

Empowering disadvantaged households to access affordable, clean energy





Currently there are about 3 million people, including over 731,000 children, living below the poverty line in Australia. The number of people who struggle with energy stress is likely to be much higher than the poverty figures.

About Australian Council of Social Service (ACOSS)

Australian Council of Social Service (ACOSS) is a national voice on issues affecting low income and disadvantaged people and the peak body for the community services and welfare sector in Australia. Our vision is for a fair, inclusive and sustainable Australia where all individuals and communities can participate in and benefit from social and economic life. ACOSS leads and supports initiatives within the community services and welfare sector and acts as an independent non-party political voice. By drawing on the direct experiences of people affected by poverty and inequality and the expertise of its diverse member base, ACOSS develops and promotes socially and economically responsible public policy and action by government, community and business.

About the Brotherhood of St Laurence (BSL)

The Brotherhood of St Laurence (BSL) is an independent non-government organisation with strong community links that has been working to reduce poverty in Australia since the 1930s. Based in Melbourne, but with a national profile, the BSL continues to fight for an Australia free of poverty. We undertake research, service development and delivery, and advocacy with the objective of addressing unmet needs and translating the understandings gained into new policies, new programs and practices for implementation by government and others. The BSL's Energy, Equity and Climate Change program has been undertaking research, advocating for equitable policies and delivering programs to low-income households since 2007.

About The Climate Institute (TSI)

The Climate Institute (TCI) was a non-government research and policy institute dedicated to the development of public and corporate policy solutions for addressing issues associated with climate change and energy transformation. Their vision was for a resilient Australia, prospering in a zero-carbon global economy, participating fully and fairly in international climate change solutions. TCI developed non-partisan evidence-based policy advice, builds targeted multi-stakeholder coalitions, and engages decision-makers across all levels of government to drive effective action on climate change and clean energy.

About the Project

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ACOSS, BSL and TCI take responsibility for final views and recommendations.

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1. EXECUTIVE SUMMARY

A smooth, fair and expeditious transition to a modern clean energy system is both desirable and achievable. However, Australia's energy system is in disarray, and low-income and disadvantaged households are bearing the brunt of it. Urgent attention is needed to ensure the transition is affordable, equitable and inclusive.

Currently there are about 3 million people, including over 731,000 children, living below the poverty line in Australia. The number of people who struggle with energy stress is likely to be much higher than the poverty figures.

Households more likely to be vulnerable to energy stress are those subsisting on unemployment or student allowances, pensioners, renters, single-parent families, people living in poverty while in paid work, Aboriginal and Torres Strait Islander people, and households where someone has a disability or medical condition.

There is universal agreement that access to reliable and affordable electricity is a basic and essential human right. It is critical to the health, wellbeing, economic participation and social inclusion of all people.

Despite being an essential service, electricity prices are skyrocketing, disconnections have increased, the number of households experiencing measurable hardship has risen, and more households are rationing energy to the detriment of their health and well-being. This is overlaid with a housing affordability crisis, low wage inflation, and long-term unemployment which has tripled since the global financial crisis – with only one job for every ten people looking for paid work.

In addition, gas prices have become unaffordable, some networks continue to over-invest, retail competition is failing to reduce prices, coal-fired power plants have unexpectedly closed leaving workers and communities struggling, the reliability of supply is becoming an increasing issue in some regions, and greenhouse gas emissions are increasing. The lack of policy certainty is now one of the biggest drivers of wholesale electricity price rises.

Efforts to provide access to affordable, reliable and clean energy – dubbed the 'energy trilemma' – are failing.

A decade of policy instability; regulatory inaction; failure to better align climate, energy and social policy; and blame-shifting among federal and state governments is central to the deterioration of every element of the energy trilemma.

So what can we do?

This report acknowledges that the energy system is shifting from a centralised base load/peaking grid to a more decentralised and diversified grid with a mix of

large-scale and distributed energy resources (usually small scale renewables and battery storage). While this will create opportunities and benefits, it could also lead to potential risks and losses. For example, rooftop solar and battery are predicted by CSIRO to contribute up to 45 per cent of all electricity being generated by customers (not utilities). While such a shift is modelled to provide greater efficiency in the system and save the average household \$414 annually compared with a future based on business as usual, the distribution of energy market costs in the new system, if not carefully managed, has the potential for wide-ranging social equity impacts.

Put plainly, there are concerns that, without significant policy and regulatory reform, the future energy market will create a two-tiered system that favours those who can access and afford distributive energy resources (such as solar panels) and those who cannot, further widening the gap between the haves and the have-nots.

This inequity is further exacerbated when incentives to support the uptake of distributive energy are recouped in a regressive manner through electricity bills, rather than more progressive means, such as from Government budgets. Those with distributive energy contribute less.

As an essential service, it is critical the most disadvantaged people in our society can access affordable electricity. Given that not all can access distributive energy, retaining an affordable grid with low-cost large-scale clean energy will be essential and the benefits of distributive energy shared equitably.

The biggest drivers of price are increases in wholesale, retail and network costs, with reforms needed in all three areas. From mid-2016, wholesale prices have risen steeply due to a combination of factors including: high gas fuel costs; a tightening supply market resulting from loss of investment due to the repeal of the carbon price and the winding back of the Renewable Energy Target (RET); the unexpected and rapid closure of coal generators in South Australia and Victoria; and the electricity system's struggle to cope with the rapid changes in generation type and availability. An underlying contributor to these is the lack of a reliable policy framework. These combined factors are estimated to be costing households hundreds of dollars a year.

While the first phase of this project as reported here does not recommend a specific set of policy levers, it does recommend governments provide greater investment certainty by implementing a climate policy to transition the electricity sector in line with Paris Agreement goals. Policies should be least cost and utilise a mix of market mechanisms, regulation, and on-budget measures, with the costs allocated equitably, and with

low-income and disadvantaged households front and centre in the policy design, ensuring they are protected. The government should also ensure there is better alignment between climate and energy policy, and reform the regulatory and governance frameworks of the national energy market to achieve this.

This report also clearly spells out that it is not just the price of electricity that hurts disadvantaged households. It is also the total cost of securing their energy needs and their ability to pay. These are influenced by many factors including housing circumstances; how much and when energy is used; the ability to access information; energy market design; adequacy of incomes; eligibility for concessions and access to technology.

People's ability to pay energy bills is closely linked to firstly their income and then the costs of other essentials such as housing, transport and medical expenses. Housing circumstance is a particularly strong indicator of vulnerability. The cost of housing determines how much is left in household budgets to pay energy bills. Whether housing is rented or owned determines the scope of actions available to reduce energy costs, as tenants may have neither the ability nor the incentive to invest in options such as energy efficient appliances or distributive energy like solar and batteries.

Energy efficiency was found to be critical and provides multiple benefits reducing costs, reducing emissions, improving health and wellbeing, and reducing the need for concessions.

Retail competition does not seem to be producing the benefits espoused, particularly for at-risk people and groups. For example, Victoria has arguably the highest retail contestability but retail costs make up a larger portion of the bill.

Recent research indicates that despite the plethora of choice, many households are disengaged from the

energy market and are therefore likely to be paying 15-20 per cent more than necessary for their electricity and gas. Some cohorts of at-risk households are even more disengaged and the inability to engage makes people more disadvantaged.

All the factors outlined above prevent people experiencing poverty and disadvantage from exercising a level of control and choice that would materially reduce their energy costs.

Investing in access to technology, better consumer frameworks and consumer education will be critical but will also have limits for a range of reasons – including cost, low literacy levels, housing situations, and complex lives. An income support system that is adequate and responsive to the changing costs of essentials, including energy, is clearly essential.

Unfortunately, the Australian social security system and other social protections for low-income and disadvantaged households are seriously inadequate and under attack. Newstart is woefully inadequate, in many cases energy concessions are poorly targeted and unresponsive to cost increases, and consumer protection laws are failing to keep pace with technology changes.

Given the essential nature of electricity, this report makes it clear that governments, regulators and decision makers must also prioritise factors outside the national energy market to provide urgent relief to energy stress if we are to make the modern electricity sector inclusive and equitable to low-income and disadvantaged households.

The report also suggests the principles governing the National Energy Market (NEM) must consider more than just 'price', and have regard for the distributional impacts and potential social and economic consequences for low-income and disadvantaged people as the electricity market transforms.

Unless there is a nationally coordinated plan that is inclusive and equitable and has better integration between climate, energy and social policy, households already struggling will be left behind and further disadvantaged.

This report has been developed jointly by ACOSS, the Brotherhood of St Laurence, and The Climate Institute to highlight the major issues facing low-income and disadvantaged households as the electricity sector transitions to a modern and clean system, and highlights areas for reform and urgent attention. This report draws on the findings from commissioned research Energy Access and Affordability Policy Research¹ and consultations with the community and energy sector and other stakeholders. It utilises a framework

People's ability to pay energy bills is closely linked to firstly their income and then to the costs of other essentials such as housing.

¹ Andrew Nance developed the five outcomes framework independently of this project.

Policies are needed across five areas to support low-income and disadvantage household's access affordable clean energy.



structured around five policy outcomes that reflect the interaction between household energy bills and energy, climate and social policies. The report is intended as a basis to inform urgent government attention on critical areas of reform and to consider further policy development, while noting other reforms will also be necessary (see section 2 for summary of recommendations).

In conducting this project ACOSS, BSL and TCI have identified issues that need further research and consideration, including:

- Which climate and energy policy packages are best to achieve Australia's fair contribution to Paris Agreement goals, provide certainty, are equitable, and have the least impact on low-income and disadvantaged households. And what additional support will be needed to protect low-income and disadvantaged households from the rising costs of electricity.
- A better understanding of the changing nature of vulnerability to current and future energy stress.
- What policy levers and network reforms are needed to ensure the uptake of distributed energy resources is not regressive, which further disadvantages struggling households, but rather is inclusive and equitable.
- Understanding the specific energy needs and issues facing Aboriginal and Torres Strait Islander communities. These communities already experience multiple existing challenges including: remoteness, poor health, inadequate infrastructure, lack of

educational and employment opportunities and low incomes. Anecdotal evidence suggests such communities experience periods of high energy use due to family and community stays, often have inefficient accommodation and don't have ready access to energy information and education. In addition, remoteness is an additional barrier to improving energy efficiency and take-up of renewable energy. There is an urgent need for further research in this area and tailored policies and programs to better support Aboriginal and Torres Strait Islander communities.

The next stage of this project will aim to undertake further research and consultations to develop more detailed policy and advocacy around the issues and potential solutions raised in this report, in particular:

- Investigate further which climate and energy policies are in the best interest of disadvantaged households and best achieve Australia's fair share of the Paris Agreement goals.
- Investigate further the distributional impacts of climate policy and energy policy measures and develop more detailed solutions to ensure low-income and disadvantaged people are better supported and not disadvantaged by the policy measures.
- Investigate further how to address inequities created by clean energy incentives and the growth of distributed energy resources, to ensure the transition to clean energy is more equitable and inclusive.



2. SUMMARY RECOMMENDATIONS: FIVE OUTCOMES TO PURSUE AN INCLUSIVE AND EQUITABLE ENERGY TRANSITION



RECOMMENDATIONS

These recommendations are broad formulations that identify where government attention and more considered policy development urgently needs to focus. They are not detailed policy proposals, nor are they the only policies needed to ensure an inclusive and equitable energy transition.

Outcome 1: Electricity priced efficiently, including integrated climate policy

1.1 Federal government works with COAG Energy Ministers to implement effective and stable policies in the electricity sector consistent with Paris Agreement objectives, comprising a carefully designed package that utilises market mechanisms, regulation and on-budget measures.

1.2 Federal government works with COAG Energy Ministers to investigate further how to address inequitable allocation of the costs associated with the transition and growth of distributed energy resources, to ensure the transition to clean energy is more equitable and inclusive.

1.3 Federal government works with COAG Energy Ministers to develop policies for managed coal generator retirement and replacement in the interests of the workers, affected communities, and energy consumers.

Other important priorities

1.4 Federal and state governments support the development of models that enable low-income and disadvantaged households to access affordable distributive energy, including community and local energy models.

1.5 COAG Energy Council consider incorporating social and decarbonisation principles to guide the decision making of the operation of the National Energy Market (NEM).

1.6 COAG Energy Ministers implement policies to improve the role and utilisation of the electricity network in contributing to a demand management and distributed generation system that is inclusive and equitable.

Outcome 2: Informed and enabled² consumers

2.1 Federal and state governments co-fund stable and ongoing assistance programs, delivered by local place-based social support services to inform and enable disadvantaged households to engage with the energy market. Where possible these programs should strengthen relationships between vulnerable households, support services, advocates and energy retailers.

2.2 COAG Energy Ministers require energy retailers to develop a low-cost, no-frills retail energy market default offering for disadvantaged and disengaged customers if they cannot or do not engage in competitive retail energy markets.

Outcome 3: Energy consumed efficiently and productively

3.1 Federal and state governments and local councils work cooperatively together to co-fund ongoing programs for disadvantaged and low-income households that provide access to energy efficient technologies, solar PV and other distributed energy resources and provide a trusted source of information. Higher levels of support should be provided to the most disadvantaged households.

3.2 Federal government supports state and territory governments to introduce minimum energy efficiency standards for rental properties in all Australian jurisdictions (with reference to local climatic conditions) to improve affordability, health and wellbeing outcomes for tenants in the poorest quality dwellings. Simultaneously the federal government reviews tax policy to ensure existing tax measures support energy efficiency upgrades.

3.3 Federal and state governments provide additional support to upgrade all public and community housing stock to best practice energy efficiency standards.

Outcome 4: Robust consumer protections

4.1 COAG Energy Ministers undertake a review of disconnection laws in light of the essential nature of electricity, with a view to ending the ability to disconnect households because of inability to pay.

4.2 COAG Energy Ministers request a review of the current National Energy Customer Framework (NECF), with these reforms in mind:

² While Energy Access and Affordability Policy Research discusses the need for consumers to be more engaged, we received significant feedback that this term did not capture the need for households to be able to exercise agency in their involvement with the electricity market.

- Introduce governing principles along the following lines:
 - It should be easy for people to engage and make effective decisions.
 - Appropriate consumer protections should be applied to all energy products and services.
 - The benefits of a transforming market should be shared across the whole community
- Review of current best practice protections in line with these principles.
- Establish a range of no-regrets initiatives:
 - Testing the need for, and form of, market interventions against real consumer decision-making.
 - Ensuring adequate access to justice by expanding the jurisdiction of energy Ombudsman schemes.
 - Requiring energy service providers to identify the consumer's purpose in acquiring a service, to ensure it is appropriately identifying programs to help disadvantaged demographics access new products and services.
- Apply updated consumer protection framework in all states, with exceptions for stronger protections allowable.

