SUBMISSION TO
SENATE SELECT COMMITTEE ON ELECTRICITY PRICES
by

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Summary

- The recent substantive increases in electricity prices are the result of a conjunction of drivers impacting on the investment decisions of electricity network businesses. These investment decisions have been influenced by: the deferral of past investment by State government- owned network businesses; the safety and reliability standards set by State Governments; demand forecasting of levels not realised; and a weakness in the Electricity Rules under which the Australian Energy Regulator operates.
- The average increases in electricity prices paid by Australian households have clearly outstripped average wages growth, the CPI, the Pensioner and Beneficiary Living Cost Index and the CPI Electricity Price Index. Yet these indices which substantively understate the actual increases experienced by the majority of households inform decisions about pension indexation rates and are cited by policymakers as evidence of price trends.
- There is scant understanding of the impacts and consequences of rapidly rising electricity prices for 3.5 million (40%) Australian households which fall in the two lowest quintiles.
- Current policies to assist low-income households are so tightly targeted that they do not 'capture' all those experiencing 'energy hardship' and there is a high prevalence of reactive, temporary financial assistance measures which offer little assistance against the substantive price increases experienced by households since mid-2007.
- An immediate policy priority should be a national review of State Government assistance to low-income households experiencing difficulties paying energy bills, the objective of which should be to remove locational inequities and improve effectiveness.

[1] The views and opinions expressed in this submission are those of the author and not necessarily reflect the views and opinions of the University of Sydney. The submission updates and extends some material prepared for an article which the author co-authored with Alan Morris, of UNSW, and which was published in the *Australian Journal of Social Issues* Vol.46 No. 4, 2011.

1. Introduction

This submission is presented in six sections. The second section discusses the drivers of the recent increases in electricity prices. A third section presents data on the average electricity price increases experienced by Australian households which are not reflected in measures used by policymakers. The consequences of higher electricity prices for low-income households are discussed in section four followed by an overview of the current policy approach to energy hardship experienced by households. A final section presents a set of policy recommendations.

2. The drivers of higher electricity prices

Electricity prices comprise a complex array of tariffs which represent four types of charges for the activities of generation, transmission, distribution and retail. These past and potential future electricity price increases are directly attributable to higher charges for transmission and distribution services (i.e. network charges), and to a lesser extent the wholesale (generation) charge (AEMC 2011). Network charges make up around half of the final retail price for electricity. The NSW IPART estimates the network cost component of NSW electricity bills to have increased by 72% in real terms over the last five years.

The progressive restructuring of the Australian electricity sector, since the mid-1990s, has implemented a new regulatory regime for the pricing of the monopoly activities of transmission and distribution, and a new market for the wholesale trading of electricity. The new regulatory pricing regime has sought to make prices cost-reflective of supply and recover the cost of investment in transmission and distribution networks to replace ageing assets, to increase capacity to meet rising peak demand and to meet reliability and safety standards.

The electricity transmission and distribution networks across Australia are owned by State Governments with the exception of Victoria which privatised all of its electricity assets in 1995. These network businesses, as corporatized commercial entities, are required to make dividend, tax-equivalent and on some occasions equity payments to their State Government owners.

Investment decisions in networks have been made in this context and for many years investment to upgrade and replace ageing network assets was deferred. Networks are now old and replacement is needed which has commenced in the last few years. The scale of investment in electricity network infrastructure is some $42 billion over the five year period 2009 to 2014, the majority of which is for

distribution networks. This is one key reason for much higher network charges and thus higher final electricity prices – deferred investment by State Government owned distribution and transmission businesses.

A second key driver of the recent increase in network charges – and another factor over which State Governments exert an influence – are the standards for the reliability and safety of electricity supply. These standards prescribe the minimum levels of service that network companies must provide and are set by State Governments. Different standards apply across Australia and obviously higher standards require higher levels of investment.

Another driver of recent network charges has been our demand for electricity has been growing, especially in peak periods, and network companies invest on the basis of forecast demand levels. Each year the Australian Electricity Market Operator prepares 10-year demand forecasts. In each of the last three years these forecasts have been downgraded. Current investment in network assets was informed by forecasts which are not being realised leading to an overinvestment in capacity.

