner, after assessing the energy efficiency improvements to the building, secures funding for the improvements through an Australian bank. A tripartite agreement is entered into between the building owner, bank and the council in whose area the building is located. In conjunction with this agreement, the council places an environment upgrade charge (a statutory charge) on the building, and under this charge the building owner pays via instalments to the council, through the rates collection system, an amount equivalent to the amount

advanced from the bank. Upon collection by the council from the building owner of payments, the council then pays this money to the bank.

Victoria has played a pioneering role in the development of the EUA model. In September 2010 the Victorian Parliament passed Australia's first legislation to support the large scale environmental retrofitting of city buildings. The City of Melbourne Act 2001 was amended to enable CoM to levy a new form of statutory charge, the environmental upgrade charge. This legislative change provided the basis for environmental upgrade finance, enabling building owners to undertake retrofits sooner, create new cash flows and start capturing the value of energy and water efficiency. EUAs are currently restricted to non-residential buildings within the CoM, but this could expand to the rest of Victoria in the near future. EUAs have since been adopted by a number of councils in NSW, and SA is currently developing legislation to enable EUAs in that state.

EUAs overcome key barriers that prevent energy efficiency projects from proceeding, particularly, the split incentive and access to finance for capital upgrade costs.

While EUAs provide an innovative finance model and overcome key barriers, to date, their uptake has not been as high as expected. So far, only 5 EUAs have been signed within the CoM.

It is important to note that, while the take up has been slow, the opportunity presented by EUAs is large. The projects that have been undertaken to date represent approximately 1.8 million square meters of net lettable area (NLA) across 125 buildings within the municipality of Melbourne. Extrapolated from the first 5 EUAs, the buildings they represent offer an estimated 138,680 tCO<sub>2</sub>-e of abatement opportunity per annum. However, there remain significant challenges to capturing this value.

The above data has been collected through the CoM's 1200 Buildings Program, although these numbers are reflective across capital cities throughout Australia. However, the majority of non-residential floor space is not located within our capital cities (municipalities). In Victoria, the CoM only represents 9.3% of NLA of non-residential buildings.

While EUAs were developed targeting commercial office buildings, they can be implemented across all non-residential buildings, under the current and proposed EUA enabling legislation in Victoria, NSW and South Australia. Significant opportunities exist within the Manufacturing, Warehouse, Distribution and Storage industry sectors, which represent 58.3% of the total NLA within Victoria.

EUAs offer a significant economic and jobs creation opportunity. The size of the opportunity for the State of Victoria alone has identified an additional \$4.5 billion of potential investment creating up to 18,000 jobs to be gained from the roll out of EUAs.<sup>1</sup> Based upon the project completed to date, the scale of this investment offers significant opportunities for abatement for the ERF with an estimated 2.42MtCO<sub>2</sub>-e of abatement per annum available to the ERF from Victoria alone.<sup>2</sup>

EUAs offer significant incentives for building owners to undertake energy efficiency projects. This is for 4 prime reasons:

- The term (length) of the loans, up to 20 years at fixed interest rates, with 100% project finance available, secured by the environmental upgrade charge.
- The ability to work with occupants to deliver deep retrofits by overcoming the 'split incentive'.

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<sup>1</sup> <http://eaga.com.au/wp-content/uploads/EUA-Finance-for-the-Regions-Summary-Report-2013-12-02.pdf>

<sup>2</sup> ClimateWorks (2011) *Low Carbon Growth Plan (2011 update)* suggests typical upfront capital intensity for a cost effective commercial building project is approximately \$1300/tCO<sub>2</sub>-e. However, the actual abatement achieved through the 5 Victorian EUAs reflects a capital intensity of \$2,051/tCO<sub>2</sub>-e abated p.a. The latter has been used for this calculation

- The opportunity to significantly enhance cash-flow opportunities when compared to other means of finance.
- The opportunity for building owners to deliver energy efficiency projects that deliver revenue as opposed to savings.

