



## Market Design Review – Options Paper Submission from Community Energy Action

### Introduction

Community Energy Action (CEA) is a private charitable trust established in 1994 with the mission to “provide energy solutions that are good for people and good for the environment”. Based in Christchurch, we initiated the first fuel poverty focused energy retrofit project in New Zealand in 1993, and since then have been involved in retrofitting over 12,000 homes, mostly low income households in Christchurch.

CEA is the longest running community energy trust in New Zealand, and a founding member of the Energy Efficiency Community Network (EECN), a network of community non-profit energy organisations around the country.

This submission focuses primarily on “Competition and Pricing” issues in Chapter 3, and “Energy affordability issues” in Chapter Four.

### Chapter 3: Competition and Pricing

#### Why have residential prices grown much faster than commercial or industrial?

The analysis on pricing issues in Chapter 3 is interesting and useful, but in our view the EC has not provided a convincing analysis of the situation. It does not explain the clear evidence available which shows that residential electricity tariffs have increased at a substantially higher rate over the last eight years compared with commercial and industrial, yet the actual growth in consumption in the residential sector is less than in either the commercial or industrial sectors. We have set out the relevant information in Table 1, derived from the Energy Data File (MED).

**Table 1. Comparative electricity trends of the three main sectors 1999-2007**

	Residential			Commercial			Industrial		
	GWh	Price c/kWh	Revenue \$M	GWh	Price c/kWh	Revenue \$M	GWh	Price c/kWh	Revenue \$M
1999	11,290	11.61	\$1,311	7,334	9.72	\$713	14,010	6.98	\$978
2000	11,057	11.87	\$1,312	6,919	10.11	\$700	14,759	5.94	\$877
2001	11,306	11.76	\$1,330	6,899	10.31	\$711	15,142	6.31	\$955
2002	11,660	12.86	\$1,499	6,964	10.16	\$708	14,525	6.71	\$975
2003	11,723	13.82	\$1,620	7,734	10.79	\$834	15,431	7.23	\$1,116
2004	12,254	14.84	\$1,818	7,389	12.01	\$887	16,151	8.10	\$1,308
2005	12,161	16.68	\$2,028	7,975	12.35	\$985	16,190	7.56	\$1,224
2006	12,231	17.29	\$2,115	8,383	13.53	\$1,134	16,780	9.13	\$1,532
2007	12,731	18.59	\$2,367	8,990	13.94	\$1,253	16,825	9.22	\$1,551
<b>Increment 1999 to 2007</b>	1,441	6.98c	\$1,056M	1,656	4.22c	\$540M	2,815	2.24c	\$573M
<b>Average increase 1999 to 2007 (% pa)</b>	1.5%	6.1%	7.7%	2.6%	4.6%	7.3%	2.3%	3.5%	5.9%

Source: Energy Data File, Ministry of Economic Development

In the eight years from 1999 to 2007 seventy six percent of new electricity demand has come from the industrial/commercial sectors, and over that same period their rate of price increase has averaged around 4.0% pa. By comparison, the residential sector was responsible for only 24% of the total growth in electricity, but their price increase averaged 6.1% pa. Yet residential consumers have been constantly told by their energy supply companies, when justifying their price increases, that price rises are needed to cover the costs of growth and new supply.

In 1999 total revenue taken in by the electricity sector was \$3.002M. In 2007 this had risen to \$5,171M, an increase of 72%. Of the \$2,170M revenue increase between 1999 and 2007, 49% came from residential customers (who contributed only 24% of the growth in demand), while 51% came from commercial/industrial customers (who contributed to 76% of demand growth).

Why are these counter-intuitive trends happening? Is it because growth in the residential sector is particularly expensive to provide because of required expansion to the network? This does not seem to be the case because the EC's own analysis shows that the increase in electricity costs over the last eight years is virtually entirely due to the energy charge component (rather than network charges). Therefore there seems to be something entirely inconsistent about the above trends (and the statements by energy companies), with the logical implication being that because of the more intensely competitive commercial/industrial sector, residential consumers are increasingly being used to subsidise the energy growth demands of commercial and industrial customers.

We note that if residential tariffs had grown at the same rate as commercial/industrial tariffs over the last 8 years then they would be some 2.6c/kWh cheaper than they are today – for households with annual consumption of 6,500kWh and 9,000kWh this represents \$170 and \$230/year savings respectively. We note that these are significantly above the average \$150 savings determined to be available from supplier switching.