4.2 COAG Energy Ministers investigate additional measures that retailers could implement for those customers identified through Payment Difficulties or Hardship initiatives in order to prevent re-occurring

hardship. These measures could include energy education, access to financial counselling, and support to access energy efficiency upgrades and distributive energy.

Outcome 5: All households have the capacity to pay

5.1 The federal government improves the adequacy of income payments including Newstart and Youth Allowance.

5.2 Federal and state governments jointly review concessions schemes to assess:

- Opportunities to improve and better target concessions to disadvantaged households, with a preference towards more equitable percentage-based systems, and to harmonise their structure across jurisdictions, where substantive differences exist.
- Ways to improve emergency relief payments, to simplify application processes, and provide greater clarity for customers.
- Ways to better promote the availability of concessions nationally.

5.3 Federal and State Government align policy, advocacy and research initiatives with corresponding housing affordability initiatives. Expand scope to include stronger integration with an understanding of transport costs.



Summary of recommended areas of reform and further policy development to provide clean affordable energy for all.



CLEAN ENERGY PRICED EFFICIENTLY

- Implement effective, inclusive & equitable stable policies to incentivise transition to clean energy, consistent with Paris [climate change] Agreement.
- Address inequitable allocation of costs associated with the transition to clean energy.
- Implement policies to manage coal generator retirement & replacement in the interests of the workers, affected communities, and energy consumers.
- Implement measures to support at-risk households access distributed energy, like community energy.
- Incorporate social and decarbonisation principles to guide the decision making of the National Energy Market,
- Implement policies to improve utilisation of demand management & distributed energy that are inclusive & equitable.



INFORMED & ENABLED CONSUMERS

- Provide targeted and local assistance programs delivered by social services to inform and enable at-risk households to better understand their energy usage & engage with the energy market.
- Energy retailers develop a low-cost retail market offering for at-risk households who struggle to engage in the energy market.



ENERGY CONSUMED EFFICIENTLY & PRODUCTIVELY

- Provide programs to support at-risk households to access energy efficient products, rooftop solar and other distributed energy, with highest level of support to the most disadvantaged.
- Implement minimum energy efficiency standards for rental properties & review tax policies to ensure existing tax measures support energy efficiency upgrades.
- Upgrade all public & community housing stock to best practice energy efficiency standards.



ROBUST CONSUMER PROTECTION

- Review disconnection laws to end practice of disconnecting households because of inability to pay.
- Review and broaden coverage of energy consumer protection laws governed by the following principles:
 - make it easy for people to engage and make effective decisions.
 - apply to all energy products.
 - benefits of a transforming market are shared across the whole community.
- Expand energy hardship programs to include provision of energy education, access to financial counselling, access to energy efficient products and distributive energy.



ALL HOUSHOLDS HAVE THE CAPACITY TO PAY

- Improve adequacy of social security payments, in particular Newstart & Youth Allowance.
- Improve access to & amount of energy concessions, including shifting to a percentage based concession to support the most vulnerable (no state is worse off).
- Align energy policy, advocacy & research initiatives with corresponding housing and transport affordability initiatives.

The background of the slide is a deep blue with a complex, abstract pattern. It features a grid of fine, parallel lines that create a sense of depth and perspective. Overlaid on this grid are numerous bright blue, out-of-focus light spots and streaks, resembling a bokeh effect or a digital data visualization. The overall aesthetic is high-tech and futuristic.

3. INTRODUCTION

3.1 Background

ACOSS, BSL and TCI share a goal of wanting to see rapid decarbonisation of the electricity sector while ensuring the transition is affordable, equitable and inclusive to low-income and at-risk people.

In 2016, ACOSS, BSL and TCI were successful in securing a grant from Energy Consumers Australia to commission research and undertake national consultations with the community and environment sector, along with other key stakeholders.

The three organisations commissioned energy consultant Andrew Nance of The Energy Project to conduct a literature review of the wide range of issues facing low-income and disadvantaged people in Australia as Australia decarbonises its energy system. The consultant's paper³ 'Energy Access and Affordability Policy Research' explores five policy outcomes that reflect the interaction between household energy bills and energy, climate and social policies. The paper proposed that these five outcomes (below), pursued in broadly equal measure can ensure effective decarbonisation of the electricity supply chain while preserving universal access to affordable energy services:

1. Electricity priced efficiently (including integrated climate policy). Andrew Nance developed the five-outcomes framework independently of this project.
2. Informed and enabled consumers
3. Energy consumed efficiently and productively
4. Robust consumer protections
5. All households have a capacity to pay their energy bills

To identify areas that are seen as particularly important and urgent, ACOSS, BSL and TCI used the Nance paper as a basis to consult with over 120 key stakeholders. The consultations considered and discussed in depth the merits of the high level solutions put forward in the Nance paper. At the end of each forum, participants were given dots and asked to select four top priorities within each outcome and their top four priorities overall. Participants were also able to put red dots against measures if they strongly disagreed with them, and to add any new ideas that were not included in the research report. (See appendix 1 for list and rating of solutions and new ideas put forward.)

The consultation discussions and 'dotocracy' exercise were very useful in understanding where there was

universal agreement on problems and solutions; divergence of views on the problem and solutions; and where more work clearly needs to be done on better understanding issues and solutions. While the dotocracy is a more democratic rather than truly scientific approach to determining priorities, it identified significant amounts of preferences for a limited number of priorities. We are confident that it indicates areas with strong and widespread cross-sectoral support, but not necessarily consensus.

The recommendations presented in this document reflect the priorities drawn from the research paper, the dotocracy, the discussions during the consultations, and engagement with formal networks. The solutions given here are not detailed policy proposals, nor are they the only policies needed to ensure an inclusive and equitable energy transition. Instead, they are broad formulations that identify where government attention and more considered policy development urgently needs to focus.

3.2 Energy trilemma – failing on all fronts

Efforts to provide access to affordable, reliable and clean energy – dubbed the energy trilemma – are failing.

The electricity sector is in transition from a highly centralised high-carbon generation system to more diversified, distributed and cleaner energy. The 100 per cent baseload and peaking plant electricity system is giving way to a mixture of large scale renewable energy sources, distributed renewable energy, and storage and demand management systems. Trends in technology, consumer preferences and business models make further progress inevitable.⁴ Large scale wind and solar with storage are now cheaper than new gas or coal generation.⁵ However, more needs to be done to manage the variability of renewable energy sources. We are now at the stage where we have the solutions, but to date there has been a failure to put appropriate systems (policy, regulatory and infrastructure) in place. Sixty five per cent of coal-fired electricity generators will be past their design life between now and 2040.⁶ How and when these generators are refurbished, retired or replaced will affect not just each aspect of the trilemma, but because of the implications for communities where these generators are situated, there will be an impact on social cohesion as well.

The need to address climate change makes faster decarbonisation highly desirable. However, the transition is not being well managed.

³ Andrew Nance, 'Energy Access and Affordability Policy Research', ACOSS, March 17, 2017, <http://www.acoss.org.au/wp-content/uploads/2017/03/EnergyAccessandAffordabilityPolicyResearchFINAL20March2017.pdf>

Electricity prices are skyrocketing, emissions in the electricity sector are increasing, and reliability of supply is becoming an increasing issue in some regions.

A decade of policy instability, regulatory inaction and blame-shifting among federal and state governments is central to the deterioration of every element of the energy trilemma.

Low-income and disadvantaged households are bearing the brunt of mismanagement and will be further disadvantaged if the desirable transition to a modern, clean electricity sector is not well managed, inclusive and equitable.

3.2.1 Emission reductions

Unconstrained climate change will have serious economic, environmental and social impacts on Australia. Higher temperatures and more extreme weather increase the risk of deaths, injuries and disease.⁷ The impacts of climate change on the economy are likely to be severe, with sectors like agriculture and tourism particularly exposed.⁸ Above global temperature levels of 2°C adaptive responses are likely to become more expensive and disruptive, and less able to maintain acceptable standards of societal health, security and well-being.

While the costs of climate change will be felt across the economy, people affected by poverty and disadvantage will be the first and hardest hit by the impacts of a changing climate; as they are least able to cope, adapt and recover.⁹ Runaway climate change will lead to significant social justice issues and increase pressure on the need for financial and services support.

It is therefore in the interest of disadvantaged Australians that Australia does all it can to ensure the goals of the Paris Agreement on climate change are met.

These goals are to limit global warming to well below 2°C, and pursue a limit of 1.5°C. Achieving these outcomes requires developed countries, including Australia, to reduce greenhouse gas emissions to net zero by 2050.^{10 11}

The electricity sector is the single largest source of greenhouse gas emissions in Australia, producing around one-third of total national emissions. While all sectors need to play a role in achieving Australia's contribution to Paris Agreement goals, when compared to other sectors such as agriculture, the electricity sector is in a much better position, due to abundant renewable energy sources and available technology to do the heavy lifting to achieve Australia's emissions reduction commitments. Moreover, decarbonised electricity is a pre-requisite for deep emissions reduction in sectors like passenger vehicles and some industrial processes.

Analyses of electricity decarbonisation by CSIRO,¹² Climate Change Authority¹³ and TCI¹⁴ find that the emissions intensity of Australia's electricity supply needs to approach 0.1tCO₂e/MWh by 2040 for emissions reduction targets consistent with a 2°C rise in average global temperatures. It is important to point out that these analyses have not modelled what is required to pursue a global goal of limiting warming to 1.5°C. Achieving the 1.5°C goal requires a faster rate of energy decarbonisation.¹⁵

Australia's electricity emissions are on a trajectory that is wholly inconsistent with Paris Agreement goals. The sector's annual emissions are around 180 million tonnes, and are projected to remain at approximately that level in the absence of strong emissions reduction measures. Figure 1 shows the gap between government projections of electricity emission under current policy settings and a pathway for the sector consistent with

⁴ Dr Alan Finkel AO, 'Independent Review into the Future Security of the National Electricity Market: Preliminary Report', The Commonwealth of Australia, 2016, <https://www.environment.gov.au/system/files/resources/97a4f50c-24ac-4fe5-b3e5-5f93066543a4/files/independent-review-national-elec-market-prelim.pdf>, 10

⁵ 'A cost curve for abatement & energy storage in the Australian power sector', Reputex Carbon, March 8, 2017, <http://www.reputex.com/research-insights/a-cost-curve-for-emissions-reductions-energy-storage-in-the-australian-power-sector/>

⁶ Andrew Stock, 'Australia's Electricity Sector: Ageing, Inefficient and Unprepared', Climate Council, 2014, <http://www.climatecouncil.org.au/uploads/f9ba30356f697f238d0ae54e913b3faf.pdf>, 10

⁷ Lesley Hughes and Tony McMichael, 'The Critical Decade: Climate Change and Health', Climate Council, 2011, <http://www.climatecouncil.org.au/uploads/1bb6887d6f8cadd5d844fc30b0857931.pdf>

⁸ Erwin Jackson et al., 'Beyond the Limits: Australia in a 1.5-2°C world', The Climate Institute, 2016, http://www.climateinstitute.org.au/verve/_resources/TCI_Beyond_the_Limits_FINAL23082016.pdf

⁹ Karl Mallon et al., 'Adapting the community sector for climate extremes', National Climate Change Adaptation Research Facility, 2013, (www.nccarf.edu.au/publications/extreme-weather-climate-change-community-sector)

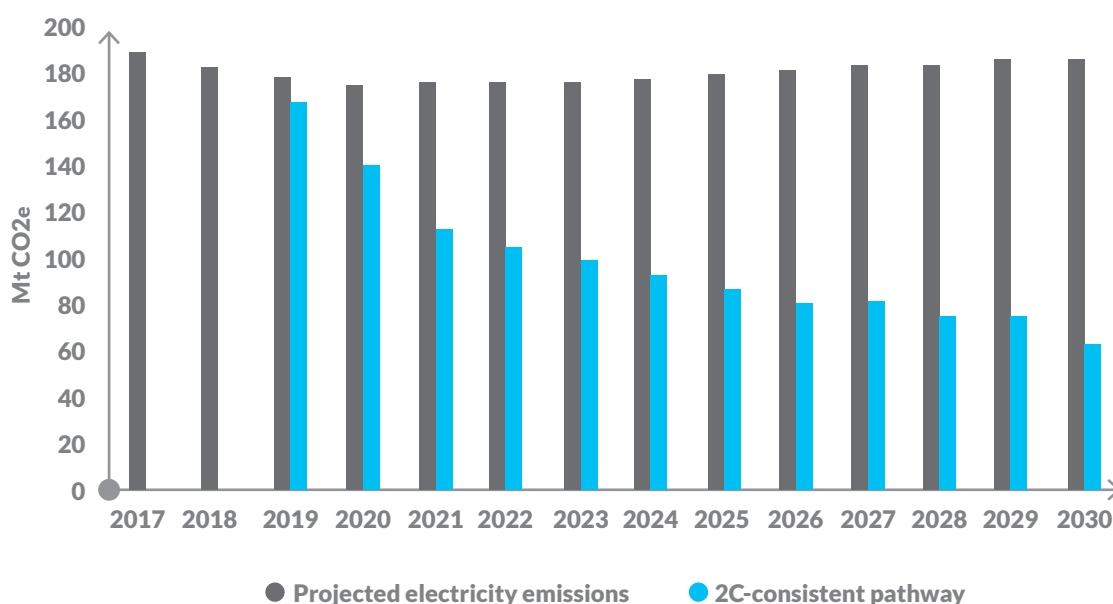
¹⁰ Erwin Jackson et al., 'Beyond the Limits: Australia in a 1.5-2°C world', The Climate Institute, 2016, http://www.climateinstitute.org.au/verve/_resources/TCI_Beyond_the_Limits_FINAL23082016.pdf

¹¹ Kellie Caught and Adrian Enright, 'Submission to the Climate Change Authority Special Review: Australia's greenhouse gas emissions reduction goals', WWF, 2015, <http://www.climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/submissions/2015/WWF%20per%20Australia.pdf>

¹² Hatfield-Dodds et al., Australian National Outlook 2015 – Supplementary data on electricity supply and emissions, (Canberra, ACT, CSIRO, 2015)

¹³ 'Policy Options for Australia's Electricity Supply Sector Special Review Research Report', Australian Government Climate Change Authority, August, 2016, <http://climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/files/SR%20Electricity%20research%20report/Electricity%20research%20report%20per%20publication.pdf>

¹⁴ 'A Switch in Time: Enabling the electricity sector's transition to net zero emissions', The Climate Institute, April, 2015, http://www.climateinstitute.org.au/verve/_resources/TCI_A-Switch-In-Time_Final.pdf

Figure 1: Projected electricity emissions versus a 2°C-consistent emissions trajectory¹⁶

3.2.2 Security and reliability

The Finkel Preliminary Report noted that ‘the shift from coal-fired generators to wind and solar photovoltaic generators has implications for security and reliability’.¹⁷

Blackouts and brownouts can be extremely disruptive and potentially life-threatening for some households. For example, people who are reliant on heating or cooling to manage medical conditions are among the most disadvantaged.

