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# Submission to the Legislative Assembly Standing Committee on Public Works

## Inquiry into Energy Consumption in Residential Buildings

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## **1. BACKGROUND**

The Public Interest Advocacy Centre (PIAC) is a community legal centre based in Sydney. PIAC seeks to promote a just and democratic society and to empower individuals and groups, particularly those who are disadvantaged and marginalised. PIAC makes strategic interventions in public interest matters by using legal, policy, communication and training initiatives.

In 1998, PIAC received funding from the NSW Government for 3 years to establish the Utility Consumers' Advocacy program (UCAP). In each of the state budgets of 2001/02 and 2003/04, UCAP was funded for an additional two years. In 2001/02 the administration of the funding was transferred from the Department of Fair Trading to the Ministry of Energy and Utilities.

UCAP aims to:

- develop policy and advocate in the interests of residential consumers, particularly low-income consumers, of the energy and water industries in NSW;
- identify systemic problems with utility service providers;
- ensure that consumer protection mechanisms work effectively;
- facilitate the development of partnerships between stakeholders in utility service provision.

As well, UCAP assists to:

- develop consumer positions in decision-making forums (for example, customer councils);
- train consumer representatives;
- develop and implement consumer friendly products and services with utility managers and service providers.

A Reference Group assists UCAP in its policy development. The Reference Group's membership consists of representatives from the following organisations and communities:

- Council of Social Service of NSW (NCOSS)
- Combined Pensioners and Superannuants Association of NSW (CPSA)
- Park and Village Service based at the CPSA
- Institute of Sustainable Futures, University of Technology
- Australian Consumers Association (ACA)
- Council on the Ageing, NSW
- rural and remote consumers.

## **2. OVERVIEW OF THIS SUBMISSION**

This submission provides the Standing Committee with an overview of:

- the NSW energy industry
- overseas energy efficiency projects and projects undertaken in NSW

- energy use by low-income households
- REFIT - A Pilot Project in the Lower Hunter conducted in 2002
- PIAC's concluding remarks.

### 3. OVERVIEW OF THE NSW ENERGY INDUSTRY

#### 3.1 National Competition Policy

The energy industry in NSW has undergone enormous changes over the past ten years.

In the electricity and gas industries, this restructure has largely been due to the introduction of National Competition Policy. The Hilmer Report of 1993 claimed that "competition is a positive force that assists economic growth and job creation"<sup>1</sup>; while the Hon Paul Keating declared a year earlier in the Government's *One Nation* Statement that "the engine which drives efficiency is free and open competition".

In 1995, the Council of Australian Governments (CoAG) agreed to the National Competition Agreements that committed the states to implementing reforms by linking Commonwealth funding to those reforms. The Agreement on Government Business Enterprises (which affected the NSW state owned electricity businesses) ensured:

- competitive neutrality
- corporatisation where appropriate
- appropriate commercial objectives
- separated integrated monopolies into competitive and monopoly components
- provision of community service obligations (csos).

In the gas industry, in 1994, COAG agreed to:

- free and fair trade in gas
- third party access arrangements
- split transmission and distribution
- no exclusive franchises.

As a result of National Competition Policy, the NSW publicly owned electricity companies were:

- corporatised, that is, were obliged to be a successful business as well as having social, environmental and regional development responsibilities<sup>2</sup>;
- split into monopoly and competitive areas of business - transmission and distribution networks are monopolies, while retail became competitive. Retail competition for small residential users was introduced on 1 January 2002.

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<sup>1</sup> Report by the Independent Committee of Inquiry, Nation Competition Policy, AGPS, 1993, p. xv.

Further community service obligations, that is, assistance to low-income households to pay electricity bills funded by the NSW Government, were made explicit.

The gas industry was treated differently because, in the main, a private company, AGL, has provided gas in NSW. However the following changes were made:

- AGL was split into transmission, distribution and retail companies. Like electricity the transmission and distribution networks are monopoly suppliers and the retail business became competitive for small customers on 1 January 2002;
- with the advent of full retail competition, small gas customers became eligible for publicly provided community service obligations.

There are now four publicly owned electricity distributors/retailers in NSW: EnergyAustralia, Integral Energy, Australian Inland and Country Energy.

### **3.2 Regulatory Environment in NSW**

The most important regulatory regimes for the NSW electricity and gas industries are the economic regulation of both distribution and retail businesses.