The prices which the electricity network businesses (except those in WA and NT) can charge – to recover the cost of these investments – are set by the Australian Energy Regulator. The Economic Regulatory Authority regulates WA networks and the Utilities Commission those in the Northern Territory.

The AER determines the future revenue needs of the network companies to cover their costs, including those for investment, and provide a commercial rate of return. The AER's determinations essentially set the network charges for a 5-year period which are passed through into the final retail price for electricity. It is these charges that have risen considerably in the last few years.

The AER's decisions about network charges are made in accordance with the National Electricity Law and the National Electricity Rules (the Rules), the regulatory framework for the Australian national electricity market. The Rules determine what the AER can do and herein lies a key weakness.

The Rules allow network companies to make an application to the AER for a price increase. The rules require the AER to accept the expenditure proposals of the network companies if satisfied that they 'reasonably reflect efficient, prudent and realistic expenditure'. Now there may be more than one expenditure forecast that meets these criteria but the rules currently preclude the AER making an objective assessment of the efficiency, or the necessity, of the proposed expenditure and setting a lower level. This means that network businesses are effectively permitted under the Rules to 'gold plate'; to provide the highest possible forecast of needed expenditure and investment.

The Australian Energy Market Commission (AEMC) makes the Rules and it recently released a draft determination and draft rules on network regulation which will address this weakness in the current regulatory framework. [2] The AEMC was established by the Council of Australian Governments and reports to the Standing Council on Energy and Resources which comprises all State and Territory Ministers responsible for energy for resources.

The drivers of recent substantive increases in electricity prices reflect a conjunction of:

- Investment which has been deferred for some years by State Government owned network businesses and is now critical to ensure availability and reliability of supply as assets age and need replacement;
- Investment in capacity to meet forecast levels of electricity demand;
- Investment to meet safety and reliability standards set by State Governments; and
- a restriction on the ability of the Australian Energy Regulator to reject proposed investment levels and propose an alternative which would lead to lower increase in network charges.

3. Electricity prices for Australian households

Most Australian households are able to choose the company to supply their electricity. If they do so, the prices paid are set by a 'market contract'. If a household chooses to remain on a 'standard contract', their electricity prices are set by State and Territory government regulators. Some two-thirds of NSW households, 40% of Victorian, one-third of South Australian, and nearly 60% of Queensland households have chosen to remain on 'standard contracts', and thus pay regulated electricity prices (IPART 2010; QCA 2010). These regulated electricity prices are to be phased out, subject to evidence of effective competition. There have not been regulated prices for Victorian households since 2009, although electricity companies must provide 'standing offer' electricity prices to those not on a 'market contract'.

During the five years to 2003-04, NSW household prices showed no real change although there were real increases of 5-11% in all other States and Territories except South Australia, where prices stagnated before leaping 24% in real terms in 2003-04 (ESAA 2003). More substantive increases in regulated household prices have occurred in recent years (ABARE 2010). Each regulator has sought

[2] Draft National Electricity Amendment (Economic Regulation of Network Service Providers) Rule 2012, 23 August 2012.

to make prices reflect the cost of supply and 'consistent with the Government's policy aim of reducing customers' reliance on regulated prices' (IPART 2010: 11).

In the 5 year period to mid-2012, the average increase in NSW household electricity prices was nearly 80%, more than 60% in Queensland, South Australia and Tasmania, and 57% in Western Australia (Table 1). Increases for households in the two Territories were 38 to 45%. The only available Victorian data since 2009 is for average market contract prices. The average real increase for standing contract prices (tantamount to regulated prices) from 2006-07 to 2010-11 has been 36% which is comparable to the nominal change shown in Table 1 of nearly 40% in the four years to 2010-11 (ESC 2011a).