The reasons often cited for security and reliability concerns is that variable renewable electricity generators do not inherently provide usable inertia and frequency control to support power system stability and security, and are not currently required to provide or procure these services. They are also much less able to contribute to other ancillary services. Having coal generators exit earlier and/or at short notice, and the occurrence of extreme temperature and weather events have also contributed to security and reliability issues.

In the last twelve months, South Australia has experienced a number of blackouts as a result of three different events. One was an extreme weather event that knocked out transmission lines, coupled with low

setting for voltage disturbance on the state’s windfarms (which has since been altered); another was a fire at a gas power plant; and a third was a result of load shedding due to exceeding peak loads during an extreme heat wave. The events in South Australia have led to concerns more broadly about whether appropriate measures have been put in place to ensure reliability and security amid Australia’s energy mix changes and extreme weather events, which includes heat waves fuelled by global warming increases.

As Dr Finkel noted ‘There are solutions available to integrate renewable electricity into the grid, including intelligent wind turbine controllers, batteries, pumped hydro and synchronous condensers, and demand management, all of which can contribute to system security. But to date there has been a failure to plan for system security and put appropriate measures of this kind in place’.¹⁸

In March this year, Australian Energy Market Operator (AEMO) and Australian Renewable Energy Agency (ARENA) announced a joint project in South Australia to pilot demand response initiatives during summer to manage the electricity supply during extreme peak times, and avoid the need to build new fossil fuel

¹⁵ Kate McKenzie and Erwin Jackson, ‘Limiting climate change to 1.5°C: A guide for businesses and investors’, The Climate Institute, May 2017, http://www.climateinstitute.org.au/verve/_resources/TCI_1-5C_businessfinance_FINAL.pdf

¹⁶ ‘Australia’s emissions projections 2016’, Australian Government Department of the Environment and Energy, 2016, <http://www.environment.gov.au/climate-change/publications/emissions-projections-2016>. ‘Electricity sector impacts of emissions abatement policies’, Jacobs Group (Australia) Pty Limited, April 12, 2015, http://www.climateinstitute.org.au/verve/_resources/Jacobs_-_Electricity_Sector_Impacts_of_Policies_to_Cut_Emissions_of_Greenhouse_Gases_Report.pdf

¹⁷ Dr Alan Finkel AO, ‘Independent Review into the Future Security of the National Electricity Market: Preliminary Report’, The Commonwealth of Australia, 2016, <https://www.environment.gov.au/system/files/resources/97a4f50c-24ac-4fe5-b3e5-5f93066543a4/files/independent-review-national-elec-market-prelim.pdf>, 10.

plants.¹⁹ In addition, the South Australian Government announced an investment in large scale storage which, they argue, will help drive down costs of electricity to consumers and provide grid security and reliability.²⁰

But as Finkel pointed out, the NEM does not currently encourage the adoption of all the measures outlined above:

‘Emerging markets for ancillary services, required to maintain system security, have not kept pace with the transition. New and updated frameworks, technical standards and rules may be required.’²¹

AEMO has said it is no longer appropriate to rely on traditional sources of electricity generation to keep the system balanced, and we need to factor in new ways to

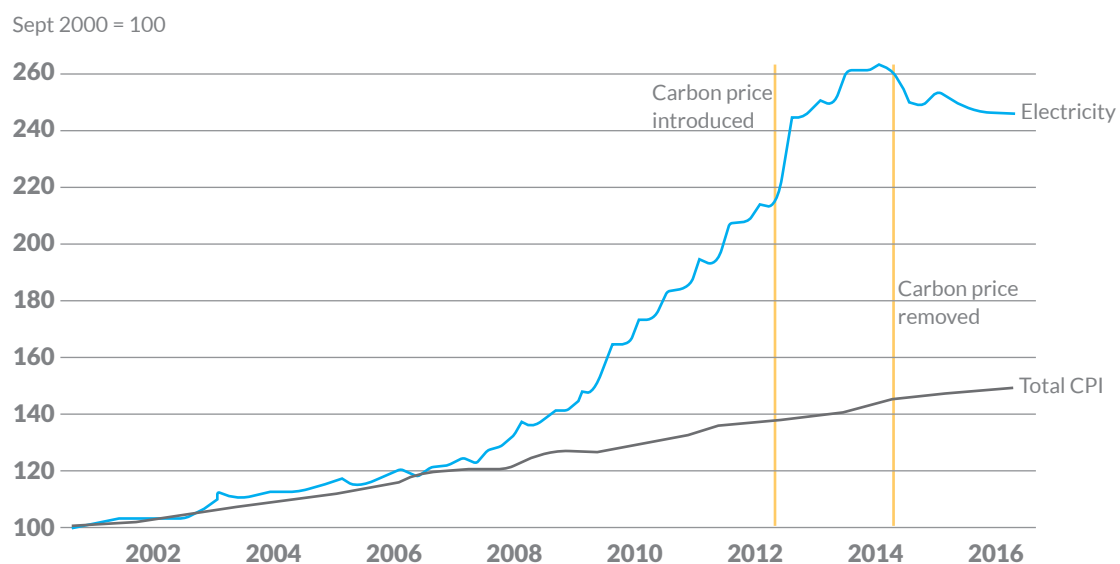
balance the system and new ways to manage it.²²

Integrating ancillary services into the system will add additional costs that must be included into the costs of transition.

3.2.3 Affordability – electricity price rises

As depicted in figure 2, retail electricity prices rose in line with inflation for a long time.²³ But after 2007 electricity prices leapt far above inflation. According to the ABS, between 2008 and 2013, the retail price of electricity across Australia’s capital cities increased by 83 per cent. As shown in figure 3, which includes July 1 2017 price rises, prices are now at historical high levels in some states.

Figure 2: Average retail electricity price compared with total CPI 2001-2016¹



¹⁸ Ibid

¹⁹ Anna Whitelaw, ‘Arena and AEMO join forces to pilot demand response to manage extreme peaks this summer’, AEMO, May 19, 2017, <https://www.aemo.com.au/Media-Centre/ARENA-and-AEMO-join-forces-to-pilot-demand-response-to-manage-extreme-peaks-this-summer>

²⁰ Jay Weatherill, ‘State Government invites expressions of interest to build Australia’s largest battery’, Premier of South Australia, March 15, 2017, <http://www.premier.sa.gov.au/index.php/jay-weatherill-news-releases/7206-state-government-invites-expressions-of-interest-to-build-australia-s-largest-battery>

²¹ Dr Alan Finkel AO, ‘Independent Review into the Future Security of the National Electricity Market: Preliminary Report’, The Commonwealth of Australia, 2016, <https://www.environment.gov.au/system/files/resources/97a4f50c-24ac-4fe5-b3e5-5f93066543a4/files/independent-review-national-elec-market-prelim.pdf>, 10

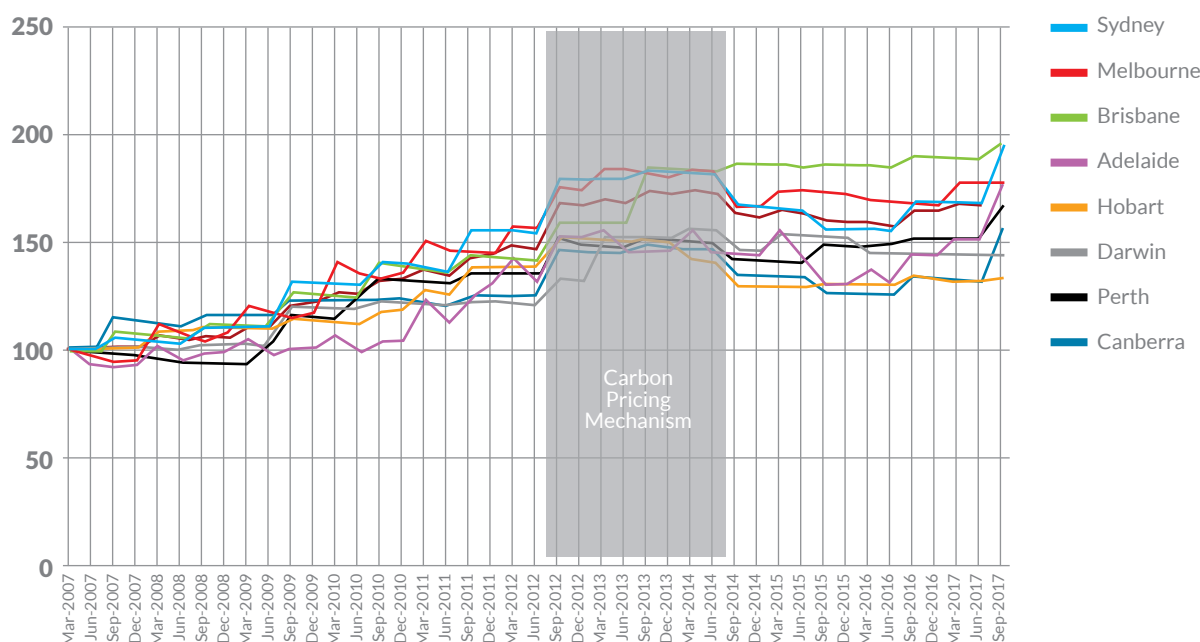
²² AEMO, ‘Black system South Australia 28 September 2016, March 2017, https://www.aemo.com.au/-/media/Files/Electricity/NEM/Market_Notices_and_Events/Power_System_Incident_Reports/2017/Integrated-Final-Report-SA-Black-System-28-September-2016.pdf

²³ Greg Jericho, ‘Electricity pricing is confusing – and that’s why they’re using it to mislead us’, The Guardian, Business, February 16, 2017, <https://www.theguardian.com/commentisfree/2017/feb/16/electricity-pricing-is-bloody-confusing-thats-why-theyre-using-it-to-mislead-us>

Figure 3 also shows there are significant differences in electricity price growth among jurisdictions. The period from mid-2009 to mid-2012 saw the strongest growth in prices in all locations except Canberra. Price growth

has been markedly lower in Tasmania, WA, ACT and NT where there is effectively no competition, jurisdictional regulators and/or government-set retail prices and the networks are in government ownership.

Figure 3: Real electricity price movement 2007 to 2017 by state²⁴



Understanding the 'building blocks' that comprise an electricity bill can help us better understand where costs are coming from and where future cost reductions can be made. The percentages discussed below represent national averages and will vary across jurisdictions (see also figure 4).

- Network costs – the transmission of electricity from large generators and distribution to and between customers – represent around 45 per cent of the average residential retail bill.
- Wholesale costs – the production of electricity from large generators – are around 23 per cent of the bill.
- Retailer controlled costs – the costs of billing, administration of customer accounts and risk management – represent around 16 per cent of the bill.

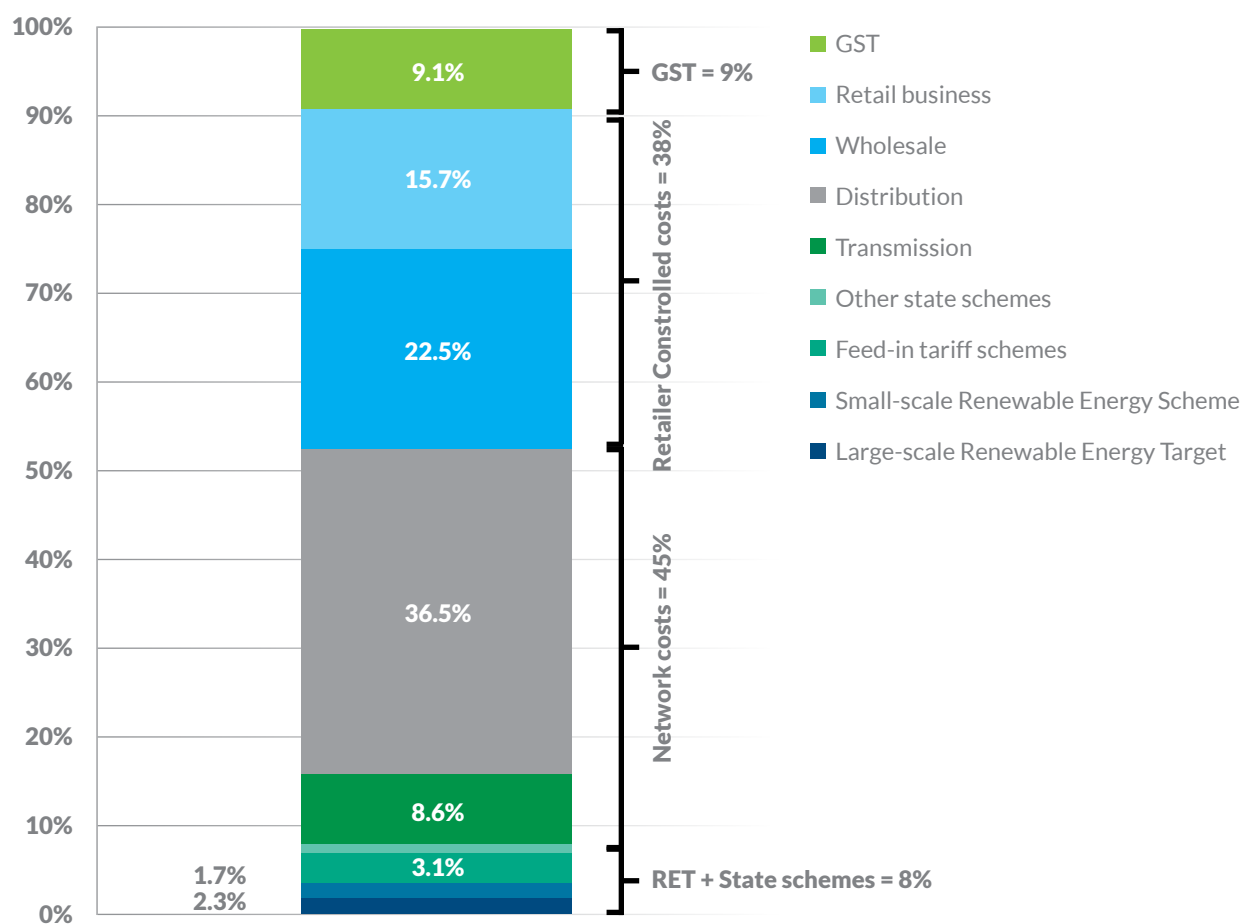
- Australia's national RET, state-based feed-in tariffs and energy efficiency schemes represent around 8 per cent of the average bill.
- GST adds 10 per cent to the above costs and therefore represents around 9 per cent of the final bill.