The Independent Pricing and Regulatory Tribunal (the Tribunal) regulates the monopoly provision of the electricity distribution businesses, (the poles and wires) and the gas distribution (the pipes that relay the gas to customers) businesses. The Tribunal is currently in the process of determining an electricity distribution pricing review and the determination will come into effect from 1 July 2004. AGL's and Country Energy's<sup>3</sup> gas distribution pricing reviews are to begin on 1 January 2004<sup>4</sup>.

The Tribunal also sets the retail tariffs for the NSW standard suppliers of electricity and gas<sup>5</sup>. All of the default electricity and gas tariffs are to be reviewed over the next year and the Tribunal's determination will come into effect from 1 July 2004.

From PIAC's point of view, the Tribunal has to take into account two important issues when making a determination: considerations of demand management (including levels of demand) and least cost planning and the social impact of the determinations and recommendations<sup>6</sup>.

Finally, the Tribunal employs very good processes for their inquiries. Processes are consultative, open and accessible. Usually there are a number of forums where organisations can provide their points of view during inquiries including through submissions, participation in working groups, public forums and roundtable discussions. This consultative approach by the Tribunal ensures that on important

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<sup>3</sup> There are a number of gas companies with distribution systems in NSW including AGL, Country Energy, Origin Energy, ActewAGL. The biggest distribution company and retailer are AGL.

<sup>4</sup> Gas distribution pricing is an access arrangement and the review will determine the prices and services to be provided by AGL to enable third party access to their distribution network.

<sup>5</sup> Standard suppliers are those businesses that had customers before the introduction of full retail competition. They have an obligation to supply and provide electricity and gas under a standard form customer contract and a default tariff determined by IPART.

issues, for example, proposed large price increases for electricity distribution networks, that public debate is ensured and encouraged.

### 3.3 Tribunal Electricity Distribution Pricing Review

In many respects the Legislative Assembly's Inquiry is timely as the Tribunal's review of electricity distribution pricing is well underway. The distributors and other interested parties, including PIAC, have put in submissions to the Tribunal. As well there have been two public forums.

Of particular interest to this Inquiry is that EnergyAustralia and Integral Energy have claimed that some of their load is peaking in summer, rather than winter because of the increasing penetration of air-conditioning. EnergyAustralia has stated that in 2002, 43 percent of their residential customer base has air-conditioning, up from 29 percent in 1997<sup>7</sup>. Integral Energy state that ten years ago, 25 percent of households had air-conditioning and the figure has now increased to over 50 percent in Western Sydney<sup>8</sup>. ABS data indicates that there has been a significant increase in the number of households with air-conditioners from 35 percent in 1994 to 49 percent in 2002<sup>9</sup>.

The problem with a peak summer air-conditioning load is 'not only because the demand response is so temperature sensitive and much higher than normal, but also because it applies additional stress to network elements and reduces their effective capacity at a time when capacity is already low due to high temperatures'<sup>10</sup>. This peak load will supposedly need \$5 billion over the next five years to upgrade the networks to ensure that there are not system wide blackouts. While there is evidence that there has been an increase in household air-conditioning, it is not clear to PIAC whether the increase in demand is solely because of household air-conditioning or whether there has also been a corresponding increase in air-conditioning use by small and large businesses.

Further, an assumption has been made by both EnergyAustralia and Integral Energy that, overall, households with high electricity demand are households that have air-conditioning. A report commissioned by Integral Energy to examine the impact of air-conditioning on Integral's network states that this relationship 'is not well proven'<sup>11</sup>.

There is currently a number of pricing proposals that are under discussion as to how to rectify the need for large capital expenditures due to the constraints placed on the networks. These pricing proposals include:

- inclining block tariffs - where the price of electricity will rise for households who use over a certain consumption level;

<sup>7</sup> EnergyAustralia, *Submission on the 2004 Distribution Determination to the Independent Pricing and Regulatory Tribunal*, 10 April 2003, p.6.

<sup>8</sup> Integral Energy, *2004 Electricity Network Review Submission to the Independent Pricing and Regulatory Tribunal*, 10 April 2003, p. 77.

<sup>9</sup> ABS Report, *Environmental Issues: People's Views and Practices*, March 2002.

<sup>10</sup> Energy Australia, *op. cit.*, p. 77.

