

Draft Clean Heat Project

**Incentives and assistance
for clean heating and energy efficiency
in the Christchurch area**

A discussion document

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1. Introduction

This discussion document outlines the draft Clean Heat Project. The Clean Heat Project is an incentives and assistance project that will assist residents in Christchurch using solid fuels for home heating to change to cleaner forms of heating. The Clean Heat Project was developed as a result of new rules for home heating proposed in the air chapter of the Proposed Canterbury Natural Resources Regional Plan (NRRP). If you want to comment on the Clean Heat Project, please note that this is a separate process to submissions on the NRRP.

Winter air pollution in Christchurch

During winter Christchurch has a major air pollution problem. Winter air pollution (suspended particulate) is a serious health risk, spoils the city's clean, green image and is a nuisance for many people.

Environment Canterbury has set a guideline of 50 micrograms of particulate per cubic metre of air (averaged over 24 hours) with one exceedence per year. This guideline is exceeded many times every winter in Christchurch, with 90% of the winter air pollution caused by solid fuel home heating. To reach this guideline the use of wood and coal for home heating needs to be reduced.

Environment Canterbury now has a proposed plan to clean up Christchurch's air: the air chapter of the NRRP.

The proposed new rules for home heating

New rules for home heating are proposed in the air chapter. The rules apply immediately, unless other dates are mentioned. Some rules apply to the entire Christchurch area, others only to the urban Christchurch area. Some rules apply throughout Canterbury. The air chapter is open for public submissions until **30 August 2002**. Submissions on the air chapter should be made on the submission form, included in the air chapter, or should follow the guidelines of a submission as outlined in the Resource Management Act 1991.

The following new rules have been proposed:

For homes with open fires in the Christchurch urban area:

- From 1 January 2006 households will not be allowed to use an open fire.

For homes with solid fuel burners in the Christchurch urban area:

- High-emission burners (emitting more than 1 gram of particulate per kg of fuel burnt and/or not meeting 65% heating efficiency) will need to be replaced 15 years after installation, but not before 1 January 2008.

For homes currently not using wood or coal for home heating and for new homes in the Christchurch urban area:

- From 1 January 2003 these households will not be allowed to install solid fuel burners.

For all homes in the entire Christchurch area:

- The existing rule that prohibits the installation of open fires will be continued from 1 June 2002.

For all homes in Canterbury using open fires and burners for heating:

- Burning painted wood, wood treated with preservatives, plastics, rubber, batteries and other household waste on open fires and other burners is forbidden.
- From 1 January 2004 only low-emission burners (less than 1 gram of particulate per kg of fuel burnt and 65% heating efficiency) can be installed.

- For homes outside the Christchurch urban area it will not be compulsory to replace existing open fires and solid fuel burners.

Clean Heat Project

The proposed rules will require many residents to change the way they heat their homes. To help households switch to clean heating and improve energy efficiency, Environment Canterbury has developed an incentives and assistance project: the Clean Heat Project. This discussion document outlines the draft Clean Heat Project. The draft Clean Heat Project is open for comments until **28 June 2002**. If you want to comment on this draft please refer to part 5 'Comments and more information'. The Clean Heat Project is expected to start late in 2002.

Background issues

The air chapter of the NRRP is not proposing a total solid fuel ban, but it is proposing to ban open fires by 1 January 2006. It is realised that low income households may not be able to afford the capital cost of energy efficient new heating appliances and landlords may choose the cheapest approved heater as they will not profit from low on-going heating costs themselves.

As a result these low income households may be faced with high on-going heating costs.

The air chapter of the NRRP still allows burners to be used, provided they are low-emission burners (less than 1 gram of particulate per kg of fuel burnt and 65% heating efficiency).

Currently 60,000 households are using solid fuels for home heating. If these households were to all use low-emission wood burners, Christchurch would still not meet the winter air pollution target adopted by Environment Canterbury (50 micrograms of particulate per cubic metre of air, averaged over 24 hours, with one exceedence per year). This means that many households will need to be encouraged to change to clean heating.

Financial implications

Environment Canterbury has set aside \$38 million over the next eleven years for an incentives and assistance programme for clean air and energy efficiency (the Clean Heat Project).

The Clean Heat Project will be funded by a special rate for Christchurch over the period July 2002 to June 2013. The funding will vary per year and the rate will vary accordingly, but the average yearly rate will be \$14.88 per \$100,000 of capital rateable value.