Table 1: Nominal average increases in regulated household electricity prices (%)

	2007-08 (%)	2008-09 (%)	2009-10 (%)	2010-11 (%)	2011-12 (%)	Cumulative Change 2007-08 to 2010-11 (%)	Cumulative Change 2007-08 to 2011-12 (%)
NSW	7.5	7.5	20.2	10.0	17.3	**52.8**	**79.5**
Victoria [3]	7.3	7.4	13.5	6.0	n.a.	**39.3**	**n.a.**
Queensland	11.4	9.1	11.8	13.3	6.6	**54.0**	**64.1**
South Australia	12.3	2.5	2.0	18.2	17.4	**38.8**	**62.9**
Western Australia	0.0	10.0	23.6	10.0	5.0	**49.6**	**57.0**
Tasmania	15.7	3.9	7.0	15.3	11.0	**48.3**	**64.6**
NT	4.4	3.4	18.0	5.0	2.8	**33.7**	**37.5**
ACT	16.7	7.1	6.4	2.4	6.4	**36.2**	**44.9**

n.a. = Not available

Source: Calculated from the annual pricing determinations of each State and Territory regulator from their respective websites.

The average change in electricity prices ***may*** understate the actual increase experienced by a household, as does the CPI Electricity Price Index for all households with the exception of those who live in Western Australia and the Northern Territory (Table 2).[4] Nevertheless, the CPI Electricity Price Index does show that increases in electricity prices have clearly outstripped the CPI and growth in average weekly earnings for those households living in all Australian States. Households in the two territories have experienced an increase in average weekly earnings during the five-year period greater than the respective changes in the CPI electricity price index.

[3] The figures for 2007-08 and 2008-09 are for regulated prices and for market contract prices in the subsequent two years.

[4] The average price increases presented in Table 1 refer to all household consumers whereas the CPI electricity index only covers metropolitan households. This different coverage does not account for such a wide difference for so many households.

During the same period the Pensioner and Beneficiary Living Cost Index (PBLCI) increased by a little more that 17% (ABS 2012c). The PBLCI informs decisions about pension indexation rates and policy makers use the CPI Electricity Price Index as evidence of price trends. Both indices substantively understate actual average electricity price movements for the majority of Australian households.

Table 2: Comparative changes in regulated electricity prices, price indices and average weekly earnings (%)

2007-08 to 2011-12	Regulated household electricity prices	CPI electricity price index*	All groups CPI*	Average weekly earnings#
NSW	**79.5**	66.3	14.3	19.1
Victoria	**n.a.**	59.5	14.2	20.0
Queensland	**64.1**	49.7	16.0	26.7
South Australia	**62.9**	50.5	14.7	21.3
Western Australia	**57.0**	56.9	14.2	33.7
Tasmania	**64.6**	41.3	13.0	27.2
NT	**37.5**	34.9	15.2	32.3
ACT	**44.9**	22.5	14.4	27.1
Australia	n.a.	57.1	14.5	27.5

n.a. = Not available; * CPI figures are for each capital city and the weighted average for eight capital cities; # Year ending August for full-time adult ordinary time earnings.
Sources: Table 2 and calculated from ABS (2012a, 2012b).

Households in the most populous States face potential increases of 33% to 42% during the next two years (AEMC 2011: 6). NSW household electricity prices rose on average by 18% from July 2012, those for Victorian standing contracts by up to 18% and Queensland by a similar magnitude (IPART 2012; Morton 2012: QCA 2012).

4. The consequences for low-income households

Household energy uses include cooking, lighting, and for appliances like refrigerators, televisions, clothes dryers, dishwashers, freezers and computers. Australian households have the highest rates of ownership of refrigerators and air-conditioners in the OECD, with nearly 75% using space cooling and 57% a clothes dryer, both big energy users and for which there has been a marked increase in household take-up in recent years (ABS 2011e; OECD 2011). More than 80% of Australian households also have a home computer.

Research and data about the impacts and consequences of the electricity price increases on low-income households is limited.

Around 3.5 million Australian households fall within the two lowest income quintiles (ABS 2011b). Poor households in advanced industrial economies, as in developing countries, spend higher proportions of income and expenditure on energy (Jamasb & Meier 2010a; Khander et al. 2010). In 2009-10, domestic fuel and power accounted for 2.6% of average weekly expenditure for ***all*** Australian households. Electricity costs accounted for 75% of this weekly expenditure (ABS 2011c).

This average, however, masks a distinct difference between income groups. As household disposable income rises, a steadily declining proportion is spent on domestic energy. The poorest 20% of households in 2009-10 spent 4% of average weekly expenditure on electricity, double that of the richest households (Table 3). The comparative weekly expenditure proportions in 2003-2004 were 2.9% for the poorest and 1.5% for the highest income (ABS 2006).