The key questions the EC needs to address and provide transparent and compelling answers on are these:

**Why have residential tariffs increased disproportionately compared with those for commercial and industrial customers?**

**Are residential tariff increases effectively subsidising the growth demands of the industrial and commercial sectors?**

### **Retailer competition and the benefits from switching supplier**

No doubt a lack of competition in the residential sector is an important underlying issue driving the trends above, and the EC is correct to highlight the potential for consumer savings through switching suppliers. The section on customer search and switching behaviour was interesting, with the observations on barriers and issues similar to what we understand the situation to be. We think that the perception of savings being transitory (paragraphs 180-182) is particularly important, especially in current times when consumers are faced with regular price increases (despite the arguments put forward in Fig 31).

We also think there may be other factors that impact on the perceived benefits of shifting – for example (a) where suppliers are offering carbon-neutral electricity, (b) where some suppliers are providing combined tariffs (electricity and gas), and (c) 'quality' aspects provided by respective suppliers such as the regularity of meter reading. In our experience, for low income and vulnerable customers, meter reading regularity is very important, since long gaps between meter readings, and estimated accounts can cause major budgeting difficulties. If lower tariffs were associated with greater irregularity of meter readings, this may end up being an overall dis-benefit.

## **Proposed actions to address poor customer awareness**

CEA supports the actions proposed by the EC in paragraphs 200 and 206 re:

- Disclosure of retail tariff options
- Extending Powerswitch coverage to all major tariff options (especially pre-payment options). Including pre-payment meters in Powerswitch will help to raise customer awareness about the costs associated with prepayment meters. Many people on lower incomes use pre-pay meters but do not always realise they are paying a higher rate.
- Improving awareness of the Powerswitch site.
- Ensuring advanced metering infrastructure ('smart meters') do not become a competition barrier.

## **Further steps that could be taken to reduce customer search and switching costs – the potential for Home Energy Advice Centres**

As the EC has noted a large proportion of customers cannot access, or are not confident about using the Powerswitch site. Also, many customers often don't understand what plan they are on, how often they are billed and why, or even how much electricity they use over a period of twelve months – let alone whether switching would be beneficial.

In our experience, more pro-active assistance will be required for many customers. We note that the EC has identified a dedicated 0800 phone line as a possible resource; also raising awareness amongst customer groups such as CAB etc. We agree with these approaches, and would like to highlight another resource that the EC could utilise which we think could be a major contributor to overcoming some of the barriers identified.

The first of what is hoped to be a national network of independent Home Energy Advice Centres (HEACs) was started in Wellington in March 2008. Two more centres (Canterbury and Auckland) are due to begin this year. This project has been initiated by EECN, and has received two years of funding from the Ministry for the Environment's Sustainable Management Fund. The main, initial point of customer contact is a dedicated 0800 phone line (0800 388 588), with trained advisors available also for home visits, outreach activities, and other ways of communicating with customers.

HEAC's, and their independent trained advisers, could play a valuable role in helping customers step through the search/switching process, but in particular they could help the many customers who might benefit most from the cost saving through switching, but who face the largest barriers in accessing this process (e.g. especially people who do not have access to the internet).

The EC noted the cost of running a dedicated 0800 helpline for switching and tariff issues, but we see the potential for this service to be provided through the national 0800 HEAC line. The advantage is that customers would also be talking to a trained adviser who may be able to facilitate a range of other beneficial actions such as access to energy efficiency assistance etc. HEAC advisers would also be able to interpret Powerswitch results for customers, especially those who are not adequately heating their homes, and develop an appropriate package of advice and referrals which will lead to multiple beneficial outcomes.

Powerswitch therefore offers a valuable opportunity for raising awareness about cold, under-heated homes. One innovation might be to include a red flag pop-up box which alerts visitors (who are living in electricity-dependent households only) to the possibility they are putting their health at risk if their winter bills are very low. This pop-up box could direct the visitor to HEAC advisers for advice about what they can do to be warmer in their homes, plus a link to guidelines for low income consumers.

To be able to provide good advice and support for such customers, HEAC/Community-based advisors need good information about a client's prior energy use to help them identify overall consumption patterns or difficulties a client may be having with their electricity bills.

Advisors therefore need to be able to contact electricity suppliers via a clear, efficient process to obtain customer energy use information. A key barrier which may need to be addressed is the issue of client confidentiality. The EC could work with electricity suppliers to reduce or remove this barrier for advisers.

