

Halt the Haze – Wood Heater Replacement Program 2007

AN INITIATIVE OF THE PERTH AIR QUALITY MANAGEMENT PLAN

Introduction

Wood smoke from domestic heating contributes to reduced air quality and haze events in winter months in Perth. Based on the most recent survey data (ABS 2005) there are 52,600 homes using firewood for heating in Perth¹. They burn about 87,000 tonnes of firewood a year and emit about 970 tonnes of fine particles into the atmosphere.

These fine particles contribute to health risks including aggravation of minor illnesses leading to extra visits to the doctor and days off work, increased hospital admissions and a small number of lung cancers and premature deaths each year. The present cost of these health impacts, attributable to residential wood smoke, is estimated to be about \$18 million a year².

The program

The Wood Heater Replacement Program for 2007, run by the Department of Environment and Conservation (DEC) in collaboration with home heating retailers, Alinta and Wesfarmers Kleenheat Gas, offered an economic incentive to encourage people using wood heaters or fireplaces as the main source of heating in their homes to convert to an alternative heating source. The program was created as one of a number of actions to combat smoke and haze under the Perth Air Quality Management Plan, a 30-year plan released in December 2000 to ensure that clean air is achieved and maintained throughout the Perth metropolitan area³.

A \$500 rebate was available to eligible residents in the Perth metropolitan area, for the removal of a wood heater or disablement of a fireplace and installation of a ducted or flued gas heater. An additional \$100 Kleenheat Gas voucher was offered to eligible applicants who purchased gas heaters using LPG. The program, offering a total of 800 rebates, started on 23 May 2007 and ran for three months, officially ending on 31 August 2007.

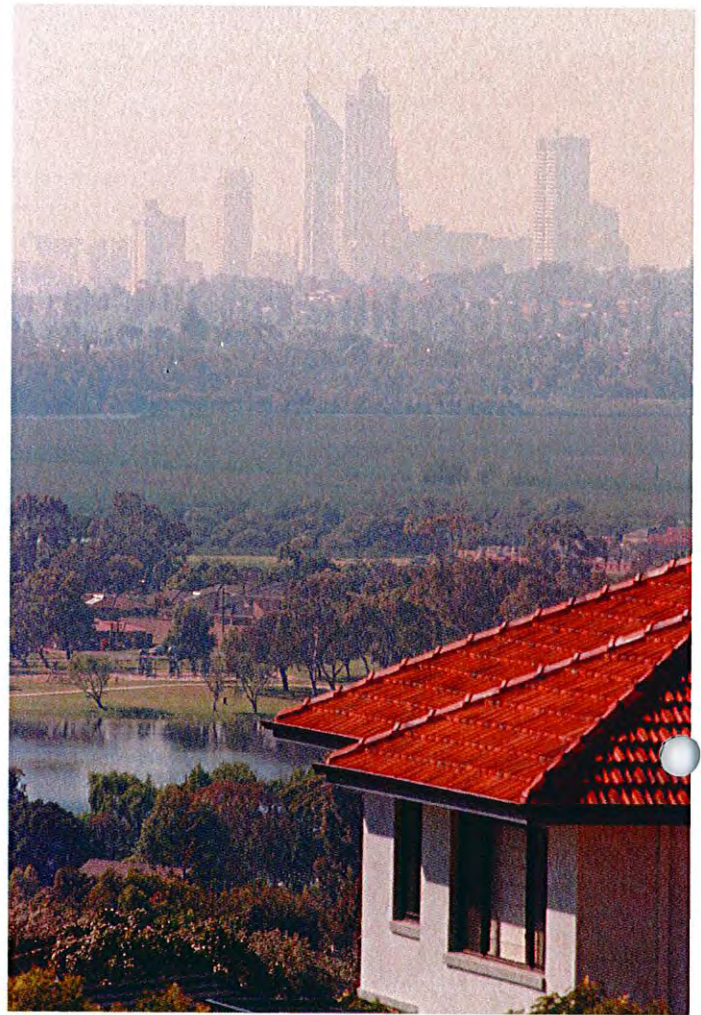


Results

The program was 72 per cent subscribed, with 577 rebates allocated. A total of 23 applicants purchased an LPG gas heater and received the additional \$100 Kleenheat Gas voucher.