Analysts suggest the price rise between the period from 2008 to 2011 was primarily due to investment in networks, in 'poles and wires'. Concerns about brownouts and incorrect market forecasts lead in many cases to over investment or 'gold plating' of the network, which consumers are still paying for.

²⁴ ABS Cat No. 6401.0 Table 9 March 2017, and relevant websites of state and territory governments and/or energy retailers.

It is no longer appropriate to rely on traditional sources of electricity generation to keep the system balanced, and we need to factor in new ways to balance the system and new ways to manage it.

Figure 4: Breakdown of average national residential electricity price, 2015-16



(Source: Based on Climate Change Authority 2016 Figure 8, AEMC 2013, 2016)

²⁵ 'Submission to Independent Review into the Future Security of the National Electricity Market Preliminary Report', Australian Energy Council, 2017

²⁶ Steven Trask, 'ActewAGL announces 'sharp increase' in gas and electricity prices', Canberra Times, June 8, 2017, <http://www.canberratimes.com.au/act-news/actewagl-announces-sharp-increase-in-gas-and-electricity-prices-20170607-gwmv4r.html>; Esther Han, 'AGL increases electricity prices by 16 per cent and gas prices by 6 per cent in NSW', Sydney Morning Herald, June 9, 2017, <http://www.smh.com.au/business/consumer-affairs/agl-increases-electricity-prices-by-16-per-cent-and-gas-prices-by-9-per-cent-in-nsw-20170609-gwo3gu.html>

²⁷ 'Turning Off the Lights. The Cost of Living in NSW', NCOSS, June 17, <https://www.ncoss.org.au/sites/default/files/Cost-of-Living-Report-16-06-2017-FINAL.pdf>

²⁸ Andrew Nance, 'Relative Energy Poverty in Australia', SACOSS, October 26, 2013, www.sacoss.org.au/relative-energy-poverty-australia; 'Households in the dark. Mapping electricity disconnections in South Australia, Victoria, New South Wales and South East Queensland', St Vincent de Paul Society and Alvis Consulting, May, 2016; and Francisco Azpitarte et al, 'Fuel poverty, household income and energy spending: an empirical analysis for Australia using HILDA data', Brotherhood of St Laurence, 2015.

Between 2012 and 2015, the carbon price contributed to increasing prices by around 9-10 per cent. For the majority of low-income and disadvantaged households and for many other people, compensation was provided through the tax and social security system.

While there was a slight drop in electricity prices after the carbon price was repealed, electricity prices have continued their upwards trend.

From mid-2016, wholesale prices have risen steeply due to a combination of factors including: high gas fuel costs; a tightening supply market resulting from a loss of investment signal due to the repeal of carbon price and wind back of the Renewable Energy Target (RET); the unexpected and rapid closure of coal generators in South Australia and Victoria; and the electricity system's struggle to cope with the rapid changes in generation type and availability.

An underlying contributor to all of these is the lack of a reliable policy framework integrating the three elements of the trilemma – affordability, security and reliability, and emissions reduction. The Australian Energy Council (AEC) has estimated the lack of national climate and energy policy certainty to be the single biggest driver of higher wholesale electricity prices, equivalent to a carbon price of over \$50 a tonne.²⁵

The impact on retail prices is now just coming through the system with electricity price rises of up to 20 per cent being announced or foreshadowed for the ACT, NSW, South Australia and Victoria. Queensland and Tasmanian governments have buffeted their states from high price rises. Retailers have signalled higher wholesale prices as the main culprit, citing policy uncertainty as one of the key factors.²⁶ All major retailers have announced measures to support their customers on hardship programs, which is welcome, but many more people will struggle with price rises of this level.



3.3 The interaction between electricity, poverty and disadvantage

'I can never pay on time and I have to go without other things like proper meals to be able to pay my electricity bills, water and phone bills.'

'Living expenses are so high and it's hard to find work as a single mum. Bills take up whatever income is left after paying high rent.'

'It is hard to keep on top of the bills and the money goes there instead of other essential items I could be buying for my children.'

'I have cut down on electricity everywhere and every way possible. If I cut down any more then we simply would not be using any ever! It is a nightmare. It is causing a lot of anxiety and depression'

Source: NCOSS (2017) Turning off the Lights: The Cost of Living in NSW²⁷

Various studies have painted a complex picture of household types that struggle with electricity affordability in Australia.²⁸ Analyses of historic income and expenditure suggest that a diverse range of household types are represented in the at-risk household cohort. These include:²⁹

- People out of paid work and living on low, fixed incomes
- People living in poor quality housing or in the private rental market
- Aboriginal and Torres Strait Islander peoples
- Single parents and their children
- Newly arrived migrants and refugees
- People with a disability and the people who care for them
- People in rental properties

Some cohorts face energy stress at higher rates than their proportion of the wider community, for example:

- Single parent families have been found most likely to seek emergency assistance to help pay for their energy costs.³⁰

- Significant hardship is experienced by people who are physically reliant on electricity supply to meet their day-to-day medical or health needs. This can range from the need to charge wheelchairs or run medical equipment at home, to the need to control body temperature. For example, people with multiple sclerosis (MS) have very low tolerances to heat and cold, and some need to run their air conditioners as much as 15 times longer than the average household.³¹

It is hard to determine how many people and households struggle with electricity affordability. We know that over 13 per cent of the Australian population live well below the poverty line.³² These people face situations where they are unable to afford to have a socially acceptable existence. This percentage has changed very little over the last ten years.³³ To illustrate the challenge people face, it is worth noting that those receiving the Newstart Allowance are at least \$100 per week below the poverty line and those on Youth Allowance are at least \$150 per week below the poverty line.

But given the groups identified above at risk of energy stress, the number of people living in households that struggle with energy affordability is likely to be much higher than the number of people living in poverty.

²⁹ Andrew Nance, 'Relative Energy Poverty in Australia', SACOSS, October 26, 2013, www.sacoss.org.au/relative-energy-poverty-australia

³⁰ Sally Babbington and Sue King, 'Helping with the cost of energy: Report of Anglicare Sydney's 2006 EAPA Data Collection', Anglicare, September, 2008

³¹ For example, people with multiple sclerosis (MS) have very low tolerances to heat and cold, and some need to run their air conditioners as much as 15 times longer than the average household. Dr Michael Summers and Dr Rex Simmons, 'Keeping Cool Survey: Air conditioner use by Australians with MS', MS Australia, 2009

³² ACOSS & UNSW, 'Poverty in Australia 2016', ACOSS and UNSW, 2016, www.acoss.org.au/poverty

³³ Ibid.

³⁴ 'Quantifying the cost of customers experiencing difficulties in paying energy bills', Energy Consumers Australia, KPMG, November, 2016, http://energyconsumersaustralia.com.au/wp-content/uploads/KPMG-ECA_Estimating_costs_associated_with_payment_difficulties_and_disconnections_October_2016.pdf

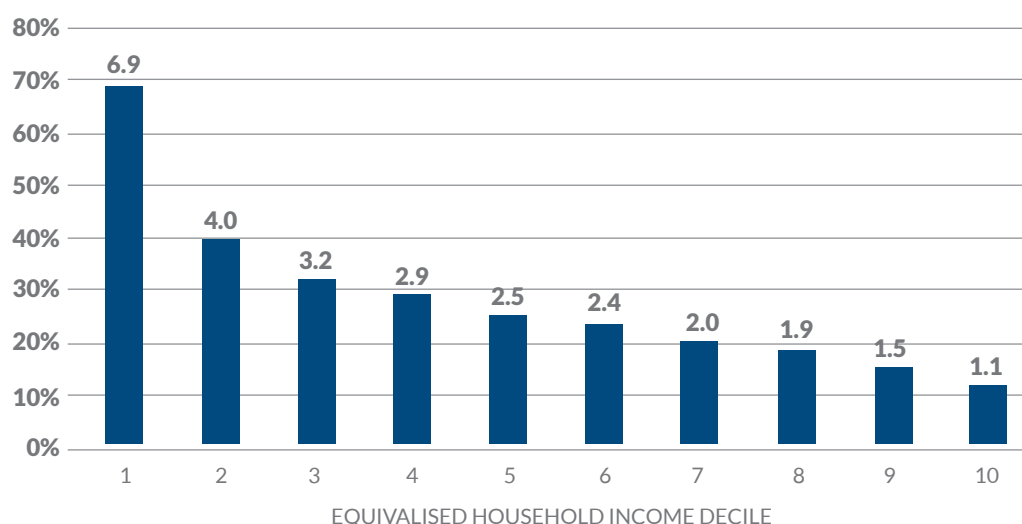
³⁵ 'Heat or Eat: Households should not be forced to decide whether they heat or eat', Consumer Action Law Centre, 2015, <http://consumeraction.org.au/wp-content/uploads/2015/08/Heat-or-Eat-Consumer-Action-Law-Centre.pdf>

³⁶ 'Energy Efficiency and People on Low Incomes', ACOSS, 2013, http://www.acoss.org.au/images/uploads/ACOSS_ENERGY_EFFICIENCY_PAPER_FINAL.pdf

³⁷ Francisco Azpitarte et al, 'Fuel poverty, household income and energy spending: an empirical analysis for Australia using HILDA data', Brotherhood of St Laurence, 2015.

³⁸ QCOSS, 'Choice and Control? The experience of renters in the energy market', June 2017 <https://www.qcoss.org.au/sites/default/files/QCOSS%20Choice%20and%20Control%20-%20the%20experience%20of%20renters%20in%20the%20energy%20market.pdf>

Figure 5: Proportion of annual expenditure on energy (electricity and gas) by equivalised income decile³⁷



As noted earlier, electricity prices have increased significantly, which is having negative impacts on at-risk households. A study by KPMG found that in 2015/2016 around 160,000 households were disconnected for non-payment of their electricity or gas bill, up approximately 47 per cent since 2009/10.³⁴ In some states there has been a threefold increase in electricity disconnections as a result of non-payment due to hardship since 2008.³⁵ Others are forced to ration energy, foregoing heating or cooling³⁶ and risking their health and wellbeing.

As shown in figure 5, weekly spending on electricity by household type is highest amongst low income households. Even noting that the data presented here show averages for the various categories of people, the distribution of the proportion of weekly spend is substantial. We know that some people in each category are paying substantially more than the average for the category. Of concern, is low income households also tend to have lower consumption than higher consumption households. That is, they are spending more of their income on energy for less energy.

Housing circumstances were found to be a clear key indicator of vulnerability.

Nationally about 30 per cent of the population are renters, most of whom are on low incomes on low incomes.³⁸ Unlike homeowners, renters are usually unable to improve energy efficiency or engage with energy markets and newer technologies in the same way, due to landlord and tenant split incentives.

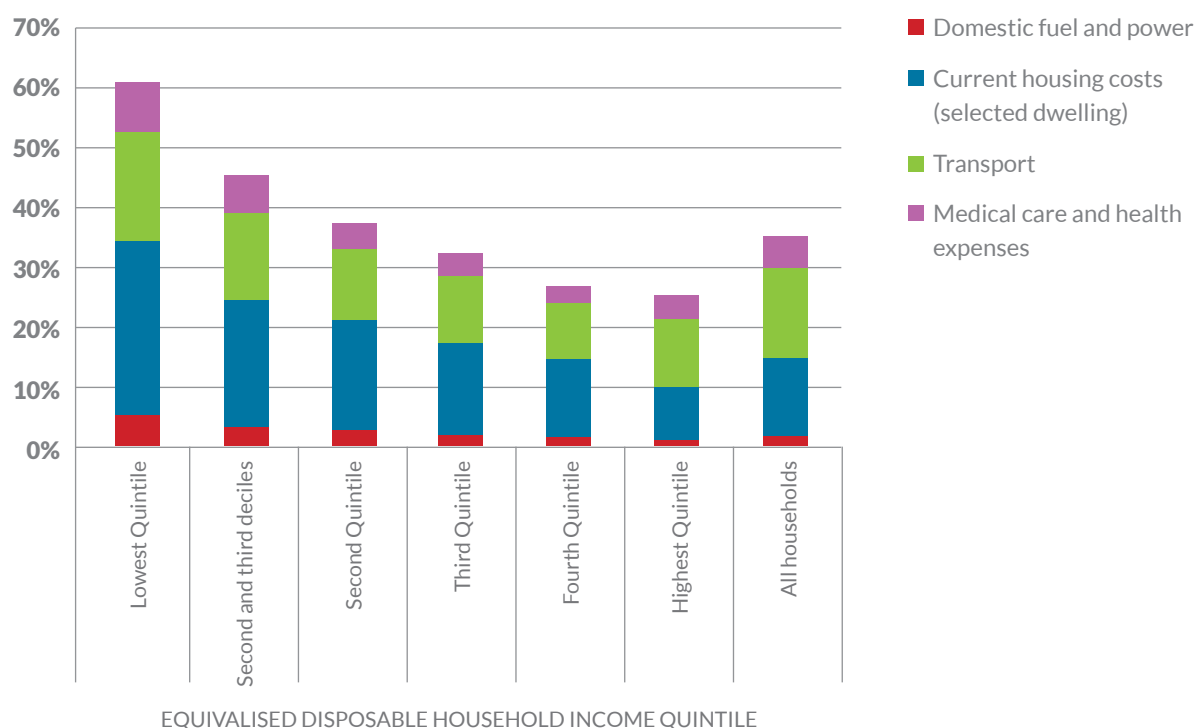
The cost of housing determines how much room exists in the household budget to pay energy bills, followed by transport costs. Figure 6 displays the proportion of average household expenditure on housing, energy, transport and health by equivalised disposable income. It shows that not only do households on the lowest income spend a greater proportion of income on energy than higher income levels, but the relative capacity of these low-income households to pay for energy is clearly compromised by their expenditure on other necessities.

³⁹ 'Households in the dark. Mapping electricity disconnections in South Australia, Victoria, New South Wales and South East Queensland', St Vincent de Paul Society and Alviss Consulting, May, 2016, <https://www.vinnies.org.au/content/Document/VIC/2016-June-Households-in-the-dark2.pdf>

⁴⁰ 'National Economic and Social Impact Survey 2015', The Salvation Army, May 2015, <https://salvos.org.au/subscribe/sites/auesalvos/files/media/newsroom/pdf/2015-tsa-esi-report.pdf>, 7.

⁴¹ Paul Simshauser and Tim Nelson, 'The Energy Market Death Spiral - Rethinking Customer Hardship', AGL Energy Ltd, June, 2012, <http://aglblog.com.au/wp-content/uploads/2012/07/No-31-Death-Spiral1.pdf>

Figure 6: Average household expenditure on housing, energy, transport and health by equivalised disposable income



Recent research by St Vincent de Paul and Alvis Consulting analysed and mapped approximately 200,000 electricity disconnections for non-payment raised by AGL in South Australia, Victoria, NSW and South East Queensland between July 2012 and July 2015.³⁹ This analysis identified six broad categories of households correlated to high disconnection rates. Four of the six categories were households in housing stress (spending more than 30 per cent of income on housing costs) while the other two categories had lower housing costs but higher transport costs. In all cases disconnection rates were correlated with high expenditure on other key items in the household budget; that is, people experiencing energy stress are likely to be simultaneously experiencing other kinds of household stress.