EECN would be very keen to further discuss with the EC the role for HEACs in meeting many of the needs identified in assisting customers with tariffs and switching issues, possibly piloting something through the Wellington HEAC as soon as possible.

### **Other comments about Powerswitch**

The following features could make Powerswitch a more useful tool for electricity customers overall.

1. Include clear information on Powerswitch website about "smoothed payments", including a calculator which estimates the regular payment amount (weekly, fortnightly, monthly) a customer might expect to pay if customer chose a 'smoothed' payment option. This can help to ease the pain of high power bills.
2. Include a warning/pop up box on Powerswitch that some people on certain low-user plans may be penalised if they start to use over a certain amount of electricity. This is particularly relevant for those people who have a change in household circumstances, switch from different space-heating fuels, or choose to try and heat the homes more adequately.
3. Include a red flag pop-up box in Powerswitch which alerts the visitor that they have very high power bills (for the number of people in the house). The pop-up box then gives the user the details to contact the HEAC 0800 Advice line.
4. The Energy Saving tips page on Powerswitch has a link to the Energy Efficiency Conservation Authority website, but fails to explain why this could be significant to the visitor. More detail could be useful next to this link – e.g. how to find out about financial assistance to make your home warmer and drier/EnergyWise Home Grants, direct the visitor to HEAC advisers.

## **Chapter 4: Energy Affordability Issues**

CEA commends the EC for including this chapter in the Review. We have been waiting a long time for the government to acknowledge this issue and provide a decent level of analysis. While we are slightly bemused that it is the EC that have been the first government agency to lay out the issues and invite comment, we warmly welcome it, nonetheless.

### **Question 8. From a conceptual viewpoint, what are the relative merits of considering energy affordability in its own right?**

We believe there is a very strong rationale, and would like to highlight a few points below:

**The demise of 'free energy' and the commercialisation of energy supply:** We think that some historical perspective is useful here. One of the characteristics of current energy affordability issues is the trend towards less diversity in household energy supply, and the displacement of non commercial energy supply options (e.g. 'free' firewood) with commercially derived supply. This is especially so for low income customers in urban areas. There are a number of reasons for this

including access to firewood supplies, loss of the 'culture' of accessing and storing wood, and increasing restrictions placed on wood burning as a result of Clean Air regulations.

**The barriers posed by capital investment:** Energy affordability issues are very often tied to an inability to invest in capital equipment which would enable people to benefit from energy efficiency or lower energy prices. Examples include:

1. To be able to successfully use night rate electricity tariffs for hot water requires a large enough (and efficient) hot water cylinder to provide adequate storage. Installed costs are typically around \$1,500
2. To enable electrical heat to be provided with an effective cost of typically 6-7c/kWh requires expenditure of typically \$2,500-\$3,500 to invest in a heat pump
3. To benefit from reduced heating costs overall requires investment in adequate insulation – typically starting from around \$3,000/household for basic insulation but much higher if insulation was comprehensive including double glazing.

This issue can be further complicated by many households facing energy affordability concerns living in rental housing. This introduces a further barrier – for example, in terms of getting the capital investment in efficiency to occur.

**The energy 'poverty premium':** UK agencies have coined this phrase to describe the additional costs that low income/vulnerable consumers often face because of their circumstance – if they miss payment on time they will lose prompt payment discounts, they will face additional costs if they have been disconnected, they pay more for using pre-payment meters etc.

As energy prices rise and compete with other costs of living, the day-to-day impact of energy costs increase, particularly on low income households. Such households then often make complex choices about how they prioritise their spending. A phrase used in the UK which illustrates this choice is "heating or eating?" Untangling fuel poverty/energy affordability from general (income) poverty is an important step towards understanding how to address this issue effectively within an overall context of income poverty.

Finally the public health and other-social good outcomes of affordable energy and energy efficient homes are so significant that energy affordability must be scrutinised separately from general income poverty. A failure to do so will undermine any progress made towards securing and achieving these key outcomes.

## **Assessing the extent of energy affordability problems**

Paragraphs 216-229 contain a very useful discussion of some of the issues. In particular we commend the EC for Fig. 32 – a most insightful way of presenting variables around warmth; and for distinguishing between the money that is actually spent versus the 'required' spending on energy, which to date has been a significant point of confusion in NZ.