<sup>11</sup> Charles Rivers and Associates (Asia Pacific) Pty. Ltd., *Impact of Air Conditioning on Integral*

- seasonal pricing - the price of electricity increases in certain periods;
- congestion pricing - the price of electricity would rise for those households who live in areas where the networks are constrained and the increased revenue would pay for the capital expenditure needed in that area.

The first of these pricing proposals was put up by the distributors - EnergyAustralia and Integral Energy while the proposal for congestion pricing is investigated in a draft report<sup>12</sup> commissioned by the Tribunal.

The distributors have received criticism, including from PIAC<sup>13</sup>, for not including in their pricing submissions to provide detailed information about their planned demand management activities, including proposals for energy efficiency projects<sup>14</sup>. While energy efficiency projects do not decrease demand in the peak demand periods, they do decrease the base load for electricity and therefore cut the peak demand.

Indeed the distributors' demand management expenditure over the next regulatory period from 2004/2009 is expected to be \$10 million by EnergyAustralia and Integral Energy's base case service standard strategy predicts expenditure of \$3.5 million. Country Energy and Australian Inland have not provided, in their submissions to the Tribunal, any predicted expenditure.

There is one demand management proposal that PIAC does support and that is for EnergyAustralia to install interval meters in cases where customers choose to install three-phase air-conditioning. PIAC believes that this measure will appropriately target high electricity users with high incomes.

PIAC strongly believes that measures other than the proposed price signals need to be employed to assist households to cut their consumption. We are very concerned that the distributors have not proposed energy efficiency programs to assist with decreasing overall demand, as an alternative to increased capital expenditure to preserve the integrity of their networks.

#### **4. OVERSEAS ENERGY EFFICIENCY PROGRAMS, SAVINGS AND NSW PROGRAMS**

Both the United States and the United Kingdom have extensive energy efficiency programs that target low-income households and which are provided free of charge. The rationale for providing such programs free of charge is that these households have little disposable income and are unlikely to be able to afford a capital outlay to recoup this amount in energy savings over a number of years.

<sup>12</sup> Sinclair Knight Metz, *Reducing Regulatory Barriers to Demand Management - Avoided Distribution Costs and Congestion Pricing for Distribution Networks in NSW*, Draft Report, Independent Pricing and Regulatory Tribunal, July 2003.

<sup>13</sup> PIAC's submission to the Tribunal's Electricity Pricing Review is attached as Appendix A to this submission.

<sup>14</sup> For a definition of demand management please see Independent Pricing and Regulatory Tribunal, *Inquiry into the Role of Demand Management and Other Options in the Provision of Energy Services*,

Economic benefits of such schemes include creating an energy efficiency industry which is important, firstly, because these projects/programs are usually contracted out through a competitive tender process and tenders are usually awarded on the final price<sup>15</sup>. Overseas evidence suggests that such projects/programs create local employment<sup>16</sup>.

The financial savings provided by such schemes mean that households have more spending power. The UK experience is that low-income households spend their savings on increased energy usage so that their homes are more comfortable whereas retrofitting high-income households has the potential to stimulate the local economy and create indirect employment<sup>17</sup>.

One-fifth of greenhouse gas emissions comes from households. There are 7 million households in Australia each producing more than 15 tonnes of greenhouse gas emissions every year. Energy use, car use and waste are the largest sources of household emissions<sup>18</sup>.

The environmental underpinnings of retrofit projects are that they contribute significant greenhouse gas emissions savings. For example, it is estimated that an AAA rated showerhead saves up to \$1,000 in energy and water bills and 10 tonnes of greenhouse gas emissions (compared to a standard 20 litre/min showerhead) over 10 years. Energy smart lighting saves up to \$50 in energy bills and half tonne of greenhouse gases (comparison of 15w compact fluorescent versus 75w incandescent bulb over 8500 hours of operation)<sup>19</sup>. These savings potentially benefit the whole community.

Residential energy efficiency projects in NSW have been undertaken by organisations such as the Sustainable Energy Development Authority (SEDA) which has undertaken a number of projects in Marrickville, Leichhardt, and North Sydney. SEDA also conducted a pilot project for people on low incomes in Liverpool in association with The Smith Family in 1999. SEDA has also retrofitted public and community housing as part of their CHEP Program that finished in 2000.