2. Objectives and key principles

Objectives

Environment Canterbury has developed the draft Clean Heat Project to address the background issues as listed in part 1 'Introduction'. The Clean Heat Project also aims to encourage an even uptake of incentives and assistance over the years the project is running. This has resulted in the following objectives for the programme:

- Help those on low incomes cope with the changes.
- Encourage households to replace open fires and solid fuel burners with clean heating appliances such as heat pumps, nightstore heaters, flued gas heaters, flued diesel heaters and flued oil heaters.
- Encourage households to replace open fires and high-emission solid fuel burners sooner rather than later.
- Encourage households to choose energy efficient heating systems.
- Encourage households to install insulation to reduce the need for heating and reduce on-going heating costs of clean heating appliances.

Key principles

As a result of the objectives the following key principles for the programme are proposed by Environment Canterbury:

- Rental situations will be addressed.
- Those on low incomes will receive proportionally higher assistance.
- Ongoing heating costs will be met to address emergency cases of hardship.
- Only homes that currently use solid fuel as their main source of heating on a typical winter night will be eligible.
- No incentives or assistance will be provided for the installation of solid fuel burners.
- Households who have installed a solid fuel burner after the air chapter of the NRRP was notified (1 June 2002), are not eligible for incentives or assistance when they want to replace that solid fuel burner.
- Only those who have registered with the Clean Heat Project before 2008 (2006 for homes with open fires) may qualify for incentives or assistance.
- Incentives and assistance will target the most polluting sources of heating first.
- Heating devices purchased under the Clean Heat Project should be energy efficient.
- Energy efficiency measures, including insulation, may be required depending on the compulsory home energy rating (see page 5).

Conclusion

Who should be subsidised?

The Clean Heat Project will provide incentives and assistance for households in Christchurch that are installing clean heating. The incentives and assistance will be available for all households currently using open fires and solid fuel burners. This includes all households in the Christchurch area and is not restricted to the urban Christchurch area.

What should be subsidised?

The proposal is to provide incentives and assistance for the purchase of heat pumps, electric nightstore heaters, flued gas, flued oil and flued diesel heaters, but not for woodburners. For poorly insulated homes it would be compulsory to install insulation, for which additional incentives and assistance will be available. For those on low incomes, grants for ongoing heating costs will be available.

3. Implementation of the Clean Heat Project

This part describes which households, technologies and energy efficiency measures are proposed to be eligible for incentives and assistance under the Clean Heat Project.

Eligibility of households

Based on the objectives and key principles, general eligibility criteria for households have been developed. It is proposed that all households wishing to participate in the project should comply with the following criteria:

- The house must be a private residential dwelling within the Christchurch City Council boundaries.
- Participants do not need to be homeowners. Tenants and private landlords will be eligible for incentives or assistance as well.
- The house must not be government owned, such as by Housing New Zealand Corporation or the Christchurch City Council.
- The main form of heating for the house must be from solid fuel, either an open fireplace or a solid fuel burner, such as a woodburner, pellet fire, coal burner, multi-fuel burner, etc.
- A home energy rating must be undertaken for all houses. For more information about the home energy rating see page 5.
- Depending on the outcome of the home energy rating some energy efficiency measures may have to be undertaken.
- Households should have registered with the programme before 2008 (2006 for homes with open fires).
- No incentives will be given for homes that are structurally unsound or homes in a serious state of disrepair for which it is not economical to install clean heating and insulation.

Eligibility of low income households

One of the key principles proposes that those on low incomes will receive higher assistance. To determine which households will be eligible for this higher assistance the following criteria are proposed:

- Households where the homeowner or principal tenant holds a current Community Services Card.
- Households where the homeowner or the principal tenant receives one of the following government benefits:
 - Unemployment Benefit
 - Independent Youth Benefit
 - Transitional Retirement Benefit
 - War Pensions
 - Invalids Benefit
 - Sickness Benefit
 - Widows Benefit
 - Domestic Purposes Benefit
 - Emergency Maintenance Allowance
 - Family Tax Benefit (Department of Inland Revenue)

Eligibility of technologies

Two of the objectives of the Clean Heat Project are that eligible technologies should have very low particulate emissions, and technologies should be energy efficient to avoid high on-going heating costs. In addition to that, no incentives or assistance will be given to technologies that can be easily transferred or that are not recommended for health reasons. This means that incentives and assistance will be available for the installation of the following types of heating:

- electric heat pumps (These are two or more times as efficient as conventional electric heaters)
- electric nightstore heaters (These can be operated on cheaper night-rate electricity tariffs)
- flued gas, diesel and oil heaters

It is proposed that no incentives or assistance are made available for the installation of the following heaters:

- Fixed electric resistance heaters. Although these heaters have the lowest capital cost, they have high on-going heating costs.
- Portable electric heaters. Similar to fixed electric resistance heaters, they can be costly to operate. They are also easily removed from the premises.
- Solid fuel burners. Environment Canterbury does not want to encourage their installation in any way. Christchurch needs to significantly reduce the number of houses using solid fuel. Encouraging the installation of these burners moves in the wrong direction.
- Portable gas heaters. A range of evidence shows that they contribute to health problems in the household and should not be encouraged. The Ministry of Health supports advice to avoid the use of portable gas heaters, which makes incentives and assistance for this type of heater inappropriate. In addition to that, they can be easily transferred to other homes.

Eligibility of energy efficiency measures

The aim of the energy efficiency measures is to reduce the heating needs of homes and enable lower energy costs, while making the home more comfortable and healthier to live in. To assess the need for additional energy efficiency measures every home will need to get a home energy rating. For more information on the home energy rating see below. The home energy rating will be paid for by the Clean Heat Project.

Depending on the outcome of the home energy rating, it may be compulsory to install insulation to be eligible for incentives or assistance for clean heating. In that case incentives or assistance will be provided for the energy efficiency measures recommended by the home energy rating.

Home energy rating

The home energy rating system is a system for a house rating based on energy efficiency. The system is currently being developed by Environment Canterbury together with the Energy Efficiency and Conservation Authority (EECA) and will be similar to the star rating for whiteware appliances.

Under the home energy rating scheme, homes will be rated on a five-star scale. The rating will be done by trained, independent assessors and using a standard checklist to ensure fairness of the rating and the ability to compare homes on energy efficiency. The rating will also suggest the most cost-effective measures for reaching the next star level.

All homeowners can request a home energy rating for their home, provided they pay for the rating. However, homes eligible for incentives and assistance under the Clean Heat Project will get a free home energy rating.

The home energy rating will assist the assessment of a home's need for incentives and assistance for insulation measures under the Clean Heat Project. It will also enable those selling or buying a home to take the energy efficiency of a home into account when considering the sale or purchase price. It will also help landlords renting out well-insulated properties and tenants looking for a warm home.

4. The proposed programmes

To allocate incentives and assistance in an efficient, effective and fair way the Clean Heat Project has been divided into five programmes. The five programmes target different groups among those eligible for incentives and assistance. The following proposed programmes are discussed in detail in this chapter.

- **Incentives for households:** This programme targets general householders affected by the proposed rules on home heating.
- **Assistance for low incomes:** This programme provides replacement costs and targets those most needy and affected by the proposed rules on home heating. Assistance is available to owner-occupiers only.
- **Grants for on-going heating costs:** This programme provides additional grants to those most needy and who have converted their open fire or solid fuel burner due to compliance with the proposed rules in the air chapter of the NRRP. Grants are available to owner-occupiers and tenants.
- **Funding for conversion projects – landlords:** This programme provides funding to organisations who are able to market clean heating and insulation directly to landlords who are affected by the proposed rules. Incentives from these organisations will be available to private landlords.
- **Funding for conversion projects – households:** This programme provides funding to organisations with established channels and relationships with potential participants. These organisations will be invited to propose different strategies and co-funded incentives and assistance for meeting the programme objectives. Incentives and assistance from these organisations will be available to owner-occupiers and private landlords.

The diagram below provides a summary of the target groups of each programme:

| Programme | With Community Services Card or government benefit | | | Without Community Services Card or government benefit | | |
|----------------------------------|--|----------|--------|---|----------|--------|
| | Owner | Landlord | Tenant | Owner | Landlord | Tenant |
| Incentives | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Assistance | ✓ | | | | | |
| Grants | ✓ | | ✓ | | | |
| Conversion projects – landlords | | ✓ | | | ✓ | |
| Conversion projects – households | ✓ | ✓ | | ✓ | ✓ | |

Programme: 'Incentives for households'***Summary***

- All households that are currently using open fires and solid fuel burners as the main form of heating can apply.
- \$300 - \$500 for the installation of clean heating and additional incentives for insulation.
- Incentives may be lower after the first two years to encourage early participation.

