

Inner Melbourne Action Plan

Progress Report

Action 9.4 Green Demonstration Projects

Purpose

1. To update the Committee on the results of an application for funding and next steps in the Growing Green Guide for Melbourne project.

Background

Grant information

2. The Local Sustainability Accord is a State Government grants program aimed at funding projects addressing sustainability or climate change issues by local governments.
3. In December 2010 the Cities of Melbourne and Port Phillip, IMAP and the University of Melbourne partnered to apply for Accord funding for the Growing Green Guide for Melbourne.
4. The Department of Sustainability and Environment have awarded \$250,000 to the project (see letter at attachment 2).
5. This project is aligned with IMAP Action 9.4: Green Demonstration Projects.

Project Description

6. The Growing Green Guide for Melbourne project is a practical tool that will increase knowledge and reduce the technical barriers of green roof and green wall construction. Using a collaborative approach between government, commercial and education institutions, the Guide includes best practice guidelines and policy recommendations that can be readily utilised by councils, developers and planners across Victoria.
7. The following outcomes will be delivered:
 - **Victorian best practice guidelines** for green roof/wall/façades including; a how-to guide for developers, landscapers and the general public, and standards for best practice construction.
 - **Practical application of the guidelines and policy recommendations** by; an opportunities assessment of key areas within municipalities that would benefit from green roofs/walls and a demonstration project concept using the guidelines to design rooftop and/or vertical greening for one building.
 - **Recommendations for options** to integrate rooftop and vertical greening into regulatory schemes including recommended changes to the planning schemes in each municipality.
8. The outcomes are further detailed in Attachment 1.

Budget

9. The total project budget is \$618,300. The State Government has committed to providing \$250,000.
10. The City of Melbourne and City of Port Phillip has committed to contribute \$125,000 including \$85,000 in kind support (people resources) and \$40,000 financial resources each over two and a half years. This would be subject to funding through Council's normal budget process.

Funding Arrangement as per Accord Application

<i>Income</i>	<i>Cash</i>	<i>In-kind</i>
City of Melbourne	\$40k	\$85k
City of Port Phillip	\$40k	\$85k
IMAP	See above	See above
University of Melbourne	\$0	\$118,300.00
Funding requested from the Accord	\$250k	\$0
Total	\$330,000.00	\$288,300.00

11. The financial and in kind support could be split between all councils in IMAP to contribute to Action 9.4.
12. The University of Melbourne will cover the balance with in kind support.
13. The Project is proposed to start in September 2011 and run for a period of 30 months.

Project delivery:

14. A project officer will be employed to coordinate the project. To ensure capacity building within municipalities is shared, the role will be split between councils. Additional contributions will be provided from relevant planning and technical staff.
15. The University of Melbourne will provide expert knowledge for the project and will write the best practice guidelines. This will build capacity across the education and training sector.
16. The project will be referenced by a technical steering committee and consultation achieved through workshops with industry stakeholders and quarterly project updates disseminated to interested parties.
17. We will share our learnings with other interested local governments in Victoria and more widely, nationally and internationally. The guidance and best practice documents will be available on our websites and will be promoted at relevant conferences, forums and media opportunities.

Recommendations

18. That the IMAP Implementation Committee note the award of grant money and confirm the allocation of budget across the four councils.

Attachment 1

Project outcomes:

The following outcomes are proposed to improve knowledge and create solutions to the current barriers to implementation.

1. Best Practice guidelines for green roofs and green walls in Victoria including:

- A how-to guide for developers, designers, landscapers and the general public. Significant knowledge gaps exist on the steps required to construct a green roof/wall and the main considerations in planning and design. The guidelines will define and detail the different types of green roofs/walls/façade greening, the demonstrated benefits for buildings and urban environments and key main issues in the design process (e.g. height and access, weight loadings, Occupational Health and Safety considerations). Maintenance and management considerations will also be discussed to assist stakeholders in deciding which approach is most appropriate for their situation. Case studies of green roofs built in Melbourne and Victoria over the last 4 years will be used to highlight these issues.
- Standards and specifications for best practice construction of green roofs and walls in Victoria to adapt to climate change. The use of relevant national and international standards and specifications is critical to the sustained success of roof and wall greening in Australia. This is particularly important given the local context of this emerging industry and the predicted effects of climate change. The guidelines must be regionally specific, help to protect against poorly constructed projects; and assist in educating and promoting best practice to the industry.

2. Regulatory recommendations for green roofs and walls including:

- Recommended changes to the planning schemes in each municipality. A document will be developed for policy planners in local government and will include guidance on recommended options for changing the planning schemes in each municipality to encourage progressive implementation of particular greening treatments.