A number of very specific questions are asked in paragraph 227 related to income definitions, household compositions etc. At this stage we would prefer a rather higher level discussion about the way in which energy affordability may be defined. We suggest that a number of 'principles' need to be fleshed out and agreed first. Some thoughts were offered at the Fuel Poverty Workshop run by CEA in June as follows:

- ***Fuel poverty should be defined in a way that captures real need – not perceived need.*** This means making sure that the way 'fuel poverty' is defined is consistent with the reality faced by households. In NZ, for example, it may be much better to define fuel poverty more generally in terms of an *'inability to afford basic energy services'* rather than being tied into a strict definition such as in the UK. For instance, householders who do not have mortgages may well

be very comfortable spending more than 10% of their income in order to meet energy services because they have much lower levels of other expenditure; while householders with high mortgages may struggle to meet energy costs that are only 5-7% of income.

- ***The definition needs to avoid setting a cut-off where people are deemed to be either in fuel poverty or not in fuel poverty. Reality is never that clear-cut.*** Any strict cut-off criteria (such as the 10% of income level used in the UK to define fuel poverty), runs the risk that those households that fall just below the cut-off just about as unable to afford the payments as those who qualify. We think that more flexible arrangements are needed.
- ***However fuel poverty is defined has to be readily transferable to administratively simple programmes.*** In the end this is most important – we want to ensure that there is a transparent and efficient process that provides an easy way of linking those most at risk with a package of suitable measures to assist them.

We recommend that a multi-party approach be taken to determine the factors to be taken into account in assessing the level of household energy. This should include government, energy companies, energy NGOs and community agencies. Teasing out factors which assesses the level of affordability of household energy requires an inclusive process with community-based NGO's who support clients who are struggling with energy affordability or living in cold homes.

Community Energy Organisations; include individual energy trusts like Community Energy Action, the Energy Efficiency Community Network (EECN), and the Domestic Energy User Network. Community energy organisations such as CEA have become very adept at understanding and addressing the issue of cold homes. We work at the coal face and are confronted with the varying needs of householders on a daily basis.

Budget service advisors; can help to bring into sharper relief the attitudes, beliefs, and life events that lead people to live in fuel poverty. Budget service advisors will also be able to offer insight if a 'winter fuel payment' is a useful tool, plus how to ensure that a winter fuel payment is spent on winter fuel.

Public health/chronic illness groups; People living with chronic health conditions such as diabetes, arthritis, plus respiratory and cardiovascular conditions are particularly vulnerable to living in a cold home and may need to be targeted with special assistance. It is important that these groups are represented.

#### **Q 10. What information should be collated and analysed to obtain a better understanding of the extent, and underlying causes, of energy affordability problems?**

The current energy affordability analysis within the Market Design Review is based on actual spend rather than what is needed to heat a house to healthy temperatures. The analysis needs to move to robust measures of what is needed. In the UK, a Standard Assessment Procedure (SAP) rating (in conjunction with income) is used as a proxy. This rating is based on a House Condition Survey.

#### **Q. 11 What steps, if any should be taken in the interim to address energy affordability problems?**

Our understanding is that the proposed cross-agency study is scheduled to take place over a period of three years. This is too long for our most fuel-poor households living in cold homes. An extensive data set is not required to take more immediate action for our most vulnerable households.

The EC can make a real difference in a much shorter time line by taking immediate action on the tasks outlined below:

1. Conduct sound analysis about the relative price increases for residential versus other sectors and look at other options to achieve fair pricing.
2. Draw on Community Energy NGO experience which includes retrofit programs, energy advice, flagship projects such as CEA's Warm Babies and Elderly Health Project which target our most vulnerable populations, plus community-based research (e.g. findings on heat pumps).
3. Support the Home Energy Advice Centre (HEAC) network project.
4. Support multi-party projects which target most vulnerable customers e.g. power companies working in conjunction with community energy NGOs, HEACs, and social agencies to develop integrated and multi-faceted solutions.

### **Take a multi-party approach and provide a whole of house solution**

CEA hosted a very successful workshop on Fuel Poverty in June this year. Over 100 stakeholders attended from all over the country including NGO's, electricity suppliers, central and local government plus health representatives. One purpose of this workshop was to produce meaningful debate amongst the diverse mix of stakeholders. Workshop participants were organised into facilitated small group discussions to discuss key fuel poverty issues for New Zealand.

A very strong key take-home messages resulting from this workshop is that effective strategies which address energy affordability and fuel poverty require a multi party approach, including

- NGO's (community energy organisations, budget service providers and health providers)
- Energy Suppliers
- a whole of government approach including the Ministry of Social Development, Work and Income, Ministry of Health, Ministry for the Environment, Department of Building and Housing, and the Electricity Commission.