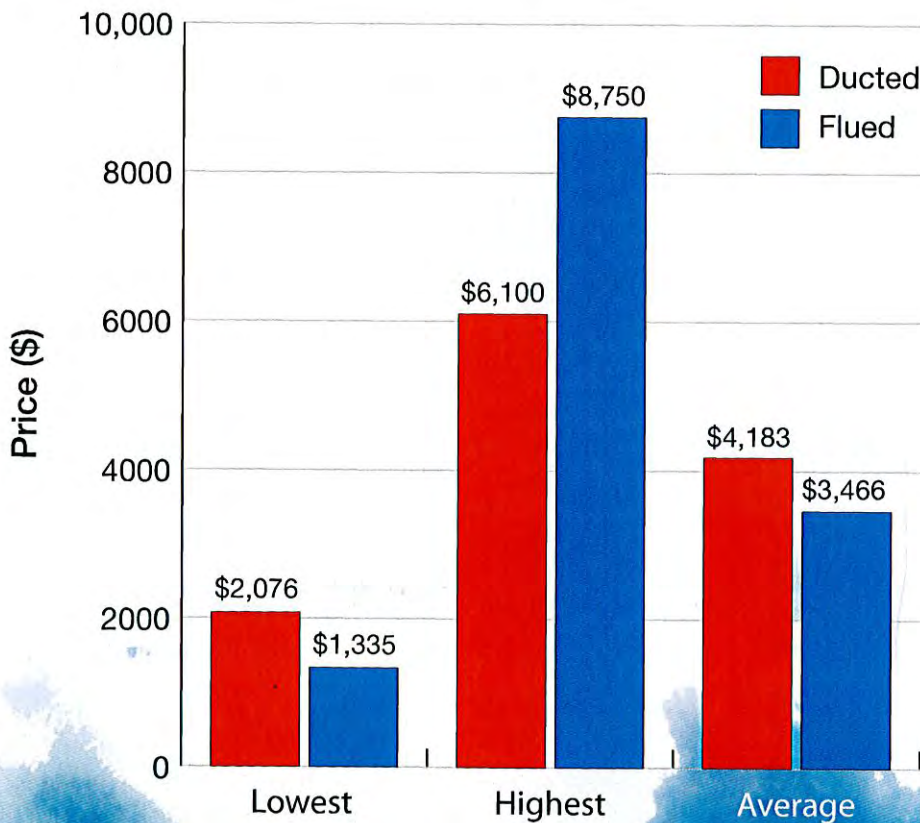
The 2007 program was administered by DEC, assisted by retailers of flued and ducted gas heating in the Perth metropolitan area. Overall, 21 companies and 46 shop fronts participated in the program. The retailers were recruited through an expression of interest from DEC and were responsible for providing potential applicants with information on the program, ensuring applicants met all the eligibility criteria, passing application information on to DEC and ensuring the old wood heaters were removed and disposed of. Applicants were only eligible for a rebate if they purchased a flued/ducted gas heater from one of these participating stores. Sales were reported at 40 of the stores.

The majority of Wood Heater Replacement Program applicants chose to replace their wood heater with a flued gas heater rather than a ducted system. Five hundred and thirty one applicants (92 per cent) purchased a flued heater and 51 applicants (8 per cent) purchased a ducted system. There was relatively little difference in these figures from the 2006 program where 12 per cent of applicants (out of 378) chose ducted heating. Details of costs paid for gas heaters in the program are shown in Figure 1.



A typical haze event in Perth

Figure 1: Costs of flued and ducted gas heaters



The program offered 800 rebates. Over the three months of the program, 577 rebates were allocated and 34 applicants pulled out of the program. Reasons given for this included purchase and installation costs being too high, problems getting an installer, the applicant decided on another form of heating such as reverse-cycle or unflued gas heating, or they realised they were ineligible.