Table 3: Average Australian household expenditure on energy, 2009-10

2009-10	EQUIVALISED DISPOSABLE HOUSEHOLD INCOME QUINTILE						
	Lowest	**Second**	**Third**	**Fourth**	**Highest**	**All**	**Second & third deciles**
% of total households	24.5	18.2	18.1	18.6	20.6	100	21.3
Mean weekly income	$314	$524	$721	$975	$1704	$848	$429
% of av. weekly expenditure on domestic fuel and power	3.9	3.2	2.8	2.4	2.0	2.6	3.7
% of av. weekly domestic fuel and power expenditure on electricity	76.3	75.0	74.6	75.7	74.3	75.1	n.a.
% of equivalised disposable income on domestic fuel and power	7.0	5.3	4.3	3.7	2.6	3.8	6.5
% of equivalised disposable income on electricity	5.4	4.0	3.2	2.8	1.9	2.9	n.a.

Source: ABS (2011b; 2011c).

Table 3 also shows the disproportionate impact of energy costs by household income quintile. The poorest quintile, actually nearly 25% of Australian households, in 2009-2010 spent, on average, 7% of equivalised disposable income on household energy costs. This is nearly three times the proportion spent by the wealthiest households and represents an upward shift since 2003-2004 when the poorest quintile was found to be spending 2.4 times that of the wealthiest (ABS 2006). It is also notable that the second lowest quintile, and a little more than 18% of households, in 2009-10 spent twice the proportion spent by the wealthiest households.

Two cautionary notes need to be made about this data. First, all the energy expenditure proportions have been derived from the *mean* weekly income for each quintile. This means that the derived figures will not be representative of all those within each income quintile and should be treated as indicative only. Second, these figures understate the current situation for low-income households because they do not include the effect of the substantial electricity prices increases since mid-2010

(as shown in Table 1). Early findings from my current research on low-income households signal that much higher proportions of disposable income are being paid on energy bills. These findings partly confirm the NSW IPART's 2011 estimate that more than 10% of disposable income was being paid on electricity bills for 5% of Sydney households and 8% of those in country NSW (IPART 2011). IPART also claimed that electricity bills for the lowest income quintile Sydney households *may* require more than 10% of disposable income compared to 2% for the highest incomes (2011: 10).

These trends and data illustrate two critical points. Electricity prices rises are causing low-income households to pay higher proportions of income and expenditure to meet energy bills. The severely disproportionate impact on the poorest Australian households is widening over time. There is little doubt that electricity bills are impacting on the circumstances and well-being of low-income households.

A low-income household's capacity to meet escalating energy costs will be influenced by the ability to change its energy demand and housing tenure (Healy 2004; Boardman 2010). The condition of housing influences the demand for energy. Draughty, poorly insulated, inadequately ventilated and older housing causing damp and mould growth, excess cold or excess heat, will directly influence energy use for space heating and cooling. Owner-occupiers *may* be more likely to make energy efficiency improvements given their greater level of control over the home. Many older owner-occupiers will, however, have insufficient financial resources for housing improvements to reduce their energy needs. Renters may not feel the responsibility or right to make housing improvements (Healy 2004). Low-income renters also face the constraint of being able to find alternative, affordable and more energy-efficient housing. Low-income households have much less capacity to influence housing energy efficiency to reduce their energy demand and stem the growth of energy bills as prices rapidly rise.

The ability of low-income households to adjust their energy demand will not only depend on housing conditions and tenure. It also will be influenced by the size, composition and daily activities of the household, as well as the capacity to replace energy-inefficient appliances and adopt different household practices. A number of studies have found that the energy demand of low-income households is relatively price insensitive (IPART 2003: 22-25; Jamasb & Meir 2010b). Consequently, it higher electricity prices can be expected to shift low-income household expenditure patterns because greater proportions of disposable income are needed for energy bills and less will be available to meet other essentials.

There is currently no substantive evidence base of the consequences for low-income Australian households of escalating electricity bills. Some small research projects have, however, unearthed findings comparable to those found internationally. A 2004 report starkly described a range of physical and mental health effects, social exclusion and deprivation experienced by 12 low-income South Australian households following an electricity price increase around 30 per cent in one year.