Sydney Water has also undertaken a major retrofitting program. Although this was targeted at water efficient devices, there are some energy savings because of the products offered.

One of the major characteristics of both the SEDA and Sydney Water programs is that they have been heavily subsidised, regardless of household income. Sydney Water's program is free to pensioners. While PIAC is supportive of such programs, one of our overriding concerns is that there are certain households on low incomes who do not

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<sup>15</sup> The REFIT project benefited from Sydney Water's *Every Drop Counts* retrofit program in that there were a variety of firms that were interested in undertaking the work and Sydney Water program had driven prices down.

<sup>16</sup> These employment benefits are extensively explored in *Energy efficiency and jobs: UK issues and case studies*, A report by the Association for the Conservation of Energy to the Energy Savings Trust, September 2000.

<sup>17</sup> *ibid.*

<sup>18</sup> More information is provided at [www.greenhouse.gov.au/community\\_household](http://www.greenhouse.gov.au/community_household).

<sup>19</sup> The Sustainable Energy Development Authority (SEDA) has estimated the savings for a range of



have the resources to pay even the subsidised cost of energy efficiency devices/services. Many of these also have high energy usage because they have uncontrollable costs, for example, poorly designed houses which have appliances that are expensive to run. Also the SEDA and Sydney Water programs target home owners, in preference to other housing tenure forms such as public or community housing and the private rental housing.

## **5. ENERGY USE BY LOW-INCOME HOUSEHOLDS**

There is a dearth of research on households' use of energy. What we do know is that:

- ABS data indicates that households in receipt of a government pension or benefit spend 4.1 percent of their income on fuel and power, compared with 3.1 percent for superannuants, 3 percent for owners of businesses, 2.4 percent for wage and salary earners and 2.8 percent for other households<sup>20</sup>;
- the Tribunal study of 1996 found that low users of electricity and gas are concentrated in households with incomes of less than \$25,000 per annum and spend less than \$200 per quarter on electricity<sup>21</sup>.

Despite the dearth of research, there are a number of assumptions that can be tentatively made about household energy use and these include:

- energy consumption is primarily driven by household size, therefore large low-income households have an inelasticity of demand, that is, they do not have any usage that is discretionary and they have large bills;
- these households often have uncontrollable costs, for example, poorly designed housing and old appliances.

## **6. REFIT - A PILOT PROJECT IN THE LOWER HUNTER - 2002**

In 1999, PIAC convened a committee, called the Community Home Energy Efficiency Partnership (CHEEP) consisting of representatives from the following non-government, government and statutory authorities:

- Council of Social Service of NSW (NCOSS)
- the Department of Fair Trading
- Sustainable Energy Development Authority (SEDA)
- The Smith Family
- Sydney Water
- Department of Community Services.

The aim of the committee was to develop funding proposals which would provide energy efficient appliances to all NSW households. This aim was to be achieved

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<sup>20</sup> Ageing Agendas, and the Public Interest Advocacy Centre, *Pensioner Energy Concessions Review*, Report to the NSW Department of Community Services, 1999, p. 6.

<sup>21</sup> IPART, *Survey of Water, Electricity, Gas and Public Transport Usage*, December 1996. IPART are in the process of doing this survey again, however it was not completed at the time of writing this

through a mix of user-pays and a subsidised service for low-income households and a submission was written to the Australian Greenhouse Office for \$38 million which was subsequently unsuccessful.

The Committee developed a business plan for EnergyAustralia<sup>22</sup> that outlined the costs<sup>23</sup> and benefits, other than savings for households and in greenhouse gas emissions, to EnergyAustralia of contributing funding for a retrofitting service. Some of these benefits included: a decrease in the costs for EnergyAustralia of debt collection (because households in receipt of the service would have more disposable income to pay bills) and providing EnergyAustralia with community goodwill and a competitive edge. Other identified benefits of a retrofitting service included local employment opportunities, support for a developing energy efficiency industry and decreased demand for Government provided community service obligations. In this case, it would be NSW Energy Accounts Payment Assistance (EAPA) Scheme which is a voucher that is distributed by welfare agencies to households that are having trouble paying their energy bills (which includes gas bills). EnergyAustralia agreed to fund the retrofits<sup>24</sup>.