3. Practical application of the guidelines and policy recommendations by:

- An opportunities assessment of key areas within municipalities that would benefit from green roofs/walls. Detailed feasibility studies will be conducted to identify the likely site-specific solutions for at least 3 high priority sites at each municipality. Local funding partners will also be identified to contribute to the implementation and analysis of the next stage - the demonstration project.
- A planned green roof/wall demonstration project in any of the municipalities in the project. This will use and apply the best practice standards and how-to guidelines to design a green roof/wall. Funding for the installation of the demonstration project may be above the funding allocated here and will be sourced elsewhere.



**Minister for
Environment and Climate Change**

Dr Kathy Alexander
Chief Executive Officer
City of Melbourne
PO Box 1603
MELBOURNE VIC 3001

8 Nicholson Street
PO Box 500
East Melbourne Victoria 8002
Australia
Telephone: (03) 9637 8000
Facsimile: (03) 9637 8100
DX 210098

28 JUL 2011

Dear Dr Alexander

**VICTORIAN LOCAL SUSTAINABILITY ACCORD: ROUND 5 PARTNERSHIP GRANT
APPLICATION**

I am writing to advise that your application for a Sustainability Fund grant under the Victorian Local Sustainability Accord (Accord) has been successful. I am therefore pleased to offer you \$250,000 on behalf of your project partners for the project – Growing Green Guide For Melbourne: A How-To Guide For Green Roofs, Walls And Facades.

Round five of the Accord funding program has allocated total amount of over \$5.6 million to 57 local government projects to tackle important environmental issues at the local level. Over \$2 million of this funding has been for partnership grants.

Your regional DSE contact, Kirstyn Lee, will be in touch with the project officer named in your application to finalise the arrangements for the project to commence. If you have any queries about the process, please contact Kirstyn Lee on (03) 9296 4453 or email kirstyn.lee@dse.vic.gov.au.

I wish you every success with your project and thank you for your valuable contribution to better environmental outcomes for all Victorians.

Yours sincerely

THE HON RYAN SMITH MP
Minister for Environment and Climate Change

Privacy Statement

Any personal information about you or a third party in your correspondence will be protected under the provisions of the Information Privacy Act 2000. It will only be used or disclosed to appropriate Ministerial, Statutory Authority, or departmental staff in regard to the purpose for which it was provided, unless required or authorised by law. Enquiries about access to information about you held by the Department should be directed to the Manager Privacy, Department of Sustainability & Environment, PO Box 500, East Melbourne, 8002.



Inner Melbourne Action Plan

Progress Report

Action 9.4 Demonstration Projects – Distributed Energy

Purpose

1. To update the Committee on progress with the Distributed Energy project, including scope, budget and external partnerships.

Background

2. IMAP Action 9.4 aims to: "Work regionally to promote sustainable water sensitive and green building demonstration projects and models". One of the projects under this action relates to development of a Distributed Energy Strategy.
3. The Inner Melbourne Energy Map study will identify opportunities for pursuing energy efficiency and low carbon distributed generation initiatives in the IMAP region. It will take into consideration distribution network opportunities and constraints, as well as current and future energy demand and reduction opportunities. Later stages of the study will also consider the economics of implementing various technologies, the impacts of these on the grid (including economic impacts) and compare the economics of distributed generation against purchasing renewable energy generated elsewhere in Victoria through the grid.
4. The objectives and overview of the project are outlined at **Attachment A**.

Discussion

5. This project will not seek to implement a distributed generation demonstration project. Instead, the Energy Map study will provide information about the best opportunities for pursuing lower-carbon forms of energy generation and mitigation in Inner Melbourne. This will inform building owners, developers and energy companies about the most appropriate energy technologies to pursue, including economic considerations.
6. Funding was sought to support this project through the State Government's Local Sustainability Accord. The recipients of the fund were announced on 1 August 2011. The application was unsuccessful.
7. It is intended that the Energy Map project proceed in partnership with the CSIRO. CSIRO has indicated a willingness to lead and co-fund the project through the National Research Flagships program.
8. Alternative sources of funding will also be sought to fund the remainder of the project. This will likely be from a major energy infrastructure company.
9. The IMAP budget has previously allocated funding for the Energy Map project over three financial years.
 - a. 2010/11 \$45K from accumulated IMAP funds [\$11K per Council – already paid]
 - b. 2011/12 \$55K from the IMAP Councils [\$13.75K per Council] – provisionally approved
 - c. 2012/13 \$80K from the IMAP Councils [\$20K per Council] – yet to be approved
10. A project plan and budget will be put to next IMAP Implementation Committee meeting with a request to approve the remaining \$80,000 of expenditure.
11. CitiPower are the dominant electricity distributor in the IMAP area. Initial conversations with CitiPower indicate that they are interested in participating in the study, primarily by providing essential data.

