

15. SUSTAINABLE ENERGY STRATEGY FOR CHRISTCHURCH 2008-18

General Manager responsible:	General Manager Strategy and Planning, DDI 941-8177
Officer responsible:	Strategy Support Manager
Authors:	Siobhan Storey Senior Policy Analyst, Dr Leonid Itskovich, Energy Manager

PURPOSE OF REPORT

1. The purpose of this report is to recommend the adoption of the Sustainable Energy Strategy for Christchurch 2008-18, with the preferred option of the action plan provided in the Strategy being Option 4. Copies of the proposed strategy are separately enclosed (ring binder).

EXECUTIVE SUMMARY

2. Having demonstrated considerable success in energy efficiency and renewable energy in its own operations, the Council now seeks to work with the people of Christchurch and other energy stakeholders to reach the vision of a sustainable energy future for the city. The Sustainable Energy Strategy for Christchurch 2008-18 defines the steps required to achieve tangible progress in this particular area of sustainable development.
3. The Sustainable Energy Strategy has been developed by Christchurch City Council in consultation with key industry and community stakeholders and has been peer reviewed by two experts from Malmö City Council (Sweden), to ensure that it meets international best practice standards.
4. The purpose and key points of the draft Sustainable Energy Strategy for Christchurch were presented to and discussed at Council Portfolio Group meetings on 21 June 2006 and 8 November 2006, and at Council seminars on 31 October 2006 and 27 March 2007. The Council approved the draft Sustainable Energy Strategy for consultation on 26 July 2007. Public consultation took place between 2 August and 24 August 2007.
5. This report gives an overview of issues raised by submitters who commented on the Sustainable Energy Strategy for Christchurch 2008–18 and presents the Strategy for approval by the Council.
6. The public consultation period for the document attracted 33 submissions from a variety of groups or organisations and individuals. The majority of submissions were positive and indicated people were pleased that a start had been made on working towards sustainable energy use. Although some felt the consultation period could have been longer, many provided thoughtful suggestions of improved wording and ideas which have been incorporated into the final document.
7. All submitters received a letter of acknowledgement which thanked them for their contribution and outlined the process from the close of consultation. Each submitter will receive a copy of the Strategy once it has been adopted by the Council.
8. A number of themes emerged from the analysis of submissions:
 - Transport and related topics (14 submissions)
 - Warmer homes and insulation (10 submissions)
 - Urban design (7 submissions)
 - Energy Expo (6 submissions)
 - Energy Agency (7 submissions)
 - Climate change (5 submissions)
 - Solar power (4 submissions)
 - Option 4 (3 submissions)
9. These themes and the consequent revisions to the Draft Strategy are outlined in the Background below.

OPTIONS

10. The four options of the Sustainable Energy Strategy action plan are summarised in the following table.

Option	Estimated total benefits accrued over 10-year period for Christchurch's community		Estimated 10-year accrued cost to Council
	Energy cost savings	Reduction in CO ₂ emissions, tonnes	
1 - Do Nothing	0	0	0
2 - Light Action	\$0.64 billion	1.85 million	\$3.83 M
3 - Medium Action	\$1.12 billion	3.10 million	\$5.77 M
4 - Strong Action	\$1.48 billion	4.15 million	\$6.57 M

Option 1 – “inaction” was discussed at the Council meeting of 26 July 2007 and there was a general consensus that it should not be recommended.

Option 2 – “Light Action” would have an estimated cost to the Council of \$3.83M over 10 years and is expected to result in \$640M energy cost savings to the city community over the same period. While this option requires a lower investment than that for other options, it would have a disadvantage of implementing only nine strategic initiatives out of the 28 proposed. Not only the direct effect of the remaining 19 initiatives would be lost but also the indirect synergy effect of all the proposed measures taken together. The option would achieve moderate targets, which may be seen as not ambitious enough and not corresponding to energy challenges of modern world and the vision proclaimed in this Strategy.

Option 4 – “Strong Action” would have an estimated cost to the Council of \$6.57M over 10 years and is expected to result in \$1.48 billion energy cost savings to the city community over the same period. While this option requires a greater investment, it is expected to produce the highest effect due to consistent implementation of a broad range of initiatives, and would create a significant behavioural shift of the citizens of Christchurch and a subsequent substantial move towards a more sustainable energy use.