To illustrate this point, taking the 'average EUA' as outlined in the Appendix 1, the impact of different ways of financing energy efficiency project is outlined. When compared to a baseline project (a project financed through an extension of a mortgage, available over 4 years only) an EUA (of 10 year term) offers a 59% increase in cash-flow benefits, with ERF funding added this increases only to 61% Refer table 1.

Table 1 Impact of EUAs on Cash flow

	<b>Base Case</b>				
	<i>Debt - Short term low cost</i>	<i>Debt - Long term high cost</i>	<i>EUA</i>	<i>EUA with ERF</i>	<i>EUA with deemed ERF payment</i>
Capital Expenditure	\$2,570,600	\$2,570,600	\$2,570,600	\$2,570,600	\$2,570,600
Deemed ERF payment					-\$51,438
Loan Amount	\$2,570,600	\$2,570,600	\$2,570,600	\$2,570,600	\$2,519,162
Interest rate	<b>5.000%</b>	<b>15.000%</b>	<b>7.000%</b>	<b>7.000%</b>	<b>7.000%</b>
Years of loan	<b>4</b>	<b>7</b>	<b>10</b>	<b>10</b>	<b>10</b>
Payments per year	12	12	4	4	4
Payment (P&I)	-\$59,199	-\$49,604	-\$89,899	-\$89,899	-\$88,100
Annual Payment (P&I)	\$710,389.22	-\$595,251	-\$359,597	-\$359,597	-\$352,401
Annual Savings	\$114,200	\$114,200	\$114,200	\$114,200	\$114,200
Project Simple Payback	22.5	22.5	22.5	22.5	22.1
ERF revenue (cash flow)				\$15,041	
<b>Net annual Cost</b>	<b>-\$596,189</b>	<b>-\$481,051</b>	<b>-\$245,397</b>	<b>-\$230,356</b>	<b>-\$238,201</b>
Cash flow benefit/(detriment) from base case		\$115,138	\$350,792	\$365,833	\$357,988
% cash flow benefit/(detriment)		<b>19%</b>	<b>59%</b>	<b>61%</b>	<b>60%</b>

Where EUAs are partnered with the ERF, ERF funds can add incentive for building owners to uptake the use of EUAs, thereby delivering the government's desired abatement. However, it must be made simple for building owners to access ERF funding.

While the above demonstrates the clear commercial enhancement offered by EUAs and how ERF funding can enhance this, the sample projects does not reflect a theoretical rational business decision to undertake a project – to actively seek a negative cash-flow. This is due in part to the numbers above reflecting an average view of 5 projects. This hides other commercial aspects that play into a decision to undertake a project. In each case competing commercial realities and operational necessities also feed into the decision to undertake an energy efficiency upgrade. While energy efficiency offers a significant abatement opportunity, without appropriate design of the ERF and its operation, and without use of a mechanism such as EUAs, SMF believes the Government will have difficulty in recovering the full potential of emissions reductions from the built environment. It is clear that aggregation of these disparate buildings to facilitate participation in the ERF is paramount. Simultaneously, without partnering with effective finance methods, such as EUAs, and other design criteria as recommended by this paper, the ERF is likely to exclude the majority of energy efficiency opportunities available within Australia.



# Crediting

## Aggregator

SMF is encouraged that the Green Paper acknowledges the role that aggregation can play in the ERF, but has some concerns that, as proposed, the ERF will not create the necessary incentives to unlock participation by potential aggregators, such as SMF, in the commercial building sector.

For aggregation to be viable under the ERF, the rules and governance arrangements for participation as an aggregator need to be simple, clear and consistent. Most importantly, the arrangements must help push down up-front transaction costs for aggregators rather than imposing additional costs and barriers to participation. This is essential because of the relatively high transaction costs experienced by participants under existing EUA and EPC models.