12. Discussions are yet to be held with United Energy regarding participation in the project for the part of Stonnington which is not in the CitiPower area, and with Jemena regarding a small area within the City of Yarra.
13. It is proposed that a Reference Committee will be established to provide technical guidance on the project. The Reference Group will be managed by the City of Melbourne.
14. It is proposed that the CSIRO will manage relationships with any potential private sector funding partner.

Recommendations

- a. That the IMAP Implementation Committee **note** the information above.
- b. That the IMAP Implementation Committee **approve** the attached Project Brief and confirm expenditure of \$100,000 for the 2010/11 and 2011/12 Financial Years as indicated at paragraph 9 above.

Attachment A: Inner Melbourne Energy Map - Overview

Project Overview

The Energy Map study will identify opportunities for pursuing energy efficiency and low carbon distributed generation initiatives in the IMAP region.

It will take into consideration distribution network opportunities and constraints, as well as current and future energy demand and reduction opportunities. Later stages of the study will also consider the economics of implementing various technologies, the impacts of these on the grid (including economic impacts) and compare the economics of distributed generation against purchasing renewable energy generated elsewhere in Victoria through the grid.

A similar study was undertaken by the City of Sydney in assessing the opportunities for Sydney's distributed energy initiatives. It is understood that there are a number of technical issues particular to Melbourne which affect the development of distributed generation systems in the Melbourne electricity network. The proposed study will test and verify this understanding.

CitiPower is the main electricity distributor operating within the IMAP area. CitiPower has indicated (at Manager level) a willingness to participate on the basis of potential benefits to the organisation. The study will identify substation precinct which are, and are not, suitable for development of cogeneration systems, and will enable these findings to be communicated to businesses. Discussions are yet to be held with United Energy and Jemena which operate in small areas within the IMAP region.

Benefits:

It is understood that there are electricity network constraints which prevent the development of gas fired cogeneration systems in inner Melbourne.

The study will develop an understanding of the distribution grid and identify opportunities for pursuing cogeneration, other forms of distributed generation and energy efficiency initiatives in Inner Melbourne. This will be based on energy demand, land use mapping, and analysis of the electricity network.

These findings will be made publicly available and will inform key stakeholders (including businesses, councils and energy services companies) of the opportunities for greenhouse gas reduction initiatives based on specific locations, and the network attributes in those locations.

The Energy Map will avoid the need for costly technical studies undertaken by cogeneration proponents currently required before applying to CitiPower for permission to develop cogeneration systems.

The study will also provide information about optimal locations to pursue energy efficiency and distributed generation projects to take advantage of network constraints and opportunities which may exist.

Governance:

It is proposed that CSIRO will lead the project and the IMAP Councils will contribute funding through a funding agreement.

CSIRO will own the intellectual property for the model developed through the study and intend to apply to model to other regions in Australia. The IMAP Councils will own the resulting report/findings. It is intended that these will be made publically available.

A Project Reference Group, managed by City of Melbourne, will be established to ensure that the project meets the needs of end users. CSIRO will manage relationships with any private sector funding partners.

Funding:

A project budget will be finalised by CSIRO by the end of August. An indicative budget has been estimated at \$1 million. A similar City of Sydney cost approximately \$700,000 however that study did not include economic modelling to determine the costs and benefits associated with pursuing certain technologies.

CSIRO has indicated it is willing to contribute significant funding (amount to be confirmed) through its Flagship program.

IMAP has allocated the following funds to the project:

- 2010/11 \$45K from accumulated IMAP funds [\$11K per Council – already paid]
- 2011/12 \$55K from the IMAP Councils [\$13.75K per Council] – provisionally approved
- 2012/13 \$80K from the IMAP Councils [\$20K per Council] – yet to be approved

Private sector funding will be sought from major infrastructure firms will be sought to complete the project budget.

The project will be structured in sequential components enabling some components to be completed without private sector funding. It is envisaged that energy demand mapping will be completed in the early stages of the project and the economic modelling will be completed later. CSIRO have indicated that the earlier stages can commence given current budgets and economic modelling would proceed subject to securing private sector funds.

Project Partner Roles:

CSIRO	Project Leader Will undertake all technical modelling liaise with CitiPower to obtain necessary technical data engage with private sector partners to source co-funding
The City of Melbourne	Manage relationships between: <ul style="list-style-type: none"> i. CSIRO ii. IMAP Councils iii. State Government iv. Reference Group v. CitiPower
IMAP Councils	Provide co-funding through IMAP
CitiPower	Provide network data to CSIRO

Next Steps

City of Melbourne is working with CSIRO to finalise the project plan and budget. Once this is complete, governance structures can be established, including the reference group, and additional partners sought.