While Option 4 offers the best programme from which to identify energy savings for the community, it remains the most expensive (see Section 10 below). It is considered that further work is required to cost and timetable an implementation plan based on two five year programmes: the first covered by the period during which Council is receiving income from its Carbon Credits sale and the second from alternative funding sources.

FINANCIAL IMPLICATIONS

11. Depending on which action plan option is adopted, there would be some significant ongoing costs associated with the strategy implementation. However, there will also be some significant savings to the community in relation to their personal and business direct and indirect energy costs resulting from the action plan (see table above). With a total annual energy cost of \$1.6 billion, a 2% saving would result in \$32 million savings per year across the Christchurch community.
12. At present, the Council has some initial seed funding of \$150,000 for the 2007/08 year. While no funding exists beyond this it is anticipated that revenue from the sale of Carbon Credits to British Gas will provide a non-rating source for the implementation of the programme.
13. On the basis of the projected funding, the Council would be in a position to fund the first five years of the full Option 4 programme. Continuation of the programme beyond Year 5 will require additional funding of approximately \$576,000 per annum. While there are strong community returns anticipated from the programme by 2013, the direct benefits from which to fund the remainder of the programme are unlikely to be sufficient to cover the entire cost of the programme.

14. Under the various options there would also be a shortfall that would need to be addressed as part of the LTCCP process in years 6-10. As this funding would not be required until a later period it would need to be considered separately as part of the LTCCP process.

Shortfalls per option:

Option 2 – \$150 thousand

Option 3 – \$2.09 million

Option 4 – \$2.87 million

LEGAL CONSIDERATIONS

15. The Local Government Act 2002 requires local authorities to take a sustainable development approach by taking into account a range of factors that directly relate to the use of energy sources. The Resource Management Act 1991 has as its purpose to promote the sustainable management of natural and physical resources. In achieving this purpose, the Act states that all persons exercising functions and powers under it shall have, amongst other things, particular regard to the efficiency of the end use of energy. The Sustainable Energy Strategy has been developed in accordance with the provisions of these Acts.

ALIGNMENT WITH LTCCP AND ACTIVITY MANAGEMENT PLANS

16. The Sustainable Energy Strategy is aligned to the LTCCP and Activity Management Plans.

ALIGNMENT WITH STRATEGIES

17. Energy issues are included in the LTCCP under its two strategic directions: *Healthy Environment* and *Prosperous Economy*. The Sustainable Energy Strategy defines the Council's role in achieving the Community Outcomes under its Strategic Directions, and the specific action plan for achieving its goals and objectives.

CONSULTATION FULFILMENT

18. The Sustainable Energy Strategy has followed the consultation requirements of the LGA with the principle of consultation throughout the development of the Strategy. This has meant that stakeholders have had the opportunity to shape the development of the Strategy, not just comment on its final form.

STAFF RECOMMENDATION

It is recommended that the Council:

- (a) Adopt the amended Sustainable Energy Strategy for Christchurch 2008-18 as enclosed.
- (b) Agree that staff prepare a two stage implementation plan based on Option 4 for the periods 2008–13 and 2013–18, to be considered as part of the 2008/09 Annual Plan and the 2009-19 LTCCP respectively.
- (c) Confirm the use of the Burwood landfill gas project Carbon Credits (estimated value of \$3.53 million) as the funding source for the 2008-13 Sustainable Energy Strategy Implementation Plan.

BACKGROUND

19. This paper gives an overview of issues raised by submitters who commented on the Sustainable Energy Strategy for Christchurch 2008–18 and presents the Strategy for approval by the Council.
20. The public consultation period for the document attracted 33 submissions from a variety of groups or organisations and individuals. The majority of submissions were positive and indicated people were pleased that a start had been made on working towards sustainable energy use. Although some felt the consultation period could have been longer, many provided thoughtful suggestions of improved wording and ideas which have been incorporated into the final document.
21. All submitters received a letter of acknowledgement which thanked them for their contribution and outlined the process from the close of consultation. Each submitter will receive a copy of the Strategy once it has been adopted by Council.
22. A number of themes emerged from the analysis of submissions:
 - Transport and related topics (14 submissions)
 - Warmer homes and insulation (10 submissions)
 - Urban design (7 submissions)
 - Energy Expo (6 submissions)
 - Energy Agency (7 submissions)
 - Climate change (5 submissions)
 - Solar power (4 submissions)
23. These themes and the consequent revisions to the Draft Strategy are outlined below. Four options for action plan were provided in the Strategy and the preferred option, Option 4, was supported by three submissions.