In order for the ERF to contribute to a greater uptake, SMF believes a number of key design features are required to promote participation by aggregators of commercial building energy efficiency projects:

- consistent with the Green Paper's design principle of streamlined participation, any pre-qualification requirements for aggregators should be appropriately targeted and proportionate so that they are not unduly onerous;
- similarly, the forms and related processes associated with the tender and auction rounds should be designed in a way which minimises up-front costs and resourcing;
- additionality of projects should be satisfied without the need for 'before and after' metering or monitoring (which add very significantly to participation costs and will result in significant time delays to achieving large scale abatement) – for example, additionality could be "deemed" to be satisfied if actions are being proposed under an EUA, or if equipment and technology types known to improve energy efficiency are specified in an energy efficiency method;
- where a project utilises an EPC, a specific method will need to be developed to account for the risk transferred to Energy Service Companies (ESCO). EPC's delivered by multiple ESCOs can be aggregated, by either an ESCO, the portfolio owner, or indeed a financier, such as SMF
- advanced payments based on "deeming" of emission reductions should be permitted in energy efficiency projects, similar to those that have been used effectively in the State-governed energy efficiency schemes; without such a provision, it is unlikely that the aggregation of many small to medium-sized energy efficiency projects could proceed;
- as is flagged in the Green Paper, the current requirements for project developers to establish relevant property rights might be a barrier to aggregation in some sectors and should be modified to provide for simpler landholder consent requirements where appropriate;
- the relationships between the aggregator and other parties (for example, building owner, council, bank) should continue to be managed through separate contractual arrangements; and
- the ERF participation rules for aggregators should be sufficiently broad to accommodate different models of environmental upgrades and energy efficiency improvements.

In making the above suggestions, SMF emphasises its strong support for the ERF's design principle of genuine emissions reductions. Given the existing knowledge and track record on energy efficiency within the commercial building sector, SMF believes the integrity of this principle can be preserved while also delivering a simple and streamlined process under the ERF. In SMF's view, both elements must exist if the ERF is to incentivise a greater uptake of energy efficiency actions in the commercial building sector.

## Additionality

SMF supports an approach to additionality that ensures that activities or projects that would have taken place as 'business as usual' are not able to participate in the ERF.

SMF also supports an approach that ensures the assessment of additionality is streamlined and cost effective. In this respect, SMF agrees that 'financial additionality' should not be part of the Government's approach.

At present, the take up of retrofitting of commercial buildings to improve energy efficiency or reduce greenhouse gas emissions is subject to a number of barriers. These include:

- Cost of capital
- Investment priorities
- Long pay-back period
- Project lead times
- Lack of information and internal resources
- Split incentive
- Absence of regulatory requirement<sup>3</sup>

Allowing the retrofitting of commercial buildings to participate in the ERF in theory provides a necessary incentive to achieve emissions reductions in the built environment.

However, in and of itself, the income derived from participation in the ERF is unlikely to be a significant driver (see Appendix 1). Assuming a least cost approach to participation in the auction and using a conservative price of \$12 per tonne CO<sub>2</sub>-e, the scheme adds only a 2.93% nominal incentive to participate.

Where capital investments may run into the millions of dollars, such a nominal incentive will do little to incentivise additional energy efficiency activity, where the opportunity cost is greater than the incentive on offer. The proposed nature of the ERF payments, being post-delivery of abatement, further decreases this incentive to two percent of capital invested (discounted at 8%).

To place this into context, normal contingencies of energy efficiency projects may be in order of 10-15% of capital expenditure.

In addition to the low rate of return on capital investment there will be other hurdles to participation including obtaining the necessary capital to undertake the project and the proposed 5 year length of the Government contracts, which are unlikely to cover the payback period of the works.

SMF considers that the EUA arrangements provide an ideal solution to overcome these barriers. **To this end, SMF suggests that one approach could be to deem a project to be additional if it is supported by an EUA.**

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<sup>3</sup> Further explanation of these barriers (and others) can be found in the submission to the Emissions Reduction Fund Terms of Reference submitted by the Clean Energy Finance Corporation.

## Methods

SMF believes that it is critical that methods strike a balance between being robust (to ensure integrity of the credits being generated) and simple (to encourage broad participation).

Where possible, existing methodologies (such as those which have been approved under the existing State based energy efficiency schemes) should be adopted and/or adapted.