#### *Provide a 'whole of house' solution*

The current standard package which retrofits ceiling and underfloor insulation is not on its own an adequate answer in many circumstances, especially in the colder climate areas. Indeed, the Health, Housing and Insulation research carried out by the Wellington School of Medicine found that the 'standard package' of insulation retrofit measures increased average bedroom temperatures by just 0.5°C, not nearly enough to make a significant difference to indoor temperatures in colder areas.<sup>1</sup>

If Government is genuinely concerned with addressing the "unhealthy homes" issue, we have to move away from seeing basic insulation retrofits as the sole answer and look towards a properly integrated package for the home. Such a package requires low cost and environmentally friendly heating and customers who are well informed about the kinds of things they can do to keep their power bills manageable, plus stay warm. This 'whole house' solution addresses all of the key dimensions which maximise energy efficiency, health, environmental, social, and economic outcomes.

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<sup>1</sup> Howden-Chapman, P et al (2007) *Effect of insulating existing houses on health inequality: cluster randomised study in the community*. BMJ, doi:10.1136/bmj.39070.573032.80 (published 26 February 2007)

## **CEA Comments On Proposed Actions**

### **Undertake comprehensive cross-agency study on energy poverty/affordability issues in New Zealand**

CEA supports this proposed action, but it must be complimented with more immediate action as outlined previously.

### **Include assessment of different policy options in cross-agency study on energy poverty/affordability**

CEA strongly supports this proposed action, but this assessment must include NGO's and energy companies. NGO representation should be from energy NGO's such as CEA, plus health and social service agencies that work with the most fuel-poor households.

### **Pursue policies to strengthen retail competition**

CEA agrees with policies as noted on pages 2-3 but note also CEA's request to examine more closely the difference between residential and commercial/industrial tariff increases.

### **Take steps to minimise customer search and switching costs**

CEA supports this proposed action but note also CEA's recommendations on pages 3-4 regarding the role of the HEAC.

### **Monitor Implementation of Revised Guidelines for Low Income Customers**

It is proposed that the EC continues to monitor implementation of revised Guidelines on Arrangements to Assist Low Income customers.

It is not clear from this proposed action what 'monitoring implementation' means. If this focuses on overseeing how electricity suppliers are implementing the guidelines and measuring the number of disconnections, then this approach is somewhat short-sighted.

There needs to be a more proactive approach which involves a wider range of community-based stakeholders including HEAC's, CAB advisors and budget service providers. Work and Income Case managers need to have a very good understanding of these guidelines as well.

A broader, more inclusive approach to implementing these guidelines would involve the Electricity Commission:

- Working with appropriate stakeholders to develop, fund and distribute a 'user friendly' version of the guidelines to low income customers. The current pdf on the Electricity Commission is not easily accessible. This version also needs to be in different languages.
- Funding and implementing systematic education of community-based stakeholders about the guidelines so they know how to help their clients appropriately and effectively within the context of the guidelines.
- Helping to facilitate positive, systematic relationships between power companies and community-based advisors.

All relevant power company staff should have a shared database of agencies to whom they can refer vulnerable consumers for advice and support if they are close to disconnection. Examples include budget service providers and HEAC's.

### **Support initiatives to improve electricity efficiency among residential users**

While we appreciate that the EC is concerned just with electricity efficiency, the broader issue is one of supporting whole-house energy efficiency improvements across all forms of energy use. CEA supports a comprehensive approach to energy efficiency involving advice, grants and loans,

and regulations. For low income and vulnerable groups in particular, multi-party partnerships are needed between government, the energy sector and NGO's.

## **Key points:**

CEA thanks the EC for bringing forward for discussion a number of important issues, and the opportunity to comment on them.

In summary, the key points for this submission are:

1. there is an imperative that the EC provides answers to the circumstantial evidence that residential customers are cross-subsidising the energy growth of other sectors.
2. a multi-party process is required at *all* stages to address fuel poverty issues, including NGO's. This includes working on a definition of fuel poverty, through to designing and implementing effective strategies.
3. Home Energy Advice Centres (HEAC) established by EECN can play an important role in enabling customers to switch to a cheaper electricity supplier. Support from the Electricity Commission will enable HEAC's to provide this advice effectively.
4. There is a need for comprehensive, 'whole of house' solution for households living in fuel poverty. This includes access to loans and grants for efficient, clean-heat appliances as well as insulation, plus quality independent advice.