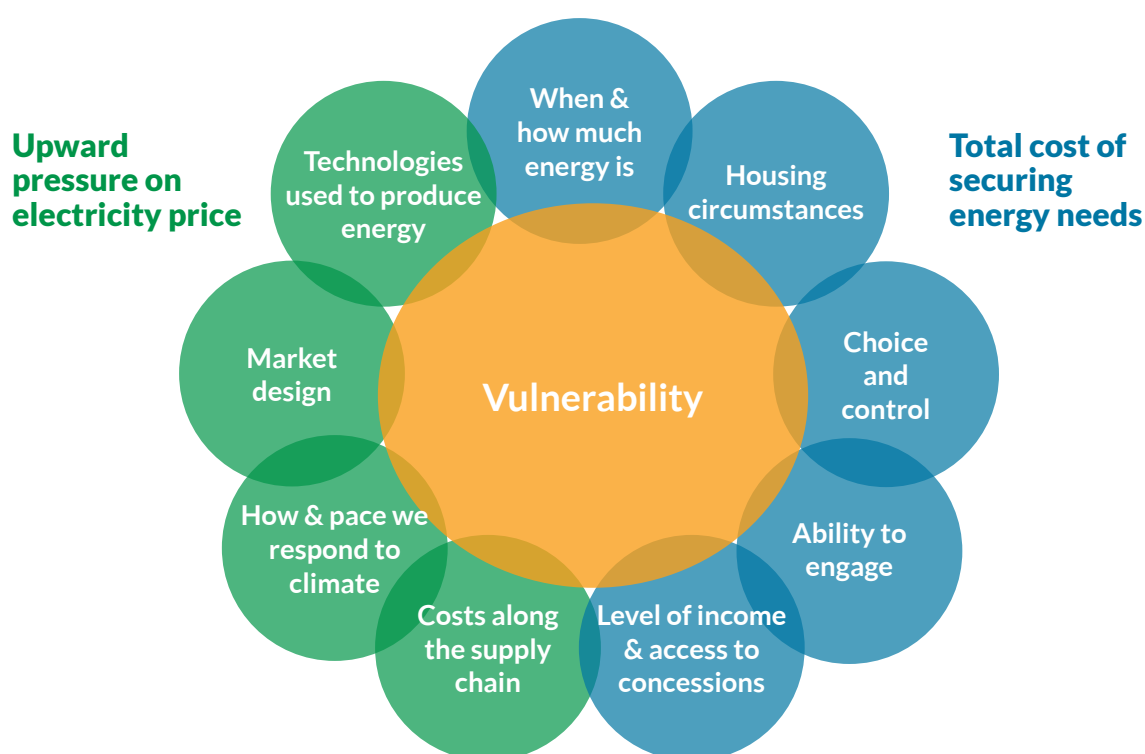
Research by the Salvation Army into those who access emergency relief found that individuals were spending 59 per cent of their total income per week on accommodation expenses. Therefore, individuals spent \$180 per week on accommodation and had less than \$125 a week left (\$17.86 per day) to live on.⁴⁰

Analysis by AGL has identified a new cohort presenting with energy stress – working families with young children facing high mortgage repayments or rental costs.⁴¹

The research indicates that the price of electricity is only part of the energy affordability story. The following factors below also contribute to the ability of at-risk households to secure and pay for their energy needs (see figure 7):

- When and how much energy is consumed
- The level of choice and control individuals have over their energy costs and their ability to respond to price signals
- Ability to engage
- Low income and access to appropriate concessions
- Housing circumstances, including the number of people in a dwelling, health requirements of people in a dwelling, house design and level of energy efficiency

⁴² 'Turning Off the Lights. The Cost of Living in NSW', NCOSS, June 17, <https://www.ncoss.org.au/sites/default/files/Cost-of-Living-Report-16-06-2017-FINAL.pdf>

Figure 7: Factors influencing total costs of securing energy

The pressures around price, total costs of energy and ability to pay culminate in low-income and disadvantaged households experiencing energy stress in a variety of ways, each with significant implications for their health and well-being, economic and social participation. Energy stress reveals itself in the number of different ways outlined below³⁷ (see also Box 1 summarising results from a recent survey of low-income earners in New South Wales):

- Households who are unable to pay their energy bills on time and end up in energy retailer hardship programs or get disconnected.
- Households who restrict their energy usage to the detriment of their health or well-being, for example living in a very cold home in winter. This often results in health or other issues.
- Households who trade off other parts of life for energy, for example forgoing school excursions, or going without food, or not paying rent.
- Households who live on a low income, and spend a high proportion of their income, and as a result, curtail their wellbeing in other areas of life.

Pressures around price, total costs of energy and ability to pay culminate in low-income and disadvantaged households experiencing energy stress in a variety of ways, each with significant implications for their health and well-being.

³⁷ Francisco Azpitarte et al, 'Fuel poverty, household income and energy spending: an empirical analysis for Australia using HILDA data', Brotherhood of St Laurence, 2015.

Box 1: Impacts of energy bills on low-income households in NSW

- **7-9 per cent** reported that they regularly go without medical treatment and medication when needed.
- **9 per cent** of respondents regularly go without a substantial daily meal for themselves, while a very worrying 6.5 per cent of respondents' children regularly go without a substantial daily meal as a result of energy bills.
- **24 per cent** of households with children have gone without school books or uniforms in order to pay energy bills, with nearly 7 per cent doing so on a regular basis.
- **31 per cent** of households with children have gone without school excursions or activities in order to pay energy bills, with nearly nine per cent doing so on a regular basis.
- **30.2 per cent** of people surveyed had not used hot water for bathing in an attempt to reduce their energy usage, with half of those responses (67 of 134) from households with children.
- **76.8 per cent** of people surveyed had not used any heating, or limited their heating to a single room to reduce their energy usage, with 15 per cent of people indicating this was something that they always did. Again, nearly 50 per cent lived in households with children.
- **61.8 per cent** of people said that they had gone to bed early in an attempt to reduce their energy usage, with 50 per cent of those people living in households with children.
- **40 per cent** of households with children are going without an Internet connection, or paying bills late, in order to pay their energy bill, with 12 per cent doing so regularly.
- **29.6 per cent** of people had foregone public transport or use of a private vehicle in order to pay their bills, with 6.4 per cent doing so regularly. More significantly, of the 45 responses from people receiving Newstart Allowance, nearly 50 per cent had not used public transport or a private vehicle as a result of their energy bills – forcing them to forgo interviews.
- **29.1 per cent** of people had not paid an internet bill or paid it late as a result of energy bills, with 6.6 per cent doing so regularly. Again nearly 50 per cent of those were receiving Newstart, many of whom would rely on an internet connection to potentially find employment and access information on support and training.
- **32.9 per cent** of people had not paid a phone bill or paid it late in order to pay their energy bills, with 8.6 per cent doing so regularly. Once again, 50 per cent of responses from those receiving Newstart had paid a phone bill late or gone without, impacting their ability to access support services and find paid employment.
- **12.3 per cent** of people reported being forced to use payday lenders, one of the most problematic and expensive sources of finance.
- **23 per cent** of people had cancelled or missed a payment on their insurance in order to pay an energy bill, with 6 per cent doing so regularly.

Source: NCOSS (2017) Turning off the Lights: The Cost of Living in NSW⁴²

“I can never pay on time and I have to go without other things like proper meals to be able to pay my electricity bills, water and phone bills.”



In addition to developing climate and energy policies to provide access to clean, affordable energy for all, it is essential that governments, regulators and decision makers also consider factors outside the electricity system to further reduce energy stress for low-income and disadvantaged households in order to improve their health, well-being and ability to participate in the economy.

3.4 Making the energy transition inclusive and equitable

This section discusses three principles that were repeatedly raised in our consultations as both fundamental to appropriate energy policy-making and currently absent from the bulk of discussion of energy issues. These principles underpin all five policy outcomes that were identified in Energy Access and Affordability Policy Research and are discussed in the rest of this report.

3.4.1 Less reliance on choice for consumers with limited ability to exercise it

Effective markets rely on consumers being able to exercise their choice. The Finkel Review Preliminary Report argued that in addition to technology change, consumers are driving the change through their choices, the most obvious is the uptake of distributed energy like solar (Australia has the highest rooftop solar per capita) and batteries.

The NEM reforms underway as a result of the AEMC's Power of Choice Review aim to give consumers more options in the way they use electricity.⁴⁴

However, consumers experiencing poverty and disadvantage do not always have the same capacity to exercise choice as other consumers. This could be because:

- They are in a rental property and have no control over improving energy efficiency or putting solar PV on the roof.
- They can't afford to purchase energy efficiency improvements or solar panels.
- Their circumstances, like mental health issues or domestic violence, prevent them from engaging in the market.
- They face language or literacy barriers.

Those unable to exercise choice often end up paying more for their electricity,⁴⁵ are more likely to be disconnected, and risk being 'left behind' possibly leading to the emergence of a 'two tier energy market'.⁴⁶

Barriers to choice need to be better understood and considered by decision-makers when developing policies to support changes to the electricity market, or we are at risk of creating a market that excludes struggling households and creates further disadvantage.



3.4.2 Inequitable cost allocation

As noted earlier the energy system is shifting from a centralised base load and peaking system to a more decentralised and variable grid with greater roles for distributed energy resources such as solar, battery storage and electric vehicles. This will create opportunities and risks, benefits and potential losses.

While rooftop solar has provided broad benefits through job creation and emissions reduction, and by avoiding new peak generation and putting downward pressure on wholesale prices, other benefits are not equitably shared.

Distributed energy resources have not been an option for households living in poverty, in apartments or in rental housing. Under current pricing structures,

households with distributed energy are able to reduce their exposure to several types of fixed costs, which are then reallocated to households without distributed energy sources. For example, the costs of network expenditure and renewable energy policies (the RET, the Small-scale Renewable Energy Scheme (SRES), state feed-in tariffs and energy saving schemes) are currently recovered on electricity bills through charges applied to each unit of energy consumed. If a household has distributed energy resources, their energy bills are small or zero and in some cases can be in credit. These households are paying little if anything towards network expenditure and renewable energy policies, whereas households without distributed energy – including low-income and disadvantaged households – pay the full amount.

⁴³ 'Dr Alan Finkel AO, 'Independent Review into the Future Security of the National Electricity Market: Preliminary Report', The Commonwealth of Australia, 2016, <https://www.environment.gov.au/system/files/resources/97a4f50c-24ac-4fe5-b3e5-5f93066543a4/files/independent-review-national-elec-market-prelim.pdf>, 16

⁴⁴ 'Power of choice', AEMC, www.aemc.gov.au/Major-Pages/Power-of-choice

⁴⁵ 'Consumer Research for 2016 Nationwide Review of Competition in Retail Energy Markets', AEMC, June 2016, <http://www.aemc.gov.au/getattachment/ea539ff7-75b1-4bb7-b3c6-f8474fd231f3/Newgate-Research,-Consumer-research-for-2016-natio.aspx>

⁴⁶ 'Finkel Review: Submission', ECA, March 7, 2017, <http://energyconsumersaustralia.com.au/research/finkel-review-submission/>, 11.

As electricity prices increase and costs of solar and battery storage decrease we will see more and more households who are able to take up distributed energy resources. A study by CSIRO and Energy Networks Australia (ENA) predict up to 66 per cent of households will generate some energy by 2050. The shift is modelled to provide greater efficiency in the system, reduce the need for significant investment in traditional poles and wires (\$16 billion by 2050), improve reliability and security, pay customers for grid support, and save the average household \$414 annually compared with a future based on business as usual. However, the report also examined the difference between ‘active participants’ – those who could access solar and batteries – and those who could not or did not. The report showed that all were better off under the roadmap scenario (cheaper bills) than the counterfactual scenario. Active participants were better off than passive, and the gap between active and passive narrows by between 30 to 66 per cent depending on household type.

Further policy consideration needs to be given to how to allocate climate policy costs and network costs more equitably, and how to further narrow the gap between active and passive households to ensure that the cost allocation of the transition is more equitable, and to ensure greater numbers of disadvantaged households can access distributed energy resources and/or benefit from the associated cost savings.

3.4.3 Recognition of electricity as an essential service

What seems to have been forgotten in the debate around the energy trilemma is the undeniable fact that access to reliable and affordable electricity is considered essential, a basic human right and a merit good.⁴⁷ Electricity is critical to the health, wellbeing, economic participation and social inclusion of everybody. However, as noted earlier, disconnections have increased 47 per cent since 2008 and anecdotal evidence suggests more people are rationing their energy use to the detriment of health and well-being.

In 2008 the Productivity Commission noted the essential nature of electricity and questioned whether corporatisation and privatisation was the best way to ensure at-risk customers continue to have access:

The introduction of competition to the provision of energy, water and telecommunications services has delivered significant benefits for consumers. In particular, while the need to put provision on a commercial footing has sometimes led to upward pressure on prices, this pressure has often been more than offset by the productivity gains that have ensued from the more competitive market environment. Moreover, consumers now have much greater capacity to purchase service ‘bundles’ that meet their particular requirements.

However, these benefits have sometimes been diluted by high ‘switching’ costs, and complex customer contracts. And the corporatisation and privatisation of suppliers has raised issues about the best means of ensuring that vulnerable and disadvantaged consumers continue to have appropriate access to these services.⁴⁸

Many participants during the consultations asked us to consider whether the current market-driven electricity sector was appropriate given it was failing so many people. They also asked whether new models needed to be considered going forward, including a return to greater public ownership (noting a shift to more distributive energy makes a traditional public ownership model more challenging).

ACOSS, BSL and TCI have not made a specific recommendation as to what the new model would look like. We have made recommendations throughout the paper to better reflect the principles that electricity is an essential service, such as amending the principles that guide the National Energy Market, and changing the laws around disconnection. We encourage policy makers and stakeholders to give further consideration to the essential nature of electricity and future market design.

3.5 What is to be done? Five policy outcomes

There are five policy outcomes identified in the report, Energy Access and Affordability Policy Research, which reflect the interaction between household energy bills and energy, climate and social policies. It is proposed that these five outcomes, pursued in broadly equal measure can ensure effective decarbonisation of the electricity supply chain while preserving universal access to affordable energy services.

⁴⁷ A ‘merit good’, is described as a commodity that an individual or society should have on the basis of need, rather than an ability and willingness to pay. Merit goods and services create positive externalities when consumed and these positive externalities have benefits not only for the individual and their family, but society as a whole. Market failure occurs when merit goods and services are under-consumed under free market conditions, and in this case also withheld.