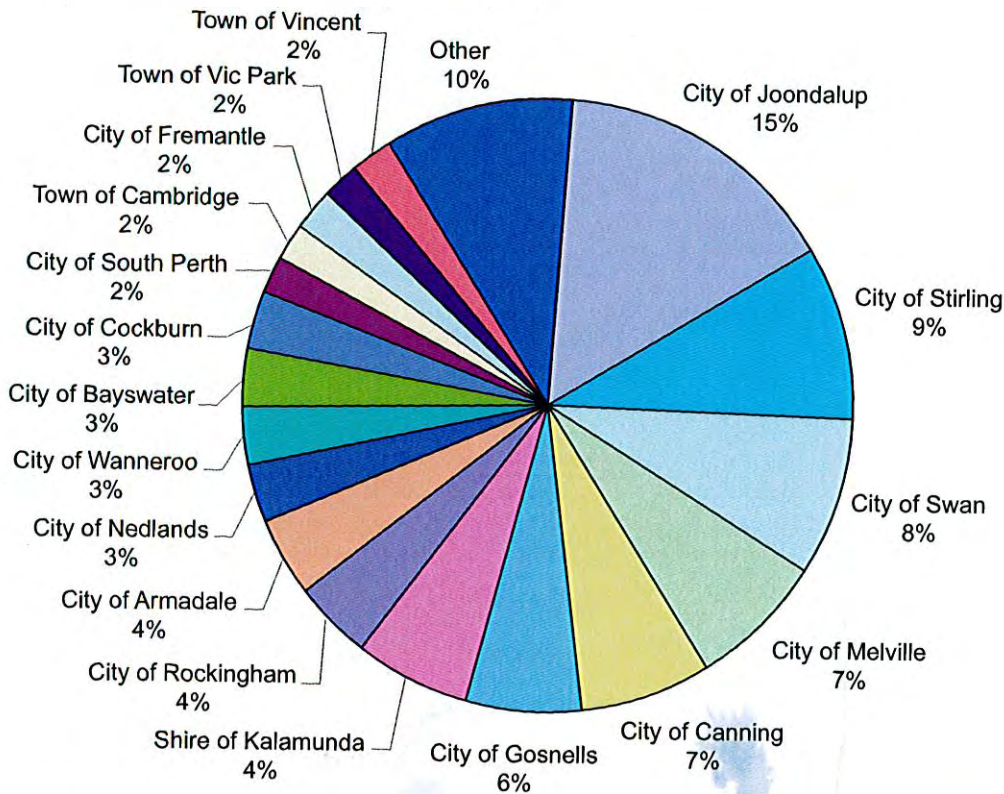
The program was most popular in the City of Joondalup (91 rebates). Other council areas where the rebate was popular included the cities of Stirling (54 rebates), Swan (48 rebates), Melville (43 rebates) and Canning (38 rebates). Figure 2 shows the percentage of rebates for each council. Council areas where fewer than five rebates were allocated were combined in the 'other' category. The spread of applicant locations was similar to the 2006 replacement program. The 2006 program was also most popular in Joondalup, Stirling, Swan, Melville and Canning.

To ensure all wood heaters were removed from use in the Perth airshed, skip bins were supplied to retailers and the old wood heaters were then transported to a metal merchant where they were crushed and recycled.



Oxford Hotel Manager John Liso with the one of the hotel's new gas heaters. The Oxford Hotel received a \$500 rebate for replacing their open fireplaces with flued gas.

Figure 2: Spread of applicants across local councils



Summary

The main intent of the program was to encourage those people currently using wood heaters as their main source of heating to convert to an alternative, cleaner heating source. The incentive offered in the program was intended to make the changeover from wood to gas heating more affordable for applicants, accelerating the replacement process.

The targeted reduction of wood heaters, particularly older non-compliant models, plays an important role in managing and improving Perth's air quality. The 2007 Wood Heater Replacement Program not only removed wood heaters, but provided a valuable tool to increase public awareness of wood smoke, the potential health effects and the role the community can play in reducing wood heater emissions.

Since 2004, three wood heater replacement programs have resulted in the removal of approximately 1,235 wood heaters in the Perth region. These programs form a key part of DEC's overall haze management plan. DEC encourages community members to consider alternative methods of home heating and remove older non-compliant models of wood heaters from their homes.



A flued gas heater

Future programs

The uptake of rebates in the 2007 program was noticeably slower than in 2006. This, and the lower number of rebates applied for, suggests that since 2004, this kind of program may have reached a high proportion of wood heater owners who are contemplating changing their heating system. Future programs will be designed taking this trend into account.



References

- ¹ Australian Bureau of Statistics, 2005, *Environmental Issues: People's Views and Practises*, Cat. No. 4602.0; Australian Bureau of Statistics, Canberra.
- ² Department of Environment and Conservation, 2007, Wood heater policy options paper, Consultation document, Perth.
- ³ DEP, 2002. Implementing the Perth Air Quality Management Plan. Department of Environmental Protection, Perth.