However because there was no funding from the Australian Greenhouse Office, the CHEEP Committee had to find funding to administratively a pilot project conducted in the Lower Hunter<sup>25</sup>, called REFIT. Collectively, SEDA, Hunter Water and EnergyAustralia<sup>26</sup> contributed to the administrative costs while Newcastle City Council and PIAC<sup>27</sup> provided in-kind support.

The aims of REFIT were to:

- deliver real benefits to disadvantaged customers through reductions in their energy and water consumption;
- develop a clearer understanding of energy and water consumption habits of disadvantaged customers;
- quantify the demand and energy and water reductions this type of project can deliver;
- reduce greenhouse gas emissions.

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<sup>22</sup> EnergyAustralia's electricity network extends from Waterfall in the south of Sydney to Nelson Bay north of Newcastle. It extends in a north-westerly direction to Werriwa, Scone and Barry. It is Australian's largest electricity network in terms of numbers of customers with 1.5 million and covers an area of more than 22,000 square kilometres.

<sup>23</sup> The average cost of the service the CHEEP Committee proposed at this time was \$270 which included providing 20 percent of homes with ceiling insulation.

<sup>24</sup> The funding was provided by EnergyAustralia Networks, that is the monopoly part of EnergyAustralia's business.

<sup>25</sup> The Lower Hunter includes the local government areas of Newcastle, Lake Macquarie, Port Stephens, Cessnock and Maitland. All of these local government areas were within EnergyAustralia's distribution area.

<sup>26</sup> EnergyAustralia came to the party and committed \$10,000 from the pot of money that was going to pay for the retrofits.

<sup>27</sup> Newcastle City Council provided in-kind supervision of the paid position, while PIAC provided

## 6.1 REFIT Kit

The REFIT kit consisted of the following items:

- an energy and water audit<sup>28</sup>
- AAA rated showerheads<sup>29</sup>
- tap aerators (slows the flow rate of taps)
- two fluorescent light bulbs
- a cistern weight (decreases the amount of water used in flushing a toilet).

## 6.2 Eligibility Criteria for REFIT

The REFIT kit was provided free in 2002 in the Lower Hunter to:

- households that were in receipt of EAPA;
- households who had a combined household income of less than \$500 per week after tax who either rented privately or had a mortgage.

The rationale for targeting households that were receiving EAPA was to target those households that were having difficulty paying their electricity bills. As well we wanted to target those households who rented privately or have a mortgage because these households were worse off financially than home owners or public tenants.

There were other considerations in not providing the REFIT service to public housing tenants. As at April 2000, public housing rent levels were increased from 20 percent to 25 percent of total household income. One justification for this increase was that "It will also allow the Department to progressively install water saving devices to tenant's homes. According to the Sustainable Energy Development Authority research so far, water cost savings are around \$54 per year and the energy savings to the tenant are around \$40 per year for the average family home"<sup>30</sup>. What the Department of Housing failed to say was that they were very interested in the water savings because they paid all of their tenants' water bills because none of their housing was separately metered.

## 6.3 Administrative Arrangements

A diagram of the administrative arrangements for delivering REFIT is Attachment 1. As one EnergyAustralia employee has commented the administrative arrangements were complex because a committee designed them. In actual fact, while complex they worked reasonably well<sup>31</sup>.

The complexity of these arrangements was reflected in the contracts that had to be entered into by the various participants. The key agreements were between:

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<sup>28</sup> The energy and water audit provides information to the householder on how they can improve the energy efficiency of the dwelling, for example, by putting up curtains to maintain warmth in winter.

<sup>29</sup> Households were given a choice of two showerheads and if needed, AAA rated handheld showerheads were provided.

<sup>30</sup> NSW Department of Housing, *Public Housing, Rents Fact Sheet*, September 1999, p. 2.

<sup>31</sup> In that, these arrangements were not identified as a problem in the Final Report, *REFIT Pilot*

- SEDA and the preferred tenderer for the project, Field Force, for the energy and water audits and the installation of the energy efficient devices. This contract<sup>32</sup> covered instructions for the tender, the tender condition, measurement and payment - general and specific, default, bankruptcy or insolvency and general, technical and product specifications. Essentially this contract outlined the products that were to be provided, the process for providing them and a number of key service standards, for example, FieldForce had to undertake the retrofit within a certain number of days of having the client referred to them and they had to keep appointments;
- SEDA and Newcastle City Council who were the Program Manager for the pilot project, that is undertook the day-to-day management of the project. This contract outlined the responsibilities of SEDA and Newcastle City Council.