SMF understands that a pre-requisite for bidders into the Fund will be an existing approved method. Accordingly, SMF supports the development of appropriate methods prior to commencement of the ERF on 1 July 2014, in order to ensure that there are realistic prospects for 'early movers' to participate in the ERF from day one.

While the Green Paper identifies large non-residential energy efficiency upgrades as a significant opportunity (over 50% of the abatement opportunity), a significant amount of abatement opportunity is disaggregated across smaller buildings, owned by businesses and individuals, who are least well equipped to unlock the opportunities of energy efficiency. Where large projects face internal competition for limited capital, the smaller projects face an absolute lack of access to capital. The ERF offers an opportunity to incentivise access to capital available through EUAs, however the methods developed need to be able to be simply implemented in both large and small facilities.

To this extent SMF recommends that a method, specific to EUAs be developed. Clearly, EUAs are a new approach to financing buildings with limited uptake. By creating an EUA specific method enables a clear, simple and financeable pathway to delivery of abatement activity. Equally as there is a handful of pilot projects in existence it is safe to assume that any new efforts to use EUAs would be additional to a Business as Usual approach.

An absolutely key aspect for project developers or aggregators will be keeping monitoring, verification and reporting costs to a minimum. If these costs are too high, this will disincentivise participation. With this in mind, SMF is a strong supporter of a "deemed" approach to the calculation of the emissions reductions or energy savings. This could be done through existing measurement or rating tools, such as NABERS and through putting in place default emissions and energy factors for specific equipment, products or systems.

A deemed approach could also potentially be applied to the concept of additionality. For example, given the barriers currently in place and the fact that there is not currently strong take up of commercial building retrofitting, a project may be deemed to be additional if it satisfies a minimum star rating improvement (e.g. a minimum increase of 2 stars) or a minimum energy consumption improvement (e.g. 20%) or is accompanied by an EUA.

## Project permanence

Methods should recognise the nature of energy efficiency in buildings is complicated. One such complication to the permanence of abatement activities relates to a change of ownership of a facility during the ERF contract term. The Government needs to consider how contracts under the ERF could and would be novated across to new building's owners or what rights and remedies the ERF contract may have in these circumstances.

A unique feature of EUAs is that it is a statutory charge that can remain with the land despite a change in owner or occupier. The EUA program in the City of Melbourne recognises this and the government may wish to consider how the ERF contract can directly compliment the EUA contract so that abatement may also continue across different owners and tenants of a building. SMF as an aggregator and administrator of EUAs across the country can assist.

# Purchasing

## Assessing bids

The auction framework of the proposed ERF opens up the ERF to the risks of gaming in the bid strategies of different proponents or abandonment of projects. If not managed effectively, there is a risk that the ERF will inadvertently deter or exclude abatement opportunities and result in a combination of insufficient abatement, higher abatement cost and non-additional abatement.

Price discovery is a key risk for SMF bidding into the auction. Being a government-owned entity, there is a risk that significant time and resources could go into preparing the auction bid (project design, feasibility and bidding costs); with tax-payers money lost if SMF is not successful. This is expected to be a major deterrent to public, as well as private, entities from bidding into the ERF in the initial rounds.

Entities that act as aggregators are likely to incur more costs and time in preparing for an auction round than entities bidding on behalf of a single project and the processes for aggregators to bid should be as straightforward as possible, while maintaining rigour.

Price discovery could be more transparent if the Government published the ceiling (benchmark) price. This would ensure that only those participants that could achieve abatement at less than the price will expend resources developing project proposals and participating in auctions. Frequent auction rounds (at least quarterly) would also assist in price discovery.

It is important that the Government publish the results of each auction (at least project type activity, sector and method used, price per tonne of abatement, tonnage and term of contract) in order to build trust in the system and assist in price discovery for future rounds.

A tender process could be used instead of an auction, at least initially, as a mechanism for price discovery, assuming the Government makes public the successful applicants (in particular project description, price and tonnage). As with other Government tenders, the Government could publish the criteria on which it will assess submissions. This may provide a more systematic and robust process as the ERF becomes established.