⁴⁸ Consumer Policy Framework Inquiry Report No. 45, Productivity Commission, April 30, 2008, www.pc.gov.au/inquiries/completed/consumer-policy/report



4. OUTCOME 1: ELECTRICITY PRICED EFFICIENTLY, INCLUDING INTEGRATED CLIMATE POLICY

RECOMMENDATIONS

Outcome 1: Electricity priced efficiently, including integrated climate policy

1.1 Federal government work with COAG Energy Ministers to implement effective and stable policies in the electricity sector consistent with Paris Agreement objectives, comprising a carefully designed package that utilises market mechanisms, regulation and on-budget measures.

1.2 Federal Government work with COAG Energy Ministers to investigate further how to address inequitable allocation of the costs associated with the transition and growth of distributed energy, to ensure the transition to clean energy is more equitable and inclusive.

1.3 Federal government works with COAG Energy Ministers to develop policies for managed coal generator retirement and replacement in the interests of the workers, affected communities, and energy consumers.

Other important priorities

1.4 Federal and state governments support the development of models that enable low-income and disadvantaged households to access affordable distributive energy, including community and local energy models.

1.5 COAG Energy Council consider incorporating social and decarbonisation principles to guide the decision making of the operation of the National Energy Market (NEM).

1.6 COAG Energy Ministers implement policies to improve the role and utilisation of the electricity network in contributing to demand management and distributed energy generation that is inclusive and equitable.

This policy outcome focuses on access and affordability by ensuring consumers are paying no more than necessary for an electricity system that is viable in the

short term, and sustainable in the long term.

The policy objective of efficient electricity pricing is enshrined in the National Electricity Objective.⁴⁹ However, as indicated by steep hikes in wholesale costs, recent ballooning network costs, stubbornly high retail margins, significant cross-subsidies, externalised emissions costs, and messy signals for the entry and exit of generation capacity caused by ongoing policy uncertainty, the current state of electricity pricing is very far from efficient across almost every component of the retail bill stack.

There are many factors behind the rise in electricity prices, including high gas fuel costs,⁵⁰ sudden tightening of the supply-demand balance caused by generators exiting at short notice,⁵¹ decreasing competition and the exercise of market power,⁵² excessive expenditure on network capacity,⁵³ and, in South Australia, a greater need for ancillary services coupled with an underdeveloped framework for their provision.⁵⁴

However, an overarching driver of higher prices is the lack of a reliable policy and regulatory framework that supports efficient investment in clean energy and supporting technologies. This, in turn, is related to weaknesses in the system of governance of the electricity sector.

Reducing the uncertainty requires the integration of climate and energy in ways that solve each aspect of the energy trilemma – affordability, emissions reduction, and security and reliability – and in ways that are consistent with the long-term climate objectives to which Australia has committed through the Paris Agreement.

National and international experience suggests that a single policy mechanism cannot achieve this. There are many factors and policy levers that can influence how efficiently energy is priced. They can include policies that minimise upward pressure on price, by, for example, making coal generator retirements more predictable; or tariff reforms that provide downward pressure by minimising the need for future network builds. Without policy adjustments across each element of the supply

⁴⁹ 'Applying the Energy Market Objectives: A guide for stakeholders', AEMC, December 1, 2016, <http://www.aemc.gov.au/About-Us/Engaging-with-us/Decision-making-process/Applying-the-energy-market-objectives.aspx>

⁵⁰ 'Energy Shock: No gas, no power, no future?', Australia Industry Group, February, 2017, http://cdn.aigroup.com.au/Reports/2017/Energy_shock_report_Feb2017.pdf

⁵¹ 'State of the Energy Market', AER, 2015, [https://www.aer.gov.au/system/files/State+of+the+energy+market+2015+\(A4+format\)+%E2%80%93+last+updated+4+February+2016.pdf](https://www.aer.gov.au/system/files/State+of+the+energy+market+2015+(A4+format)+%E2%80%93+last+updated+4+February+2016.pdf)

⁵² Ibid.

⁵³ 'Electricity Network Regulatory Frameworks, Productivity Commission Inquiry Report', Productivity Commission, April 9, 2013, <http://www.pc.gov.au/inquiries/completed/electricity/report/electricity-overview.pdf>

⁵⁴ 'Future power system security program', AEMO, August, 2016, <http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Security-and-reliability/-/media/823E457AE45E43BE83DDD56767126BF2.ashx>

chain (wholesale, network, retail), unnecessary and unfair costs are likely to increase.

The solution clearly calls for a more comprehensive approach to market reform and transition management. The reforms and the way the costs are allocated for the transition must be equitable and inclusive.

The recommendations provided above are not detailed policy proposals, nor are they the only recommendations needed to ensure an affordable, inclusive and equitable energy transition. Instead, they are broad formulations that identify where government attention and more considered policy development urgently needs to be focused.

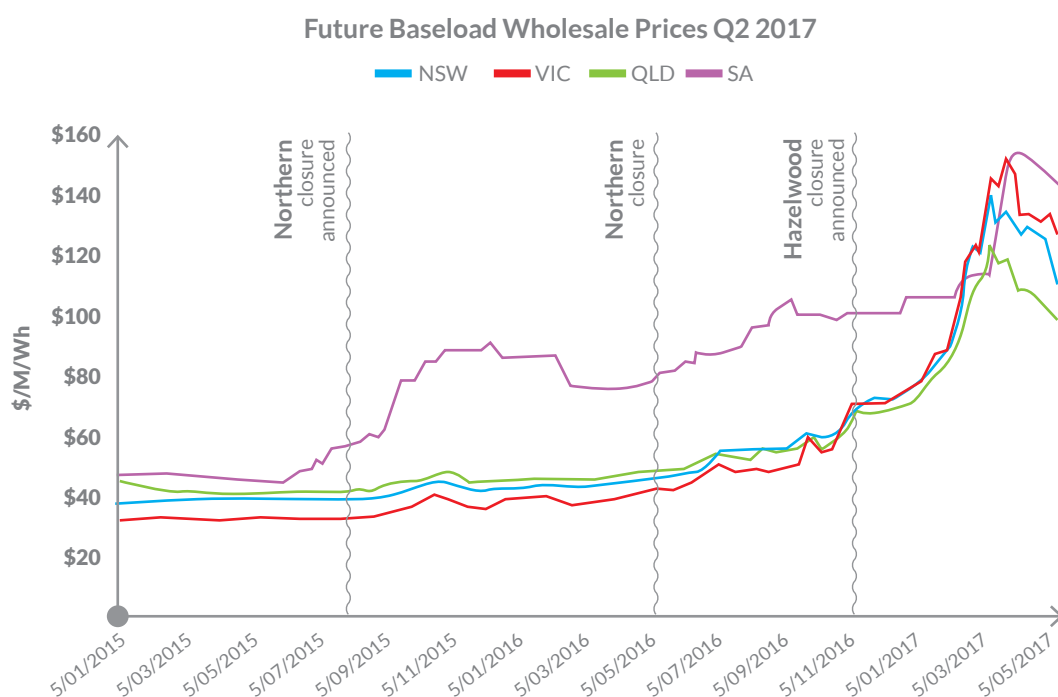
4.1 Lower prices require stable policy over the long term, which in turn requires alignment with the long-term objectives of the Paris Agreement

A review of recent modelling of climate policies was recently coordinated by Nance, and included the emissions trading scheme, the emissions intensity scheme, the extended RET, and power station regulations. The review found that, almost irrespective of the type of mechanism used to reduce greenhouse

gas emissions in the electricity sector, the combination of wholesale prices and policy costs was around 5c/kWh or 20 per cent higher than average 2015-16 electricity prices from 2020 to 2030, *assuming no changes to any other cost drivers*.⁵⁵ This reflects a level approximating the long-run marginal cost of new generation. This price impact also tended to hold for a range of emissions reduction targets, so that more ambitious emissions reduction targets would have little impact on the cost of transition.⁵⁶ The convergence of prices to this level simply reflects the fact that every mechanism would induce the gradual replacement of existing coal-fired power stations with new cleaner generation.

However, current wholesale prices are well above this level, as exiting generation systems are not being efficiently replaced because of policy uncertainty (see Figure 8, below). Modelling done for the government's United Nations Framework Convention on Climate Change (UNFCCC) taskforce put the cost of policy uncertainty at 0.4 per cent of GDP by 2030, due purely to the heightened risk premium of energy sector investments.⁵⁷ The costs of greater policy risk are exacerbated in electricity generation and network investment by the shift toward technologies with a higher proportion of upfront capital expenditure.

Figure 8: Wholesale electricity future contract prices⁵⁸



A recent estimate by the AEC puts the current cost of policy uncertainty in the electricity sector alone to be equivalent to a \$50+/tonne carbon price, or a wholesale price increase of \$40-60/MWh. The AEC has warned:

*'Without a stable national policy, and with ageing power stations closing and no signals for how they should be replaced, there is likely to be continued volatility in wholesale prices. The recent future contract price rises are the result of sustained policy changes at state and national level and, as a result, ongoing uncertainty.'*⁵⁹

Additionally, recent modelling by the Centre for International Economics (CIE) found policy uncertainty is one of the factors costing households \$184 to \$272 a year.⁶⁰

This suggests that a key criterion for a lowest-cost emissions reduction policy is that it is stable and reliable enough to mobilise timely investment.

A basic requirement of policy stability is consistency with clearly stated long-term goals that match the timeframe of asset investment (20-40 years). Given the objectives of the Paris Agreement are to keep global warming to 'well below' 2°C and to pursue a limit of 1.5°C, climate policies should be demonstrably capable of consistency with these objectives to give investors comfort that these policy parameters will not have to be drastically changed in future.

Many pieces of analysis have shown that the Paris Agreement objectives imply that Australia's national emissions need to reach net zero levels by 2050.⁶¹ Given that electricity decarbonisation is a prerequisite to decarbonisation of other parts of the economy (such as

vehicles and buildings), and other sectors will lag due to current lack of technology solutions (such as agriculture and emissions-intensive industries like steel and cement) electricity emissions need to approach this point even earlier.⁶²

Businesses and investors will remain hesitant to invest if the targets don't match what is required under the Paris Agreement.

Fortunately, the costs of the transition to clean energy are coming down. Recent analysis from Bloomberg,⁶³ Reputex,⁶⁴ the Centre for International Economics (CIE)⁶⁵ and the gentailer AGL⁶⁶ found that for a new energy generation build, renewable energy (wind and large scale solar pv) is now cheaper than gas and coal. Reputex and AGL found this is still the case with storage and/or firming capacity added.

For example, the CIE analysis conducted in May 2017 of the levelised cost of electricity (the unit cost of electricity over the lifetime of a generating asset) is outlined in table 1 below, showing wind energy is the cheapest form of new build energy, followed by solar pv.



⁵⁵ Andrew Nance, 'Energy Access and Affordability Policy Research', ACOSS, March 17, 2017, <http://www.acoss.org.au/wp-content/uploads/2017/03/EnergyAccessandAffordabilityPolicyResearchFINAL20March2017.pdf>

⁵⁶ Ibid.

⁵⁷ Prof. Warwick J. McKibbin, 'Report 1: 2015 Economic Modelling of International Action under a New Global Climate Change Agreement', DFAT, August 20, 2015, <http://dfat.gov.au/about-us/publications/Documents/economic-modelling-international-action-under-new-global-cc-agreement.pdf>

⁵⁸ Panos Priftakis, 'Are higher wholesale prices the new norm?', Australian Energy Council, April 6, 2017, <https://www.energycouncil.com.au/analysis/are-higher-wholesale-prices-the-new-norm/>

⁵⁹ Ibid.

⁶⁰ Review of economic modelling exercises & assessment of the impact of uncertainty, Climate Change Authority, May 31, 2017, <http://climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/files/2017%20Elec%20Review/Review%20of%20economic%20modelling%20exercises%20%26%20assessment%20of%20the%20impact%20of%20uncertainty.pdf>

⁶¹ Submission to the Independent Review into the Future Security of the National Electricity Market, The Climate Institute, March 2017, http://www.climateinstitute.org.au/verve/_resources/TCL_Finkel_Submission_03032017.pdf

⁶² Erwin Jackson and Cameron Reid, 'Reducing the horizons of uncertainty: Setting Australia's post-2030 emission goal', Climate Institute, May 4, 2017, [http://www.climateinstitute.org.au/articles/publications/reducing-the-horizons-of-uncertainty-setting-australias-post-2030-emission-goal-\(tci-agl\).html](http://www.climateinstitute.org.au/articles/publications/reducing-the-horizons-of-uncertainty-setting-australias-post-2030-emission-goal-(tci-agl).html)

⁶³ Bloomberg via <http://reneweconomy.com.au/clean-coal-most-expensive-new-power-supply-says-bnef-and-not-all-that-clean-74531/> and <http://www.reputex.com/research-insights/a-cost-curve-for-emissions-reductions-energy-storage-in-the-australian-power-sector/>

⁶⁴ A costs curve for emissions reductions & energy storage in the Australian electricity sector, Reputex, March 2017, <http://www.reputex.com/research-insights/a-cost-curve-for-emissions-reductions-energy-storage-in-the-australian-power-sector/>

⁶⁵ Review of economic modelling exercises & assessment of the impact of uncertainty, Climate Change Authority, May 31, 2017, <http://climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/files/2017%20Elec%20Review/Review%20of%20economic%20modelling%20exercises%20%26%20assessment%20of%20the%20impact%20of%20uncertainty.pdf>

⁶⁶ Ibid.