#### 6.4 Accessing Clients

As can be seen from the administrative arrangements for the pilot project, we expected welfare agencies to identify clients, particularly, those clients that needed EAPA vouchers to assist them to pay their electricity bills. PIAC, SEDA and Newcastle City Council ran a number of information sessions on the pilot project for welfare agencies. In addition, PIAC and Newcastle City Council met with individual agencies, particularly volunteer<sup>33</sup> organisations to brief them on the benefits of the project and to their individual clients.

Overall 50 percent of all REFIT applications, of which there were 1244 came from welfare agencies<sup>34</sup>, 30 percent came from advertising and mailouts and 19 percent were self referrals which indicates that word of mouth is an effective method of accessing clients, albeit after a period of time.

#### 6.5 Results of REFIT

There are two sources of information for the results of REFIT. The first is the report from the Program Manager that identified process issues with the implementation of REFIT<sup>35</sup>. This report is Appendix B. The second source is a report commissioned by PIAC from the Social Policy and Research Centre<sup>36</sup> that analysed the information contained on the audit forms filled out by FieldForce when they installed the devices

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<sup>32</sup> Sydney Water provided the contract for their retrofitting program, *Every Drop Counts* which formed the basis of this contract. If we had not had this support from Sydney Water, the process of developing it would have taken us at least 6 months longer as this contract would have had to be developed from scratch.

<sup>33</sup> This was important because many volunteers work during the day and voluntary organisations, such as St Vincent de Paul, meet at night and the information needed to be provided to those workers who were delivering a service.

<sup>34</sup> Of the 50 percent referred from welfare agencies, the Salvation Army provided 57 percent and St Vincent de Paul Society provided 20 percent. The remaining 23 percent were from a variety of agencies including neighbourhood centres, family support services, women's refuges and youth services.

<sup>35</sup> Final Report, *op. cit.*

<sup>36</sup> Dr Tony Eardley and Judith Brown, *Analysis of Data from the REFIT Pilot Program*, A Report for the Public Interest Advocacy Centre, May 2003. Both of these reports are available from

plus information that Newcastle City Council collected when they received a request for the service. This report is Appendix C. This research provides demographic information and types of appliances that were owned by or installed in the recipient households.

There were 1124 free REFIT kits installed. Of the 1124 households who participated in the pilot project: 100 percent received two compact fluorescent light bulbs, 89.5 percent received a AAA rated showerhead, 66 percent received at least one tap aerator and 4.5 percent received a cistern weight. Of those households that applied to receive REFIT, there were 45 no shows (that is, there was no-one at home when the contractor called to install the devices), 84 households cancelled their appointments (due to the fact that households were moving, they changed their minds about receiving the service and some customers could not be contacted by telephone), and there were 18 call backs (result of faulty products and leaking showerheads).

The characteristics of REFIT recipients are interesting in that they show that the pilot project was well targeted. There were a total of 1,899 adults and 1,021 children (children's ages were not collected) in the recipient households. The largest number of adults in one household was 14 and the largest number of children in a household was 6.

**Table 1: Type of Recipient Household compared with 2001 ABS Data for the Australian Population as a Whole**

Household Type	REFIT Data	2001 ABS Data
Single Person	25.2	9.1
Sole Parents	21.6	15.5
Adults with Children	29	47
Adults with No Children	24.2	35.7 <sup>37</sup>

It is pleasing to see that a higher proportion of single person and sole parents households than the national average received the service.

The other demographic information that is of interest is the type of recipient household and their income source.

<sup>37</sup> This column does not add up to 100 percent because 1.8 percent of households in the census who

**Table 2: Recipient Household Type by Income Source**

Household Type	Income Source					Total (Number)
	Pension	Income Support	Employed %	Other	Unknown	
Single	47.9	23.4	9.6	1.1	18.1	282
Sole parent	34.3	43.0	4.5	-	18.2	242
Adults with children	47.2	22.2	6.5	0.9	23.1	324
Adults with no children	30.3	43.2	6.3	-	20.3	271
Total (row %)	40.5	32.1	6.8	0.5	20.1	1119

Table 2 suggests that the pilot program was fairly well targeted, in that close to three-quarters (72.6 per cent) of recipient households in all reported receiving either a pension or other income support payment from Centrelink. The figures are broadly similar across all household types, although single people were somewhat more likely and sole parents less likely, to be employed.