## Contracts

### **(a) Upfront payments based on evidence-based deeming**

While the Climateworks costs curve shows that the lowest cost abatement activities to be in the area of energy efficiency in buildings, in practice, the rate of implementation of such projects is less than expected. This is in part due to the considerable upfront transaction costs that arise before the projects are implemented, and for an aggregator of small projects, these upfront costs are likely to be significant.

As an aggregator, SMF will face considerable costs in bringing together a range of disparate small to medium building owners and managing the implementation of the projects. There will be costs involved in getting to a position where SMF can bid, and if successful at auction, further upfront costs will be involved in implementing the projects. This will require significant resources. There is a risk that if SMF is unable to access such funding, then this will prevent it from acting as an aggregator.

We agree with the Government that standard contracts are required so that some participants do not achieve more favourable terms than others. However, there should be the option for upfront payments to be made to successful participants that meet certain criteria.

One of the criteria could be that the delivery of the agreed emission reduction tonnes are guaranteed (through the project proponent or the underlying project being secured). EUAs are a bankable instrument as the charge attaches to the building so that if the owner sells the building, the new owner is obliged to comply with the charge. If there is a default, then the council is entitled to sell the building in order to be repaid the charge (similar to a mortgage). The Australian

Government would therefore face minimal risk in providing upfront finance to SMF, as an aggregator for buildings implementing energy efficiency projects through EUAs.

Equally, if SMF was acting as an aggregator on behalf of the Victorian Government's owned buildings, the fact that they are government owned would mitigate any risk to the Australian Government that the payments would not be repaid (either in cash or emissions reductions). The amount of upfront payment that is appropriate will depend on the quantity of tonnes that the applicant has bid into the auction and the price per tonne.

The NSW and Victorian Energy Efficiency Schemes each allow for "deeming" which means they provide recognition of future abatement (in the form of certificates or payment for abatement) in advance. Deeming is permitted where there is evidence that savings will persist. Without some form of deeming, the ERF will not be able to access most small – medium scale commercial savings opportunities.

Deeming, within the context of the design of the ERF also enable the type of subsidy currently being offered within the design of the ERF, moving from a cash-flow subsidy; to a capital subsidy (refer Table 1). Capital subsidies have proven to work in previous government run programs such as the green building Fund.

Upfront or "advanced" payments were also a common feature of many of the Government managed carbon funds, and are often used by development banks such as the World Bank or the Asian Development Bank, in emission reduction purchase agreements that they enter into. This is in recognition of the fact that project proponents require funding at the implementation stage, in order for the project to proceed. The upfront payments are then offset by the delivery of emission reduction units and through "make-good" clauses.

#### **(b) Make good provisions**

SMF supports the use of a make-good provision in the form of allowing project proponents to use ACCUs to meet their commitments. This would assist in providing a market for ACCUs beyond the Government and would help incentivise project proponents to apply for funding through the ERF. The resulting secondary market would also provide an efficient way to source supplementary abatement from proponents that over-deliver.

In order for project proponents to be able to manage the project risks, there should be a price ceiling on the ACCUs, or the option for project proponents to purchase international units if the domestic price reached a certain point. If there was no price containment in the make-good provisions, then this would be a deterrent for project proponents in applying for funding through the ERF. This is because it would be impossible to calculate the price per tonne for auction, if the maximum price per tonne in the make-good provisions was not known.

#### **(c) Contract Bankability**

The Green Paper notes that the forward contracts secured by proponents through an auction process can be used as security when proponents apply for finance for the project. As demonstrated at Appendix 1, and in the context of commercial building upgrades (and indeed industrial projects), the value of the contract with the government provides little to no security for a lender looking to invest into an energy efficiency project.