In detail

This programme will provide incentives for the replacement of all solid fuel heating appliances (such as open fires, woodburners, coal burners, multi-fuel burners). The incentives will provide a fixed amount of money per household. The amount of money will depend on the appliance installed (see page 9). In addition, incentives will be provided for the sealing of an open fire or the removal of the burner. A home energy rating will be compulsory and energy efficiency measures, as agreed mutually between the home energy rating assessor and the homeowner, will need to be installed to be eligible for incentives for heating appliances. The cost of the home energy rating will be paid for, and incentives will be given to partially cover the cost of recommended energy efficiency measures.

Eligibility

All owner-occupied homes and rental properties will be eligible for incentives under this programme.

Decreasing level of incentives

Financial incentives may be reduced by 10% for each year after 2005, to encourage early participation. A maximum reduction of 30% of the incentives may occur by the time participants are required to register in 2008 (2006 for homes with open fires) for payments to be made under the programme. This will encourage more steady participation instead of most of the participants waiting until just before new home heating rules take effect. Encouraging early participation will be a key issue to be addressed in the implementation.

Programme implementation

Environment Canterbury may administer the entire programme or, alternatively, may subcontract components of the administration to third parties. The proposed implementation procedures will involve similar requirements to the earlier Christchurch City Council 'Helping Hand for Heating Programme', with a list of registered retailers and installers.

Eligible technologies and level of incentives provided

The following incentives are proposed:

| <i>Heating</i> | | |
|--|-----------------------------|------------------|
| CURRENT | INSTALLED | INCENTIVE |
| Open fire | Heat pump – Electric | \$500 |
| | Nightstore – Electric | \$300 |
| | Fixed resistance – Electric | \$0 |
| | Flued – LPG/Diesel/Oil | \$500 |
| Solid fuel burner | Heat pump – Electric | \$500 |
| | Nightstore – Electric | \$300 |
| | Fixed resistance – Electric | \$0 |
| | Flued – LPG/Diesel/Oil | \$500 |
| Sealing open fire/removal of solid fuel burner | | \$100 |

| <i>Energy Efficiency Measures</i> | | |
|--|--------------------------------------|-----------------------|
| CURRENT | INSTALLED | INCENTIVE |
| Compulsory home energy rating | | \$80 |
| Ceiling or wall insulation - No insulation present or top-up of existing insulation needed | Insulation - minimum of R3.0 | \$3.50/m ² |
| Floor – No insulation present | Insulation - minimum insulation foil | \$3.50/m ² |
| Dampness barrier needed | Underfloor seal - PVC | \$2.00/m ² |
| Draughts –Insufficient draughtstopping present | Various items | 30% up to \$100 |
| Curtains – No curtains present | Double Lined | \$3.50/m ² |

Programme: 'Assistance for low incomes'***Summary***

- Only owner-occupiers currently using open fires or solid fuel burners as the main form of heating and who are on a low income (those with a Community Services Card or receiving specified government benefits) can apply.
- Heating appliances and insulation will be subsidised up to a maximum of \$4,000.

In detail

This programme is proposed to provide a complete retrofit of the house for those on low incomes. Until 2005 it will be limited to those homes replacing an open fire with clean heating. The assistance will include improvements to the energy efficiency of the house, as recommended by the home energy rating. In 2005 this programme will be extended to the replacement of existing enclosed solid fuel burners (such as woodburners, coal burners, multi-fuel burners).

Eligibility

All owner-occupied homes with the owner holding a current Community Services Card or receiving a Government Benefit as specified on page 4, will be eligible for assistance under this programme.

Programme implementation

As the nature of this assistance programme is highly targeted, is specialised and involves the provision of a complete package, it may be more efficient to have one or two programme implementation contractors appointed. These programme implementation contractors would be responsible for the provision of all services to the participants.

It will be important for the selected programme implementation contractor(s) to provide an unbiased assessment of the appropriate replacement clean heating equipment and efficiency measures, hence they will need to provide evidence of non-conflict of interest and mechanisms that reduce market distortions.

Eligible technologies and level of incentives provided

Assistance will be provided for the same heaters and energy efficiency measures as listed under the incentives programme. Heaters and energy efficiency measures will be subsidised for 100% of the installed cost to a maximum of \$4,000.

Similar to the incentives programme, a home energy rating is compulsory and is also paid for by the assistance. Which energy efficiency measures will be covered by the assistance programme will depend on the outcome of the independent home energy rating.