As the eligibility criteria was generous, it was anticipated that some recipients would be employed, albeit in low paid or part-time employment, and this was indeed the case with approximately 6.8 percent of recipients in paid employment.

However, since for a substantial proportion of cases income source is unknown, the Social Policy Research Centre attempted to impute likely receipt of income support or pension income on the basis of referral to the program through a welfare agency<sup>38</sup>.

It is assumed for this purpose that these agencies are likely to be used mainly by people receiving some kind of welfare payments. Just over 76 per cent of all these missing cases are recorded as being referred by one of the main welfare agencies involved. On this basis the percentage of pension or income support recipients amongst the pilot program clientele rises to nearly 89 percent.

One other interesting finding from the Social Policy Research Centre's research was the types of heating systems present in the recipients' homes by household type.

**Table 3: Types of Heating by Household Type**

Household Type	Types of Heating					
	Electric radiators	Air conditioning	Gas	Electric fan	Other	Unknown
	%					
Single	45.0	12.8	12.4	7.1	12.1	10.6
Sole parent	42.1	17.8	14.5	5.0	12.4	8.3
Adults with children	38.7	18.2	16.2	4.9	15.7	5.9
Adults with no children	27.5	26.2	19.8	2.6	16.2	8.1
Total	37.8	19.0	15.9	4.9	14.2	8.1

Again, some of this information was unknown, however the most common overall heating appliance was electric radiators (38 per cent), followed (perhaps surprisingly) by air conditioning (19 per cent), then gas (15.9 per cent). The tables shows which kinds of households were more or less likely to have the different kinds of heating. Thus, although air conditioning was found in only 19 per cent of homes overall, 26 per cent of households consisting of two or more adults with no children had this heating type, whereas single people and sole parents were more likely to rely on electric radiators.

This information has ramifications for energy suppliers. From an environmental point of view, energy suppliers should seriously consider fuel substitution schemes, that is converting housing from electricity to gas for low-income households because of the greenhouse gas savings, as well, households would benefit because gas is a cheaper fuel for heating and cooking purposes.

## **7. CONCLUSION**

It is PIAC's understanding that EnergyAustralia is examining whether they implement REFIT throughout their distribution area. While the REFIT recipients' savings were well in excess of the cost of an average \$112 (incl GST) to supply and install, administrative costs were high (over \$70). EnergyAustralia is expecting that these costs should be greatly reduced in the future. Due to the excessive administrative costs that were essentially outsourced to community agencies and local government, EnergyAustralia is seeking other ways of delivering REFIT.

There have been other developments since the completion of REFIT. The ALP in their environmental policy released before the State election in March 2003 undertook

to "distribute \$300,000 to 1,500 low-income homes in the Illawarra to fit energy and water efficiency devices. If this trial program proves to be successful, we will extend the scheme to other areas"<sup>39</sup>. PIAC is unaware as to how or when this election promise is to be implemented. With this commitment of funding, the question does arise as to where the funding for REFIT type projects should come from: consolidated revenue or energy companies.

There are obviously clear benefits for energy businesses to fund such projects, particularly as the NSW Government has introduced from 1 January 2003 the Greenhouse Gas Abatement Scheme which requires energy retailers to meet mandatory targets for abating the emission of greenhouse gases from electricity production and use. In addition, there are benefits that are not so easily measured, some of which are outlined above in section 6 above, as well as gaining wide community support for funding such initiatives.

PIAC wants the NSW electricity distributors/retailers to actively pursue projects such as REFIT as they deliver both environmental and social benefits, as well, they assist with the distributors peak load because they reduce their electricity base loads. In addition, recipients would not have been able to contribute the environment and climate change without the provision of the REFIT service.

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<sup>39</sup> Australian Labor Party, New South Wales Branch, *Protecting our future - Labor's plan for a healthy environment*, March 2003, p. 10.



The REFIT Pilot Project is an initiative of the CHEEP Committee and Energy Australia to provide a retrofitting service to low income private tenants, in the Lower Hunter area, to reduce energy usage and greenhouse gas emissions and save the tenant money on their energy bills. The retrofitting service will be provided free of charge to the low-income customers.