> ... all forgo at least one of the normal essentials of physical health, thermal comfort, adequate nutrition, social contact, access to education or entertainment, or freedom from financial insecurity and mental stress ... usually a combination of two or more of these unmet needs has emerged (Laris and Associates 2004: 9).

Changed household expenditure patterns arising from electricity price increases were also found in 2004 amongst people receiving financial counselling. Half had reduced their spending on food and telephone, whereas 80% or more had cut expenditure on clothing, holidays, movies and sport (Uniting Care 2010: 7). A few years later, more than 70% of financially stressed households were found to be making sacrifices to meet electricity price increases and 10% were unable to meet the cost (Wesley Mission 2010). Electricity and gas bills have been found also to be the greatest cause of rental arrears (63%) in Victorian low-income households (Sharam 2007).

A not-for-profit organisation which distributes government vouchers to assist those having difficulty with the payment of energy bills reported in 2008 that 80% of these were seeking assistance for electricity bills (Babbington & King 2008: 15). Nearly 40% of the two lowest household income quintiles were unable to pay electricity, gas or telephone bills on time during 2010 (ABS 2011d).[5]

A study of the experiences following a utility disconnection reported children (3%) or others in the household (34%) became anxious or distressed, children were unable to do homework (17%), and someone in the house either could not use a medical device (9%) or became ill (7%) (PIAC 2009). State government regulators are reporting higher levels of disconnections, with increases of 33% in Victoria and 54% in South Australia in 2010-11 (ESC 2011b:9; ESCOSA 2011: 14).

Finally, a 2010 survey found 27% and 18% of older NSW homeowners dependent primarily or solely on the age pension 'always' or 'often' had difficulty paying their electricity or gas bills respectively.[6] Just over one quarter of respondents said they could 'seldom' or 'never afford' to heat or cool their

[5] Prices for gas and telecommunications did not increase at the same rate as electricity during this period (ABS 2006; 2011b). Thus it is assumed that electricity bills were a significant contributor to this outcome.

[6] The survey was undertaken by third-year University of New South Wales students for a research project on older homeowners who are solely or primarily dependent on the age pension. An electronic questionnaire was distributed by the NSW Council on the Ageing to which 203 responded.

homes adequately, and 44% cent of those who perceived that their quality of life was 'poor or fair' always had difficulty paying their electricity bills.

5. The current policy approach to energy hardship

The Australian Federal government has acknowledged that low-income households:

> have been particularly impacted by increases in retail energy prices as a result of poor quality housing stock, limited ability to reduce energy use with better appliances, and the fact that ... they spend proportionally more of their income on this essential service (DCCEE 2011: 4).

Australian assistance to the energy-impoverished households is, however, limited and provided through three means.

First, all electricity retailers are required to provide 'hardship programs' which generally are payment arrangements for energy bills owing or for ongoing use (AER 2011). Second, the Federal Government provides a utilities allowance to a small group of income support recipients to assist the payment of water, sewerage, property rates and energy bills (Centrelink 2011). The equivalent of this allowance is also paid to age pensioners within a quarterly pension supplement. The Australian Government's Low Income Energy Efficiency Program is intended to assist low-income vulnerable households improve their energy efficiency, although it is unclear whether this will amount to more than endeavouring to change household behavioural practices. Other programs to improve housing energy efficiency have tended to provide rebates to home-owners and have not targeted low-income households, one example being the ill-fated Home Insulation Program (ANAO 2010).

State governments provide the third and primary form of assistance through concessions (such as a lump-sum or concessional tariff rate. Eligibility criteria vary across jurisdictions. Generally, to qualify for State Government assistance a low-income household must be receiving income support and/or hold a concession card such as the Federal Health Care Card. Most States provide a rebate for life support or medical needs for cooling. New South Wales and Queensland provide 'crisis' assistance to those experiencing difficulties paying bills and Tasmania provides a meagre heating allowance of $56 per annum. Some State governments have provided energy audits and limited assistance to improve energy efficiency, such as light globes and door 'snakes' (NSW DECCW 2010).