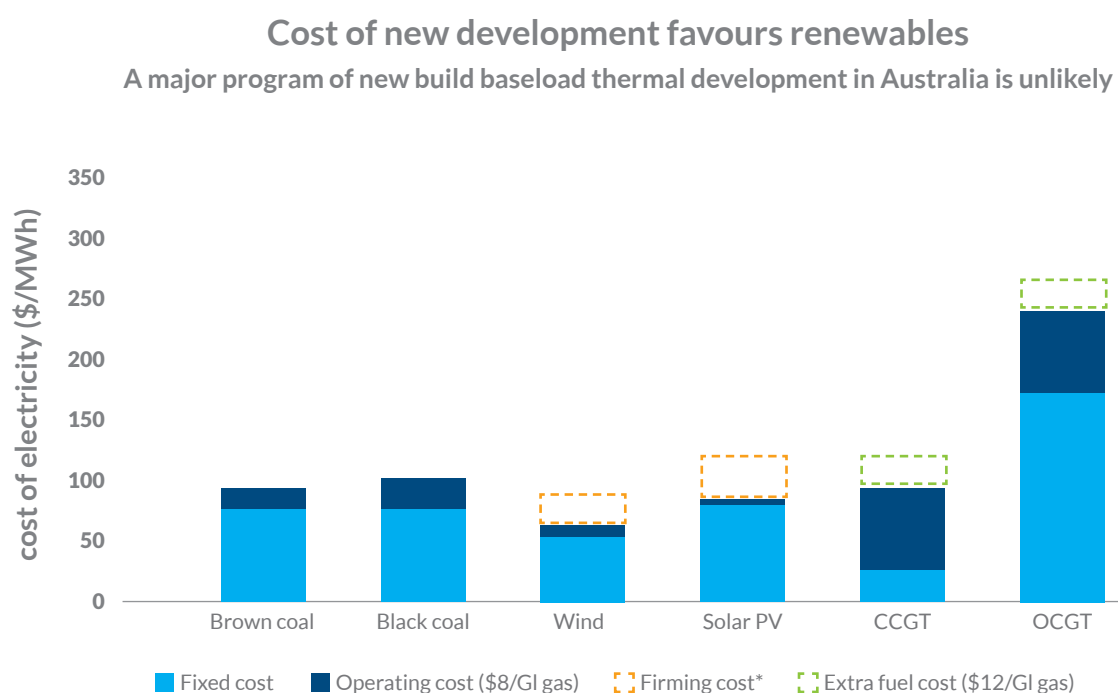
Table 1: CIE analysis of levelised cost of electricity generation

Technology	Life Years	Capital Cost (\$/W)	Operating cost (\$/MWh)	Fuel Price	Capacity factor (%)	LCOE with 8% discount rate (\$/MWh)	LCOE with 9% discount rate (\$/MWh)	Impact of 5% increase in risk premium (\$/MWh)
Supercritical, Black Coal	40	2.3	7.0	\$100/t	50	92.5	98.0	32
Ultra-supercritical, Black coal	40	3.1	7.0	\$100/t	50	107.8	115.0	41
CCGT-Gas	30	1.4	7.0	\$10/GJ	50	115.4	118.6	18
Wind	25	1.8	8.0	N/A	35	67.6	72.3	27
Solar	25	1.9	3.0	N/A	25	88.5	95.6	41

Note: the impact data shown here include a 15 per cent profit component

As shown in figure 9, AGL has done a similar analysis including costs of firming with new build renewables, and found wind to be the cheapest source of new energy.

Figure 9: AGL diagram showing costs of new energy generation



Source: AGL estimates: assumes capacity factors of 40% for wind, 25% for solar, 75% for CCGT and 10% for OCGT, heat rates of 8 for CCGT and 10 for OCGT.

While clean energy has become cost competitive, a more stable, effective and long-term climate and energy policy will still be necessary to meet emissions reduction targets consistent with the Paris Agreement and ensure the transition does not compromise reliability and security.

4.2 Delivering a stable framework for efficient investment demands a pragmatic combination of policies and regulatory reform

Upward and downward pressure on electricity prices will be dependent on: how and at what pace we respond to the risks of climate change; the technologies we use to produce electricity; the market designs we use; and how we manage significant increases in the price of natural gas.

The exact technology mix that will best provide universal access to reliable, affordable decarbonised energy is unknown; however multiple analyses show it is likely to contain a majority proportion of large-scale energy and an as yet unknown percentage of decentralised renewable energy.⁶⁷

Core principles that should underpin the reform to better support low-income and disadvantaged households include:

- Policies should be least cost;
- The cost allocation for the transition should be equitable;
- Policies should be inclusive, accessible and affordable for all; and
- Include policies that actively protect the most disadvantaged.

What has been clear from experience overseas and our experience in Australia is that no one single climate policy can solve the problem. Our review of climate policy modelling⁶⁸ showed that carbon pricing policies like emissions trading schemes or energy intensity schemes tend to have the lowest overall economic costs, while subsidy policies can result in lower energy prices, particularly those that incorporate some element of market competition such as contracts for difference and white certificate schemes. As modelled, regulations tend to produce results at a higher cost, due in large part to their inflexibility. However, there are several caveats to these results:

- Carbon markets in the real world have not yet demonstrated an ability to drive capital investment decisions. Models assume a forward carbon cost trajectory that is predictable enough over the long term for investors to bank on. However, as the IEA notes: 'After more than a decade of using carbon markets globally, carbon pricing policies are not



delivering their theoretical potential. Realistically achievable carbon prices in the short to medium term do not appear high enough to drive the investment and operational changes needed to decarbonise electricity systems.' This has been largely due to poorly-designed models where too many free permits were given, and includes access to poor quality offsets among other factors.

- The costs of subsidy schemes have to be recovered from somewhere. If these costs are attached to other parts of the electricity bill, there is a risk of inequitable and distortionary impacts. If incentives are provided out of government revenues, exposure to costs aligns more with the progressive nature of Australia's tax and transfer system rather than electricity prices. The downside of budget subsidies is their vulnerability to changing priorities of the government of the day and the health of the budget.

- How to decide what to build, and when and where to build it, is not obvious. One of the challenges with the current market mechanisms used to drive renewable growth is that it has driven least cost investment of large scale renewables with little consideration given to location, and what additional requirements are needed to guaranteeing grid reliability and security. A market mechanism which allows decision-making to be spread across more participants and to be made in response to price signals might be more resilient to uncertainty, but this will only happen if price signals appropriately reflect all the changing needs of the electricity system. If an 'around the market' scheme like reverse auctions for contracts for difference is used, the scheme's settings need to be capable of providing this function, which would require very sophisticated and responsive policy setting.
- Managing the lumpy nature of coal generator exit needs particular attention. New large-scale generation or storage tends to require several years to plan, finance and build. Recent generator retirements have occurred barely six months after they are announced, not allowing time for market operators and financial markets to prepare and for replacement generation to be built. The mismatch between entry and exit timeframes has already resulted in degraded energy security and higher prices. It has also had a significant impact on workers, their families and local communities.
Research shows that under national and global 2°C scenarios, traditional coal generation is phased out by 2035, and is replaced by a mixture of large and small-scale zero and near-zero emissions energy systems.^{69 70} Not only will this have implications for ensuring adequate generation and reliability measures are in place, but will have significant impact on communities in those regions where coal-fired power stations are located.
To avoid current issues arising from unplanned and poorly managed closure, policies are needed that will provide more advance warning and clarity to avoid upward pressure on prices, and to implement worker and community transition measures.
- Optimising the role of the grid is necessary for efficient and equitable decarbonisation. Most climate policy analysis to date has paid relatively little attention to the role of the transmission and distribution network in decarbonisation. But an efficient and equitable transformation of the

electricity supply depends to a large extent on ensuring the grid is capable of facilitating a wide range of energy technologies and transactions (large scale and distributive) and that the costs of its doing so are fairly allocated. The current grid and its regulatory framework are not positioned to deliver these outcomes without significant reform.

- Some level of policy inflexibility i.e. regulation, is useful in reducing uncertainty and its costs. Experience to date demonstrates that emissions markets are volatile and weak, and subsidy policies are vulnerable to budget reductions. Buttressing these policies with regulated minimum requirements can significantly diminish volatility and uncertainty. Examples include carbon price floors (as in the UK), emission intensity regulations (as in Europe) or generator age limits (as in Canada). Given the need for regulations to adapt over time to changes in technology and market behaviour, minimum requirements along with a process of foreseeable opportunities to update or strengthen them can ensure regulations remain fit for purpose

The need for stable, effective climate and energy policies consistent with Paris Agreement objectives was seen as a priority throughout our consultations. ACOSS, BSL and TCI have not recommended specific climate and energy policies but argue that we need a carefully designed package that utilises market mechanisms, regulations and on-budget measures. The policies should carefully manage coal generator retirement and replacement in the interests of the public, energy consumers, and communities.

4.3 Costs associated with the transition to clean energy and growth of distributed energy must be equitable

ACOSS, BSL and TCI support the transition to clean energy in line with the Paris Agreement objectives, noting that people experiencing poverty and disadvantage are the least able to adapt, cope and recover from climate change impacts. However, poorly managed allocation of the costs associated with the transition can disproportionately increase the costs and burden on low-income and disadvantaged households, who are the least able to afford the costs.

As noted earlier, a number of renewable energy incentives such as the National RET mechanism, state based feed-in-tariffs, and energy efficiency schemes, are recouped in a regressive manner through electricity

⁶⁹ 'Modelling illustrative electricity sector emissions reduction policies', Climate Change Authority, February 17, 2017, <http://climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/files/170217%20Jacobs%20Final%20Report%28revised%29.pdf>

⁶⁸ 'Andrew Nance, 'Energy Access and Affordability Policy Research', ACOSS, March 17, 2017, <http://www.acoss.org.au/wp-content/uploads/2017/03/EnergyAccessandAffordabilityPolicyResearchFINAL20March2017.pdf>

bills. These schemes add an average of eight per cent on electricity bills, with the amount varying depending on the state.

These schemes have arguably provided ‘public good’ through emissions reduction, job creation and avoided new peak generation. However, low-income and disadvantaged households are not benefiting as much as recipients of the schemes and are essentially subsidising wealthier households.

In recognition of the negative impact, the Queensland government recently shifted the cost recovery of their solar feed-in-tariff off bills and on to the government budget.⁷¹

We would urge other governments to explore shifting the remaining FITs, SRES, and other energy efficiency schemes off bills and onto government budgets.

Inequity is further increasing with the growth of distributed energy such as solar and battery storage. To date, the opportunities and benefits of cheaper power from distributed energy resources have not been accessible for households experiencing poverty or disadvantage, who are unable to access new technology (i.e. renters), or unable to afford new technology (i.e. can’t afford upfront costs).

Under current pricing structures, distributed energy

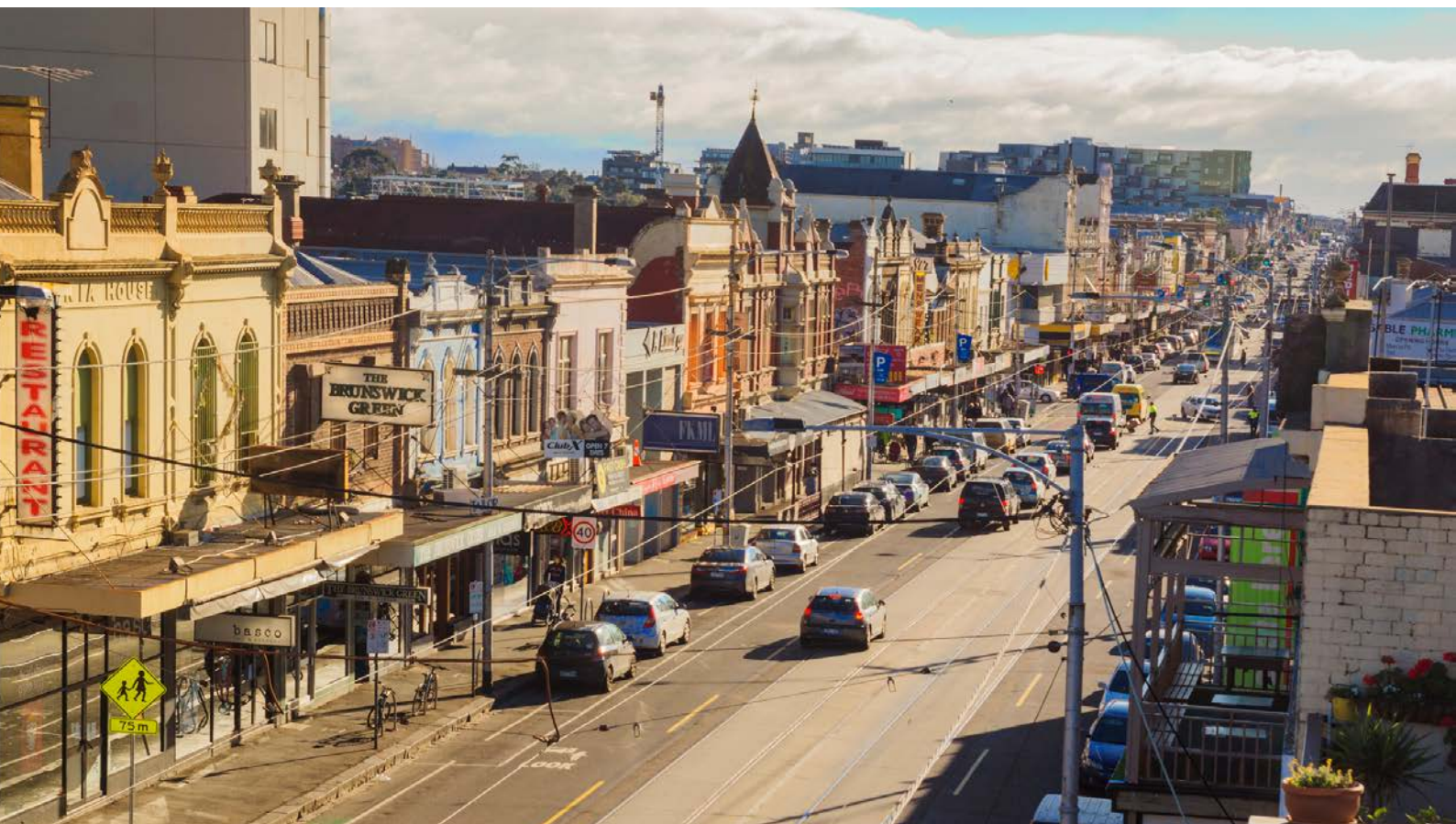
resources are emerging as a potential driver of a ‘two tier’ electricity market: households with distributed energy are able to reduce their exposure to several types of fixed costs, which are then reallocated to households without distributed resources. This further widens the gap between the ‘haves’ and the ‘have-nots’.

A key reason for this is because current network expenditure and clean energy policies are recovered through charges applied to each unit of energy consumed, rather than a fixed amount. If a household has distributed energy resources their energy bills are small or zero and in some cases can be in credit. They are paying little if anything towards network expenditure and clean energy policies, whereas households without distributed energy sources – including low-income and disadvantaged households – pay disproportionately more.

Unless addressed, this inequitable cost allocation will increase as the uptake of distributive energy increases. Research by CSIRO and the Energy Networks Association (ENA) finds that by 2027 over 40 per cent of customers could use onsite distributed energy resources and by 2050, this figure could increase to 66 per cent, with up to 45 per cent of all electricity being generated by customers (not utilities).⁷²

To a limited extent, these issues have been considered in





the AEMC's Power of Choice reform package, which aimed to unwind cross-subsidies and open up competition for metering, energy storage and other customer-side aspects of energy markets. The Distribution Network Pricing Arrangements Rule Change (AEMC 2014) is a key component of Power of Choice, often referred to as 'cost reflective pricing'. The rule change compels network pricing to better reflect network congestion at times of peak demand. However, there have been no trials of cost reflective pricing with low-income and disadvantaged households, and the only potential comparison showed that certain households, such as families with children, found it difficult to adjust energy use and responded better to non-price signals such as 'peak alerts'.

