

10.20.23

Chairperson and Committee Members  
**ENVIRONMENT & COMMUNITY DEVELOPMENT**

**15 OCTOBER 2008**

Meeting Status : Public

Purpose of Report: For Decision

**ENERGY PROJECTS: LIGHT BULB DISTRIBUTION****EXECUTIVE SUMMARY**

This paper is an update report on the energy saving light bulb promotion seeking guidance on whether Council agrees to proceed ahead of the full report back on the wood switching feasibility report back.

Staff were previously directed to continue pursuing funding options from external agencies. Funding for the project has been secured via a Crown Loan from the Energy Efficiency and Conservation Authority (EECA) for \$76,500. A supply of bulbs attracting a subsidy from the Electricity Commission has also been secured. Contact Energy has also agreed to sponsor \$25,000.

This paper is being put before the Committee at this time as a decision is now needed if the \$25,000 from Contact Energy is to be retained and if Council is to be able to purchase bulbs at the subsidised price.

**SIGNIFICANCE OF DECISION**

- 1 The significance policy is not triggered by this report.

**BACKGROUND**

- 2 As part of the 2008/09 Annual Plan process Council approved work proceeding on community energy saving projects, to be funded from savings from Council's own energy saving projects, in particular the fuel switching initiative at the Paraparamu wastewater treatment plant. The range of projects included:
  - purchase of energy saving light bulbs at a discounted rate for distribution to households as part of a wider community sustainability initiative.
  - increased contribution to the Energywise Home Grant Scheme for low income households;
  - exploration of funding options for solar heating and insulation for other households.
- 3 The main savings to fund this programme would be from energy savings via the proposal to switch from the diesel fired to a wood fired boiler system at the wastewater treatment plant. The initiative, if feasible, would also substantially reduce Council greenhouse gas emissions.

- 4 Staff were directed to continue to pursue applications for the EECA loans and grants schemes with a full report back on the package once the feasibility report was received. No final commitment to any initiative was to be made until the full report back was considered. The report back was to also include consideration of options around an alternative gas-fired boiler, the Hamilton City sludge drying initiatives and any regional biosolids initiatives.
- 5 As directed by Council, staff have proceeded with the following applications to EECA (all applications subject to final Council approval):
  - a low interest loan to fund energy saving light bulbs;
  - a grant and low interest loan for the fuel switching project for sludge drying;
  - a grant and loan for potential efficiency projects at the Otaki Pool;
  - Energy-wise home grants
- 6 Council has received approval from EECA for the take-up of a loan for energy efficient light bulbs. In addition, Contact Energy has contributed \$25,000 to the project, provided that Council match it with the identified amount (i.e. the amount is not used to offset the amount identified as being contributed by Council).
- 7 At present the take-up of the loan from EECA awaits approval by Council as part of the full package, in particular consideration of the feasibility of the fuel switching project. The Contact Energy contribution has been received by Council and awaits active use.
- 8 Contact Energy is increasingly concerned that the \$25,000 contributed is not yet being actively used and have requested that unless a decision to proceed is made by 16 October 2008, the money is to be returned.
- 9 The wood feasibility study has been completed and staff are now preparing papers which include assessment of all options. The full report on sewage drying options will be the subject of a separate paper in November 2009.
- 10 Preliminary results from the review of options for the fuel switching to either wood or gas for sludge drying show that significant savings are available.
- 11 This paper seeks guidance on whether the Committee wishes to proceed ahead of the final consideration of the wood switching project and other options in order to secure the Contact Energy contribution.

## CONSIDERATIONS

### *Issues and Options*

- 12 EECA has reviewed the economics of the light bulb project and has confirmed that for a cost of \$76,500, the benefit to ratepayers in lower energy bills will be around \$5.8 million over the life of the bulbs. That is a cost benefit ration of \$76 benefit for every \$1 of cost. On that basis it has approved the loan.