The majority of measures provided by all governments are so tightly targeted that they do not 'capture' all those experiencing difficulties paying energy bills. There is a high prevalence of reactive,

temporary financial assistance measures for vulnerable households. Australian State Government rebates and concessions offer little assistance against the recent price increases. Measures to provide widespread, long-term improvements to housing energy efficiency are virtually non-existent.

Table 4: State government electricity concessions, 2011

STATE	PROGRAMS
NSW	• Rebate of $200 per annum on electricity bills. • Life support and medical energy rebates. • Energy accounts payment assistance scheme ($30 voucher)
Victoria	• Annual electricity concession of 17.5 per cent off electricity bills. • Off-peak concession of 13 per cent reduction on off-peak tariff rates. • Medical cooling concession of 17.5 per cent off electricity costs (1 Nov – 30 April). • Life support machine concession. • Electricity transfer fee waiver.
Queensland	• Electricity tariff rebate of $0.5385 per day. • Life support and medical cooling/heating concessions. • Home energy emergency assistance scheme.
South Australia	• Concession of up to $158 per annum.
Western Australia	• Energy rebate (31-40 cents per day). • Debate child, account establishment and air conditioning rebates. • Life support equipment and medical electricity subsidies.
Tasmania	• Electricity concession of 111.70 cents per day. • Heating allowance of $56 per annum. • Life support machine rebate.

Source: This summary listing has been compiled from a wide range of State Government websites and those of organisations directly delivering emergency assistance on behalf of those governments.

6. Recommendations

It is recommended that:

[a] A revised approach to the setting of network charges be adopted, through the National Electricity Rules, to strengthen the AER's ability to assess the efficiency and necessity of proposed investment expenditure of electricity network businesses and recommend alternative investment levels.

[b] The feasibility of adopting national reliability and safety standards to electricity supply be investigated.

[c] Improvements to electricity demand forecasting techniques be adopted.

[d] Hardship experienced by low-income households from paying household energy bills be recognised as a distinct social problem.

[e] An immediate policy priority should be a national review of State Government assistance to low-income households experiencing difficulties paying energy bills, the objective of which should be to remove locational inequities and improve effectiveness.

[f] The development of more accurate measures of electricity price movements should be another policy priority.

[g] Policies to improve the energy efficiency of homes need to be of sufficient scale to have an impact on the overall problem.

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References

ABARE (Australian Bureau of Agricultural & Resource Economics) (2010) *Energy in Australia,* Canberra, ABARE.

ABS (Australian Bureau of Statistics) (2006) *Household Expenditure Survey Australia: Detailed Expenditure Items, 2003-04 (reissue)*, Cat. 6530.0 http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6535.0.55.0012003-04%20(Reissue)?OpenDocument

—— (2011b) *Household Income and Income Distribution Australia,* Cat. 6523.0 http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6523.02009-10?OpenDocument

—— (2011c) *Household Expenditure Survey Australia, Summary of Results, 2009-10*, Cat. 6530.0: http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6530.02009-10?OpenDocument

—— (2011d) *General Social Survey: Summary Results, Australia, 2010* Cat. 4159.0 http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4159.02010?OpenDocument

—— (2011e) *Environmental Issues: Energy Use and Conservation, March 2011,* Cat. 4602.0.55.001 http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4602.0.55.001Mar%202011?OpenDocument

—— (2012a) *Consumer Price Index, Australia, June 2012*, Cat. 6401.0 http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6401.0Sep%202011?OpenDocument

—— (2012b) *Average weekly earnings, Australia, May 2012,* Cat. 63012.0 http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6302.0Aug%202011?OpenDocument

—— (2012c) *Pensioner and Beneficiary Living Cost Index, June 2012,* Cat. 6467.0 http://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/D82E77E7B531FB95CA257945000CE7A4?opendocument

AEMC (Australian Energy Market Commission) (2011) *Possible Future Retail Electricity Price Movements: 1 July 2011 to 30 June 2014, Final Report,* 25 November, Sydney, AEMC.

Australian Energy Regulator (2011) AER Fact sheets, http://www.aer.gov.au/node/1032

ANAO (Australian National Audit Office) (2010) *Home Insulation Program,* ANAO Audit Report 2010-11, Canberra.

Babbington, S. & King, S. (2008) Helping with cost of energy, Report of Anglicare Sydney's 2006 EAPA Data Collection, Policy Unit Research Paper, Sydney, Anglicare.