In addition to the energy efficiency measures listed under the incentives programme, assistance may also be provided for:

- Hot water cylinder wraps
- Low-flow shower heads
- Energy efficient lighting (fixed compact fluorescent lights , tubular fluorescents)
- Repairs to the home to ensure efficiency measures are utilised effectively

Programme: 'Grants for on-going heating costs'***Summary***

- For tenants and owner-occupiers on low incomes, who have replaced their open fire or solid fuel burner through the incentives or assistance programme.
- Up to \$300 per winter (need to re-apply yearly).
- Grants will only be available until the owner/tenant moves to another property.

In detail

This programme will provide grants for on-going heating costs for households on low incomes. A grant of up to \$300 per year will be provided. This payment may be made monthly over five winter months and participating households will need to re-apply yearly for the grant. No further grants will be paid if the householder moves to another home and no grant will be paid to the new occupant of the home.

Eligibility

All homeowners and tenants holding a current Community Services Card or receiving a Government Benefit as specified earlier, *and* that have replaced their open fire or enclosed burner with a clean heating appliance under the incentives or assistance programme will be eligible.

Programme implementation

The actual payment of the grant can be made direct from Environment Canterbury by electronic funds transfer to the participant's heating account with his or her electricity, gas, diesel or oil supplier. This would reduce administrative costs and would ensure the payment is used for home heating purposes. Environment Canterbury can oversee this process through the appointment of an administrator.

Programme: 'Funding for conversion projects – landlords'***Summary***

- Organisations will be invited to put in bids for projects that target private landlords and encourage them to install clean heating and energy efficiency measures.

In detail

Encouraging the rental market to take up incentives is a highly specialised field. Under this programme a fund will be created which will enable organisations with knowledge and experience in the rental sector to set up their own projects providing clean heating and energy efficiency in rental homes.

Participants in projects of these organisations should meet all the requirements regarding eligibility of households, heating technologies and energy efficiency technologies of the Clean Heat Project as listed in the incentives and assistance programmes.

Eligibility

Owners of rental properties will be eligible to participate in projects financed by this fund. Government organisations, such as Housing New Zealand Corporation or the Christchurch City Council are not eligible.

Programme implementation

The funding will be released in rounds with a capped amount of funding per round. It is anticipated that organisations applying for funding under this programme will suggest marketing or other additional mechanisms to complement the incentives programme for households. These organisations may also propose a contribution by the property-owner to the assistance programme.

This programme will be implemented via a bidding process and will utilise the existing implementation arrangements of the incentives and assistance programmes. The successful organisations will enter into a contract with Environment Canterbury.

Programme: 'Funding for conversion projects – households'

Summary

- Organisations will be invited to put in bids for projects that encourage households in general to install clean heating and energy efficiency measures.

In detail

Some organisations may have access to large numbers of potential participants through established channels and may be able to provide economies of scale in marketing these programmes to their own customers. Under this programme a fund will be created which will enable these organisations to set up their own projects aimed at their own clients. The fund will expect these organisations to provide co-funding. The co-funding can be in-kind. This fund is especially targeting organisations that will benefit from the installation of targeted technologies and energy efficiency measures. Organisations will need to target at least 100 participants and will need to meet the requirements regarding technologies of the incentives and assistance programmes.

Eligibility

Owner-occupiers and private landlords will be eligible to participate in projects financed by this fund.

Programme implementation

The fund will be released in specified rounds. This programme will be implemented via a bidding process and will utilise the existing implementation arrangements of the incentives and assistance programmes where applicable. Successful organisations will enter into a contract with Environment Canterbury.

5. Comments and more information

Comments

This document outlines the incentives and assistance from the draft Clean Heat Project. Please let us know what you think of this proposal by writing to:

- Environment Canterbury, Freepost 1201, PO Box 345, Christchurch. A stamp is not required.

Or email comments to:

- Submissions@ecan.govt.nz

Written comments must be received by **28 June 2002**.

Please note, this is a separate process to submissions on the air chapter of the Proposed Canterbury Natural Resources Regional Plan (NRRP).

More information

For more information on the Clean Heat Project, the air chapter of the Proposed Canterbury Natural Resources Regional Plan (NRRP) or other information on clean heating and energy efficiency, please contact us:

- www.ecan.govt.nz/cleanairnow.html
- ecinfo@ecan.govt.nz
- Environment Canterbury, 58 Kilmore St, Christchurch
- 'Clean Air Now' line on (03) 353 9727