- 13 Issues around mercury in energy saving light bulbs have received media coverage over the winter. Staff have reviewed the main claims made in the media and advice on health risks and clean up methods.
- 14 In particular, staff have reviewed recent advice on cleaning up broken bulbs issued by the Ministry for the Environment, EECA, the National Poisons Unit (University of Otago) and the United States' Environmental Protection Agency. Staff have also discussed the issues with the Director of the National Poisons Unit. He identified the risk as comparable to the risk levels from other hazards in the home and put them into perspective compared to other hazards such as dishwasher tablets, and mercury levels in fresh fish. He also noted the conservative nature of official clean up guidance.
- 15 As a result of consultation with expert sources, advice around safety issues is unchanged in support of the bulbs. Any household who finds the low level risks unacceptable would be free to not take up the offer of access to light bulbs. The issue for Council is whether it wishes to proceed in the light of this advice.
- 16 Staff have also investigated issues round bulb disposal. Currently, the overwhelming majority of bulbs go to landfill in compliance with acceptable per litre concentration levels of mercury. It is understood that while some selective diversion of bulbs from landfill does occur, there is no large scale programme to recover fluorescent lighting for recycling.
- 17 A simple and relatively inexpensive recovery and recycling options is available to Council. Boxes specifically designed for the purpose could be purchased for the collection of bulbs in service centres, libraries and manned recycling centres. When full, boxes are collected by the recycling company. All parts of the bulbs are then recycled including aluminium, glass, phosphor coatings and mercury. The mercury is then sold on to the dental profession where it is used for fillings.
- 18 It is believed that if Council were to agree to the ongoing purchase of recycling boxes it would be the first Council to offer such a service in New Zealand.

### **Financial Considerations**

- 19 The Contact Energy sponsorship of \$25,000 is linked to the full project proceeding for at least 34,000 bulbs.
- 20 The Crown Loan for \$76,500 is to be repaid over five years at a flat rate of \$3,825 a quarter (\$15,300 a year) from 15 November 09 (an effective annual percentage rate of 4.1 per cent.)
- 21 This investment will give a return to the community in excess of \$76 for every \$1 invested, having a total benefit in excess of \$5.8 million for a \$76,500 investment.
- 22 The sponsorship and the loan give a total budget of \$101,500. Staff propose to allow a minimum for \$90,000 for the purchase of bulbs with the balance to be spent on supporting community groups who are involved in distribution and for the funding of recovery and recycling.
- 23 The full report on the feasibility of the switching project (either to wood or gas) is yet to be formally reported to Council. This will take another month to six weeks

to prepare and is expected to including an indication form EECA of actual grant and low interest loan funding it would be prepared to contribute. While the economics of fuel switching for sludge drying are such that Council may wish to proceed irrespective of a Crown grant and low interest loan, it is important that these government funding options are pursued. Review of Wellington Region sludge disposal options and the Hamilton (sludge-fired dryer) options are complete and remain to be reported.

- 24 The issue from a financial management perspective is whether Council chooses to accept the risk of proceeding with the light bulb project ahead of the final decision on the fuel switching project.
- If Council were to proceed now it would secure the \$25,000 sponsorship from Contact Energy. It may also incur an additional \$15,300 annual cost in loan repayments if it ultimately does not proceed with switching away from diesel for sludge drying.
  - If Council chooses not to proceed now it will lose the \$25,000 from Contact Energy but would still have the option to take up the EECA loan from late November.

#### **Legal Considerations**

- 25 None.

#### **Consultation**

- 26 Consultation on the proposed energy projects investment policy is underway.

#### **Policy Implications**

- 27 There are no policy considerations.

#### **Publicity Considerations**

- 28 This will be a high profile campaign for Council with appropriate communications support.

#### **Other Considerations**

- 29 None.

### **RECOMMENDATIONS**

1. That report SP-08-396 be received.
2. That the Council agrees to proceed with this project, authorising the uptake of the Crown Loan and accepting \$25,000 in sponsorship from Contact Energy.

**Report prepared by:**

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