

## Inner Melbourne Action Plan

### Progress Report

#### Action 9.4 Green Demonstration Projects – Distributed Energy Project

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#### Purpose

1. To update the Committee on the progress and completion of Action 9.4 Green Demonstration projects: Distributed Energy project.
2. To recommend that the project report be published, together with the associated data.

#### Background

3. Action 9.4 consists of 3 part.
  - a) Water Sensitive Cities
  - b) Green Roof Project
  - c) Distributed Energy project
4. The Distributed Energy Project involved undertaking an energy modelling and mapping study of energy consumption within the IMAP region. The study involved:
  - a. modelling energy consumption and distribution across the study area based on census, buildings and property data;
  - b. mapping the energy consumption and distribution,
  - c. modelling the expected growth in energy consumption at 5 year intervals until 2026,
  - d. investigating and modelling the changes in energy consumption resulting from expected growth and from potential energy saving initiatives and distributed generation initiatives.
5. The Distributed Energy Project was undertaken in partnership with CSIRO and was led by the City of Melbourne. The study area encompassed the Cities of Melbourne, Port Phillip, Stonnington and Yarra. The project was commenced prior to the City of Maribyrnong joining IMAP and Maribyrnong has not been included in the study.
6. It was intended that the project would also model the economic and cost impacts and benefits to the grid of various energy usage scenarios. These aspects were not completed as they relied on additional external funding which was not secured.

#### Discussion

7. The study, including modelling and mapping, has been completed. A final project report has been completed by CSIRO and presented to the project working group. Energy modelling and mapping data has also been provided.
8. The energy consumption models and maps enable informed decision making about expected future energy consumption and the likely effectiveness of different programs and development scenarios in achieving energy reductions. The data enables this analysis to be undertaken based on the diverse population and building characteristics and attributes in the study area.

9. Prior to releasing the final report and publishing the data, a small number of outstanding issues and refinements need to be resolved between the Study authors and Councils. These include:
  - a. issues relating to data formatting and consequently usability. These are being resolved with CSIRO and the relevant Council's GIS teams;
  - b. The editorial content of the final report focuses more heavily on energy growth trends in the City of Melbourne as compared to the other Councils in the study area. This is the result of a greater level of detail being available to CSIRO about expected growth within the City of Melbourne compared to the other Councils. The project team is working to resolve these concerns.
10. It was intended that the project would also model the effects of these on energy demand growth and saving scenarios on the grid. This aspect of the project was dependant on additional external funding which was not secured.
11. Subsequent discussions with CitiPower indicate that it will be possible to overlay information about network constraints alongside the model. This will enable strategic decisions to be made about the deployment of energy efficiency and distributed generation measures across the network. This will be of benefit to network operators and strategic planners.
12. The study will be able to inform:
  - a. electricity network planning,
  - b. the design and focus of energy efficiency programs delivered by councils or other agencies,
  - c. the design and focus of renewable energy programs.
13. A communications and engagement plan is being developed by the City of Melbourne Sustainability Branch and Corporate and Strategic Marketing Branch, and by CSIRO Communications staff.
14. It is intended that the communications package will involve a media kit and social media elements. The strategy will contain information specific to each Council, identifying key trends and issues specific to each Council. Members of the project team will liaise with communications staff prior to the publication of the report and data.
15. It is proposed that the final report be published and that the modelling data be made publically available. It is intended that this will be of most interest to academics as well as energy efficiency and technology providers.
16. The project team is in discussions with NICTA (National Information Communications Technology Centre for Excellence) to make the data available on the NICTA mapping platform to enable the energy modelling data to be analysed alongside CitiPower network data.

## **Funding**

17. IMAP expenditure for the project was approved by the IMAP Implementation Committee and contributions were made between 2010/11 – 2012/13. No further contributions are required.
18. The project was funded through a grant agreement with the CSIRO. IMAP contributed \$180,000 to the project. CSIRO's contribution, including in-kind was \$775,000. The total project budget was \$955,000.
19. The initial grant contribution of \$100,000 has been paid. The balance of \$80,000 remains in the budget and will be paid upon the acceptance of the final report by the IMAP project working group once the outstanding issues have been resolved.

## 20. Recommendation

That the IMAP Implementation Committee:

- a. notes the completion of the project, pending the resolution of data formatting and editorial issues in the report, and
- b. agrees to the publication of the report and data following the development of a communications and publication strategy.