Transport and related topics (14)

24. There were 14 submissions discussing transport. Many included suggestions for reducing the reliance on the private car and supporting the move to fuel efficient cars and cars fuelled by alternatives to petrol. A number commented on the relatively minor emphasis on transport in the Strategy. However, since the Council has developed separate strategies which either focus on transport issues or relate to it in some way, this was intentional to avoid duplication. The relevant strategies are the Greater Christchurch Urban Development Strategy, the Metropolitan Christchurch Transport Statement, the Cycling Strategy for Christchurch City, the Metro (Public Transport) Strategy 2006–2012 and the Pedestrian Strategy for Christchurch City – “A Step in the Right Direction”. A paragraph to explain this has been added to section 4.2 of the Strategy.

Warmer homes and insulation (10)

25. There were 10 submissions relating to improving the energy efficiency of homes, both new and existing houses. Suggestions included providing incentives for both landlords and home owners to retrofit older homes, rates rebates for highly energy efficient homes and encouraging developers to consider the orientation of new sections to maximise passive solar gain. Five of these submissions suggested that the Council establish and implement a city-wide home insulation project associated with the provision of subsidies.
26. On 8 August 2007 the Energy Efficiency and Conservation Authority (EECA) announced the launch of the EnergyWise Homes initiative. This central government initiative will provide considerable funding in the form of grants and loan interest subsidies for residential energy efficiency measures and heating. The 2007/08 financial year budget for the initiative is \$16.5M, with forecasts for further four years of \$16M to \$21M annually.

27. EECA now seeks to develop partnerships with local councils, commercial entities, energy and community trusts, district health boards, community based organisations so that the greatest number of homes can benefit as quickly as possible.
28. A co-ordinated and unified city-wide approach would maximise the amount of central government funding available and, subsequently, the benefits to the city. This can be achieved by establishing a large-scale insulation project under the umbrella of the Sustainable Energy Strategy.
29. Therefore, in the light of the recent central government initiative and in accordance with the submissions received, an additional initiative, E28 - EnergyWise Homes project has been added to the action plan.

Urban design (7)

30. Seven submissions commented about the role urban design has on energy usage. In addition to the orientation of sections referred to above, submitters suggested a comprehensive approach to the development of subdivisions designed to build communities, minimise car use and maximise walking or cycling. A paragraph referring to the City Council's guides promoting sustainable building design and building site selection has been added to section 6.4.

Energy Expo (6)

31. There was support for an Energy Expo although it was felt that this could link up with the existing annual Sustainability Expo rather than to have yet another dedicated Expo. The Strategy indicates the Energy Expo will build on the success of existing events.

Energy Agency (7)

32. There was support for the formation of an Energy Agency and a number of submitters suggested other organisations that could be included in such an Agency.

Climate Change (5)

33. A number of submissions commented that stronger action towards meeting New Zealand's obligations under the Kyoto protocol is desirable. The Council is developing strategies to combat climate change, and improve Christchurch's sustainability across the four wellbeings: social, economic, cultural and environmental. The implementation of these strategies will make an impact on the energy use in the city and associated CO₂ emissions. The Sustainable Energy Strategy is closely linked to and overlaps with the above strategies in some areas. Hence to avoid duplication it does not include specific initiatives which will be covered by those strategies. Paragraphs to explain this have been added to section 6.1 of the Strategy.

Solar Power (4)

34. Four submissions commented on the use of solar power but it was felt that all forms of renewable energy generation should be explored, including wind and wave and tidal generation. Although wave and tidal power generation is not yet economic, the Strategy indicates Christchurch should be poised to take advantage of this energy technology when it becomes available.