Implicit in the ambition for the ERF contract to be 'bankable' is a project finance approach to delivering projects. To take a project finance approach to energy efficiency, projects require the business case to be cash flow positive from day one. Detail that sits behind this relates to the relative value of collateral on offer to a financier of a project. One of many underwriting metrics used in project finance is the Loan to value ratio (**LVR**) which is also considered within mortgage backed finance. Using LVR to illustrate the point, in the example used, the ERF contract would have a nominal value of \$75,204 against a capital expense of \$2,570,600, leaving an LVR of approximately 97.1%. To put this into context, finance secured by a commercial mortgage requires an LVR of 55 - 65%.

Using the LVR metric alone (as additional underwriting metrics will need to be satisfied in order to make the ERF contract bankable) and assuming an LVR of 60%, the required value of the ERF contract would require the price per tonne of abatement to be in order of \$164.07 per tCO<sub>2</sub>-e in order to make the ERF contract 'bankable', assuming the contract term of 5 years remains the same. Were the term of the ERF contract to double, the cost per tonne of abatement would accordingly half.

Given the government's intent to buy least cost abatement and despite the Green Paper identifying energy efficiency as a negative cost opportunity, clearly without a complimentary form of finance for these projects there is little chance of non-residential energy efficiency contributing to the abatement task of the ERF, in large or small facilities.

However, SMF welcomes the Government's commitment to allow the use of EUAs in partnership with the operation of the ERF, as EUAs do provide a form of project finance, that can unlock abatement opportunity. An EUA can, and has provided up to 100%, of the capital required for Energy Efficiency projects, Refer to Appendix 2 for case studies of projects undertaken to date in Victoria.

## Melbourne's Average EUA

Based upon:

	<i>Number of projects</i>	<i>NLA</i>	<i>Capital Expenditure</i>	<i>Annual \$ Savings</i>	<i>Annual tCO2-e savings</i>
<b>TOTAL</b>	5	79,485	\$12,853,000	\$571,000	6,267
<b>AVERAGE</b>	1	15,897	\$2,570,600	\$114,200	1,253.4

Assumed costs to apply, participate in auctions and report to ERF and Assumed Price received from Auction:

	<i>Cost (\$)</i>
<b>Upfront – Method and Auction</b>	\$ 4,500 <sup>4</sup>
<b>Ongoing reporting p.a</b>	\$ 1,000
<b>Price / tCO<sub>2-e</sub></b>	\$ 12.00

Average EUA ERF Cash-Flow

<i>Year</i>	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>15</i>
Net Cash flow	-\$2,575,100	\$ 128,241	\$ 128,241	\$ 128,241	\$ 128,241	\$ 128,241	\$114,200	\$114,200	\$114,200	\$114,200	\$114,200	\$114,200	\$114,200	\$114,200	\$114,200	\$114,200
<i>Including ERF Revenue</i>		\$ 15,041	\$ 15,041	\$ 15,041	\$ 15,041	\$ 15,041										
<b>ERF Contract Value</b>																<b>\$ 75,204</b>
<b>NPV ERF revenue (8%)</b>																<b>51,438</b>
<b>ERF Receipts as % of Capex</b>																<b>2.93%</b>
<b>Discounted ERF Receipts as a % of Capex (8%)</b>																<b>2.00%</b>

<sup>4</sup> These upfront costs do not include any costs associated with development of a method, or any costs associated with the preparation or negotiation of an EUA and are considered additional to normal costs incurred through undertaking an energy efficiency project.

# Appendix 1

## 460 Collins



	NLA	Annual Savings (tCO2-e)	Annual Savings (\$)	tCO2-e Savings (%)	Capex (\$ '000)	Other innovation / technology / important stories	# of Buildings in CoM	Volume of NLA in CoM (m2)
<p>The building is located in the north-west corner of the intersection of Collins St and William St in the central business district of City of Melbourne. The building dates from the 1938 and consists of 11 levels:</p> <p><b>Basement</b> –bank tenancy various space, heating plant room, sub-station and main switchboard.  <b>Roof</b>-cooling plant, other mechanical services, 'shed' and minor facilities.  <b>Floors 1-8</b> inclusive-general office tenancies.  <b>Ground</b>-bank tenancy banking chamber and bank-office support areas.</p>	3,559.6	170	11,000.0	31%	383	The funding enabled the building owner to be proactive and undertake end of life replacement of a chiller before it broke down. By replacing the chiller while it was still spring, the owner was able to avoid any disruption/ inconvenience to his tenants over the summer period. Furthermore, by replacing the old chillers with the new Power Pax chillers, the owner saved \$11000 on energy bill per annum.	30	73,199