Boardman, B. (2010) *Fixing Fuel Poverty: Challenges and Solutions,* London, Earthscan.

Centrelink (2011) Utilities allowance http://www.centrelink.gov.au/internet/internet.nsf/payments/utilities_allowance.htm

DCCEE (Department of Climate Change and Energy Efficiency) (2011) *Low Income Energy Efficiency Program: Design Options,* Public Consultation Paper, Canberra, DCCEE.

DECC (Department of Energy and Climate Change) (2011) *Annual Report on Fuel Poverty Statistics 2011,* London, DECC http://www.decc.gov.uk/en/content/cms/statistics/fuelpov_stats/fuelpov_stats.aspx

ESAA (Electricity Supply Association of Australia) (2003), Electricity prices in Australia 2003/04, Sydney South, ESAA.

ESC (Essential Services Commission) (2011a) *Energy Retailers Comparative Performance Report – Pricing 2010-11*, Melbourne, ESC.

—— (2011b) *Victorian Retail Energy Market Overview 2010-11*, Melbourne, ESC.

ESCOA (Essential Services Commission of South Australia) (2011) *Annual Performance Report: South Australian Energy Supply Industry 2010/11,* Adelaide, ESCOSA.

Healy, J.D. (2004) *Housing, Fuel Poverty and Health: A Pan-European Analysis,* Aldershot, Ashgate.

IPART (Independent Pricing and Regulatory Tribunal) (2003) Inclining block tariffs for electricity network services, Discussion Paper 64, Sydney, IPART.

—— (2010) *Review of Regulated Retail Tariffs and Charges for Electricity 2010-2013: Electricity – Final Report,* Sydney, IPART.

—— (2011) *Changes in Regulated Electricity Retail Prices from 1 July 2011: Electricity – Final Report,* Sydney, IPART.

—— (2012) *Changes in Regulated Electricity Retail Prices from 1 July 2012: Electricity – Final Report,* Sydney, IPART.

Jamasb, T. & Meier, H. (2010a) Energy spending and vulnerable households, *Cambridge Working Paper in Economics 1109*, Faculty of Economics, University of Cambridge.

—— (2010b) Household energy spending and income groups: Evidence from Great Britain, *Cambridge Working Paper on Economics 1011*, Faculty of Economics, University of Cambridge.

Johnston, M.M. (2010) New meters, new protections: a national report on customer protections and smart meters*,* Deakin West, St Vincent de Paul Society National Council.

Khandker, S.R., Barnes, D.F. & Samad, H.A. (2010) Energy poverty in rural and urban India: are the energy poor also the income poor? *World Bank Policy Research Working Paper No. 5463*, Washington DC, World Bank

Laris, P. & Associates (2004) Powering poverty: a report on the impact of the 2002-03 electricity price rises on 12 low-income households in South Australia*,* Adelaide, Western Region Energy Action Group.

OECD (2011) *Greening Household Behaviour: The Role of Public Policy,* Paris, OECD.

NSW DECCW (New South Wales Department of Climate Change and Energy) (2010) *Home Power Savings Program: Stakeholder Fact Sheet* http://www.savepower.nsw.gov.au/households/home-power-savings-program/about-the-program.aspx

PIAC (Public Interest Advocacy Centre) (2009) Cut-off II: The experience of utility disconnections*,* Final report prepared by URBIS, Sydney, PIAC.

QCA (Queensland Competition Authority) (2010) *Draft Decision: Benchmark Retail Cost Index for Electricity 2011-12,* Brisbane, QCA http://www.qca.org.au/files/ER-QCA-NEP1011-BRCI-DraftDec-1210.pdf

—— (2012) *Final Determination: Regulated Retail Electricity Prices 2012-13,* Brisbane, QCA http://www.qca.org.au/files/ER-QCA-NEP1213-RegPri-FinalDet-0512.pdf

Sharam, A. (2007) 'What the gas and electricity arrears of private low-income tenants can tell us about financial stress', *Journal of Economic and Social Policy,* 11 (2), 23-38.

Wesley Mission (2010) Making ends meet: Financial stress is not just about money, *The Wesley Report,* Number 8, October.