## Kings



	NLA	Annual Savings (tCO2-e)	Annual Savings (\$)	tCO2-e Savings (%)	Capex (\$ '000)	Other innovation / technology / important stories	# of Buildings in CoM	Volume of NLA in CoM (m2)
<p>Kings business park precinct is a five building campus style development. Four buildings were retrofitted as part of this project.</p> <p>Similar improvements were made to the four buildings which included new cooling towers and highly efficient chillers to replace existing units. New pumps and piping were installed along with variable speed drive pumps, fans and air handling units to reduce air conditioning energy consumption. A new direct digital control system for the building was also installed to provide energy savings, replacing an analogue system that allowed only limited monitoring of equipment operation and performance.</p>	30,660	2,680	250,000	35%	3,190	The applicant also received grant funding under the Green Building Fund. The EUA funding enabled the applicant to implement a more comprehensive energy management program. The EUA finance was used in conjunction with grant funds to better manage the building owners cash flow, during construction and throughout the project life	11	429,799

## 123 Queen



The CQ building at 113 Queen Street is a fifteen story building with a NLA of 18493m2. It is mixed use building comprising of: Conference Ctr, Public car park, Restaurants, Bars, Hotel Rooms, Office spaces and education facilities

The energy efficiency improvements undertaken are installation of a 380kW combined heat & power (trigeneration) system, improved lighting control systems, façade upgrade and sub-metering.

	NLA	Annual Savings (tCO2-e)	Annual Savings (\$)	tCO2-e Savings (%)	Capex (\$ '000)	Other innovation / technology / important stories	# of Buildings in CoM	Volume of NLA in CoM (m2)
<p>The CQ building at 113 Queen Street is a fifteen story building with a NLA of 18493m2. It is mixed use building comprising of: Conference Ctr, Public car park, Restaurants, Bars, Hotel Rooms, Office spaces and education facilities</p> <p>The energy efficiency improvements undertaken are installation of a 380kW combined heat &amp; power (trigeneration) system, improved lighting control systems, façade upgrade and sub-metering.</p>	16,240	2,500	180,000	59%	1,500	Installation of a trigen system.	35	359,661

## 470 Collins



	NLA	Annual Savings (tCO2-e)	Annual Savings (\$)	tCO2-e Savings (%)	Capex (\$ '000)	Other innovation / technology / important stories	# of Buildings in CoM	Volume of NLA in CoM (m2)
<p>Constructed in the 1960s, the building contains 15 levels, including car park, basement &amp; plant room with a combined floor space of approximately 16000m2 and is used primarily for commercial office space.</p>	9,763	310	50,000	23%	780	Upgrade of boilers and Building management system	33	281,062

## 501 Swanston



	NLA	Annual Savings (tCO2-e)	Annual Savings (\$)	tCO2-e Savings (%)	Capex (\$ '000)	Other innovation / technology / important stories	# of Buildings in CoM	Volume of NLA in CoM (m2)
<p>501 Swanston Street comprises a 19 level office tower, ground level tenancy and basement car park with a combined space of 19,262m2. Office Levels are located on levels 1 through to 17 with levels 18 &amp;19 comprising service rooms. In addition to the ground level car showroom tenancy, there is also a cafe.</p>	19,262	607	80,000	18%	7,000	<p>The EUA enabled a higher order of environmental outcomes that might have otherwise not been achieved, such as a rooftop garden. Funding from EUA will be used for a full upgrade of the plant room, chillers and boilers, and a solar film for the windows to lessen the load on the AC. A \$2.5 million portion of the fund will also fund new kone lifts that will include regenerative braking and energy recovery mechanism.</p>	33	281,062



# SUSTAINABLE MELBOURNE FUND

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