Similarly, a key feature of the CSIRO/ENA approach was to keep people connected to the grid. It focused on ways to provide systemic benefits to the electricity distribution network through sophisticated use of demand management and distributed energy resources via changes in policy settings and price structures. This enabled a reduction in expenditure on network

investments while increasing the value of a smarter electricity network. This study found that a scenario achieving net zero emissions by 2050, with a very high level of distributed energy and demand response, would save the average household \$414 annually compared with a future based on business as usual. A medium-income family who cannot take up distributed energy resources would still save over \$600 annually (in real terms) through the removal of cross subsidies.⁷³ However, those with distributed energy benefit more.

Using fixed charges to recover fixed policy costs, rather than each unit of energy consumed, is another potential policy response. This could also apply to recouping costs of a climate policy mechanism aimed at incentivising large-scale investment, such as the RET or the Clean Energy Target (CET) recommended by chief scientist, Alan Finkel, where the cost of the scheme is recouped through the bill. Other options to more progressively fund climate policy are through a progressive tax levy or consolidated revenue, noting this is reliant on healthy government budgets.

Further policy development is needed. It's more likely

⁶⁹ 'Energy, Climate Change and Environment: 2016 Insights', OECD/IEA, 2016, <http://www.iea.org/publications/freepublications/publication/ECCE2016.pdf>

⁷⁰ 'Modelling illustrative electricity sector emissions reduction policies', Climate Change Authority, February 17, 2017, <http://climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/files/170217%20Jacobs%20Final%20Report%28revised%29.pdf>

⁷¹ 'Felicity Caldwell, 'Government steps in to reverse decision on power price hike', Brisbane Times, May 31, 2017, <http://www.brisbanetimes.com.au/queensland/government-steps-in-to-reverse-decision-on-power-price-hike-20170531-gwh0vs.html>

that most households and business will stay connected to the grid, incentivised by new sources of revenue such as selling to the grid, selling to neighbours, and network payments; however the 'stay on the grid' scenario should be deliberately enabled. Identifying how network costs and the costs of transition to clean energy are more equitably allocated is a priority, to ensure everyone contributes fairly to the transition and maintenance of a universal accessible, affordable, reliable and secure energy system.

4.4 Incentivise access to distributive energy for low-income and disadvantaged households

The community and local energy service sector is one emergent sector that could help provide access to a broader range of distributive energy services for low-income and disadvantaged households.

Still in its infancy in Australia, community and local energy projects and proponents are usually driven by social and environmental objectives as well as economic objectives. Initiatives tend to be designed and supported by coalitions of individuals or organisations, and can take many forms. A focus is often on overcoming specific barriers to participation in sustainable energy generation or use.

Examples of different community energy efforts are:

- The Moreland Energy Foundation's focus on providing local communities with energy advice and support to invest in affordable renewables for low-income earners and the community.⁷⁴
- A program by SGCH (formerly St George Community Housing) to incorporate energy efficiency and solar PV into community housing for low-income families.⁷⁵
- The STUCCO Student Cooperative's consumer-led solar plus storage embedded network that lowers the electricity bills of 40 student residents.⁷⁶
- CORENA, which funds solar and energy efficiency upgrades for charities across Australia.

The community and local energy service sector could become an important way for those currently locked out of the energy transition to access its benefits. The sector has a unique ability to develop innovative approaches to specific community circumstances. Community energy groups are particularly well-placed to be trusted providers of energy-related advice for users in their

area.

Community energy projects have leveraged private funding as well as public funding and financing mechanisms. However, further development of community power is hampered by regulatory and financial barriers. A solid foundation of government support will enable the sector to grow, evolve and contribute to a richer ecosystem of Australian energy solutions.

Other mechanisms including government funded and targeted programs are discussed in later sections.

4.5 Keep an eye on the big picture

4.5.1 Public versus private – energy as a social good

Throughout the consultations we undertook for this submission, there was considerable debate about the merits of privatisation versus state ownership, and about which model would benefit low-income and disadvantaged households.

We heard a strong message from across both the community and environment sectors that the promise of privatisation, particularly in the retail market, has not been realised, and that excessive prices show competition is not working in practice as well as it does in theory.

On the other hand, lack of competition in the wholesale industry in some states such as Queensland, where the state government has ownership over significant power generation, was also viewed as a driver of higher prices.

In addition, state-owned network companies have been more responsible for excessive 'gold plating' of the poles and wires, compared to privatised networks.

It was also noted that the Tasmanian government, which has ownership of a majority of both wholesale and retail, were recently able to put a cap on price rises to benefit consumers.

A consensus was not achieved. We note that both private and public-owned entities have been accused of price-gouging, but critics of the market have a point. Irrespective of their ownership, energy providers need to operate within rules that provide more robust consumer protection and stronger constraints on the exercise of market power.

⁷⁴ 'Electricity Network Transformation Roadmap: Final Report', Energy Networks Australia and CSIRO, April, 2017, http://www.energynetworks.com.au/sites/default/files/entr_final_report_web.pdf

⁷⁵ 'Electricity Network Transformation Roadmap: Final Report', Energy Networks Australia and CSIRO, April, 2017, http://www.energynetworks.com.au/sites/default/files/entr_final_report_web.pdf

⁷⁶ See for example: <https://www.mefl.com.au/news/unaa-awards/#more-2524> and <http://www.theleader.com.au/story/4071387/power-bills-to-be-cut/>

⁷⁵ Sophie Vorrath, 'CSIRO "internet of things" pilot aims to cut community housing power bills by 80%', One Step Off The Grid, November 24, 2016, <https://onestepoffthegrid.com.au/csiro-internet-things-pilot-aims-cut-community-housing-power-bills-80/>

⁷⁶ 'Stucco's Solar System' Stucco, <http://www.stucco.org.au/solar>

4.5.2 Consideration should be given to updating the National Electricity Market guiding principles

The electricity market is undergoing a dramatic transition to decarbonise. This is creating both opportunities and risks, benefits and losses. At the same time, the national energy market rules and regulations have been slow to respond, which is hindering the decarbonisation transition and compromising reliability and security.

It's fair to say that the electricity market is currently failing on the NEM objectives around price, reliability and security. These narrow objectives are no longer fit for purpose.

Now more than ever, the distribution of energy market costs has the potential to cause wide-ranging and serious social equity impacts. Yet the current framing of the national energy market does not provide guidance on how to even consider the social or distributional impacts of energy policy or regulatory decisions – especially for low-income and disadvantaged people. Given the essential nature of energy supply, it is important that outcomes for these customers are explicitly considered by decision-makers.

Similarly, the current framework that guides the NEM does not provide any guidance at all on how to facilitate and support energy policy.

Australian Chief Scientist, Alan Finkel has argued:

*'For both system security and affordability reasons, it is important that governments ensure energy and emissions reduction policies are integrated. The energy system needs to be able to adapt to changes in technology and in supply and demand that are stimulated by emissions reduction policies. Emissions reduction policies that are aligned with the operation of the electricity system will better support efficient investment decisions by consumers, and generation and network assets.'*⁷⁷

Consideration should be given to incorporating social and decarbonisation principles to guide the decision-making of the operation of the NEM. While there was broad support in the consultations for social good and decarbonisation principles to be considered and included in the NEM operations, some community organisations held a different view primarily concerned about the implications around affordability.

Inclusion of a decarbonisation principle in the regulation of the NEM to support decarbonisation of the electricity network is not intended for the NEM market regulators to set the policies for meeting Australia's national or international decarbonisation targets. This should be done by federal and state governments via a nationally coordinated approach. However, the rules and regulations that govern the electricity market should embrace, facilitate and not hinder these policies or the market. Including a principle in the operation of the NEM to support decarbonisation of the electricity network would support this goal.

4.6 A well-designed package of measures can lower total costs

Multiple policies in theory increase costs by diminishing efficiency; however, the benefits may more than compensate if they provide clearer guidance on required emissions reduction, and significantly reduce the range of investment uncertainty.

Modelling by Jacobs for the CCA found that combinations of climate policies were able to achieve emissions reduction at a lower combined cost than the individual policies, because each policy made up for a weakness in the other.⁷⁸ The CSIRO/ENA modelling took the examination of multiple measures further by examining a policy package that addressed the needs of both the network and generation sectors.

Ensuring decarbonisation and improving affordability will require a range of policy types: regulation to provide minimum standards of action, transparency, and protection; market signals to enable competition and choice and minimise compliance costs; and on-budget subsidies to assist those most in need and reward public good innovation.

⁷⁷ 'Dr Alan Finkel AO, 'Independent Review into the Future Security of the National Electricity Market: Preliminary Report', The Commonwealth of Australia, 2016, <https://www.environment.gov.au/system/files/resources/97a4f50c-24ac-4fe5-b3e5-5f93066543a4/files/independent-review-national-elec-market-prelim.pdf>,

⁷⁸ 'Modelling illustrative electricity sector emissions reduction policies', Climate Change Authority, February 17, 2017, <http://climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/files/170217%20Jacobs%20Final%20Report%28revised%29.pdf>

A solid foundation of government support will enable the sector to grow, evolve and contribute to a richer ecosystem of Australian energy solutions.





5. OUTCOME 2: INFORMED AND ENABLED CONSUMERS



RECOMMENDATIONS

2.1 Federal and state governments co-fund stable and ongoing assistance programs, delivered by local place based social support services to inform and enable disadvantaged households to engage with the energy market. Where possible these programs should strengthen relationships between disadvantaged households, support services, advocates and energy retailers.

2.2 COAG Energy Ministers require energy retailers to develop a low-cost, no-frills retail energy market offer that disadvantaged and disengaged customers can default to if they cannot or do not engage in competitive retail energy markets.

Increasingly, consumers are being required to engage in their home's energy usage if they want to lower their energy bills. Engagement can take many forms, from getting the best deal in the retail market to using smart meter data to change energy consumption habits. Many benefits can flow to informed and enabled consumers.

However, it is important to understand that some households face limits and barriers to engage with the market, which may include lack of capital, language and literacy barriers, rental, or geography.

There is clear evidence that better informing and educating consumers about their bills, energy use and the energy market significantly benefited consumers.

During the consultations, many participants argued it is unrealistic and unfair to expect all consumers to engage to the level required to access material benefits. And that many existing efforts place too much emphasis on the individual consumer and insufficient emphasis on ensuring the design of the market leads to acceptable outcomes for all consumers, including those who are disengaged.

This section highlights two areas where appropriately informed and enabled consumers can benefit:

- Competitive retail energy markets
- Smart meters

Concerted policy leadership is missing and there is no

obvious champion of energy assistance programs for low-income and disadvantaged households.

5.1 Competitive retail energy markets are not delivering on their promise

5.1.1 Engaged and active consumers can get lower prices

Competitive retail energy markets have held up the promise of lower and more efficient prices for all. Evidence from the AEMC,⁷⁹ AER,⁸⁰ and St Vincent de Paul⁸¹ suggests that there is a large spread of market offers available and the difference between the best and the worst offer is very large. For example, in Victoria the difference can be up to \$830 per annum for electricity and \$480 for gas, which could be a significant savings and benefit to many households.⁸²

For households to get the better deals in the market, they need to regularly engage with the retail electricity or gas market to ensure they are receiving a competitively priced supply.

5.1.2 However, many households are missing out on ongoing benefits from the market

Research suggests that, even where competition is available, it is failing to drive down the retail component of energy bills.⁸³ A majority of households are also disengaged from the energy market and paying more than necessary. The AEMC's Energy Consumer Research found around 55 per cent of all customers had not switched electricity retailer or plan in the last five years. This suggests that these households are paying significantly more – typically 15-20 per cent more – than customers who actively pursue a better offer.⁸⁴

The common design of retail contracts with limited 'benefit period' discounts allows retailers to price discriminate against disengaged customers. Similarly, the prevalence of 'pay-on-time' discounts discriminates against those that are unable to pay their power bills on time due to dire financial circumstances. The flipside of these discounts (up to 30 per cent of consumption charges) comes in the form of hefty late payment penalties.⁸⁵

There have been calls from many consumer advocates for retailers to change their business model to become more consumer focused by putting customers on the retailer's best plan for the customers' circumstances.

⁷⁹'Power of choice', AEMC, www.aemc.gov.au/Major-Pages/Power-of-choice

⁸⁰'Annual report of the performance of the retail energy market', AER, 2015, https://www.aer.gov.au/system/files/AER%20Annual%20Report%20on%20the%20Performance%20of%20the%20Retail%20Energy%20Market%20201415_0.PDF

⁸¹'An update report on the Victorian Tariff-Tracking Project', St Vincent de Paul Society and Alviss Consulting, October, 2016, https://www.vinnies.org.au/icms_docs/256169_Victorian_Energy_Prices_October_2016.pdf

⁸²Ibid.

⁸³'A critique of the Victorian retail electricity A report for the Brotherhood of St Laurence', CME Australia, June, 2016; and Dr Ron Ben-David 'Shock Therapy Reviving retail competition in the energy market' Essential Services Commission, 2016.

The concerns that consumers are not benefiting from retail competition has led to the federal government directing the ACCC to investigate the retail supply of electricity and the competitiveness of retail electricity markets in Queensland, NSW, Victoria, South Australia, Tasmania, and the ACT.

5.1.3 *There is limited choice in some states*

While choice is failing to deliver on its promise in some areas, in other areas there is limited choice or no choice. There is limited choice of retailer in the ACT and no effective choice in regional QLD, TAS, WA and NT.

5.2 Smart meters as a tool for engagement

Smart meters and network tariff reform offer new ways of engaging with households and managing consumption. But they also add a new layer of distinction between customers. Smart metering can provide more frequent billing and real time consumption and cost information. This can help reduce energy bills and/or minimise bill shock, which has significant potential to soften vulnerability. However, despite the rollout of smart metres in Victoria, all the expected consumer benefits have yet to be realised.⁸⁶ A report by VCOSS, 'Making Energy Visible',⁸⁷ identified a number of technical and cost barriers with smart metering, including lack of energy literacy, lack of internet access, and poor data functions.

5.3 Barriers to engagement

While there is some evidence that some disadvantaged households do engage actively in the energy market to find the best deals, other cohorts of disadvantaged households are more disengaged and the inability to engage puts people at further disadvantage. Consultation participants identified multiple barriers to engagement and options to address them. They also reported that a significant proportion of consumers may not want or be in a position to be informed and engaged consumers.

Pre-requisites for engagement include:

- Information provided in accessible formats (including languages and modes of dispersion) and in accessible locations (including for regional, rural and remote communities).
- Consumer literacy, including the adequate financial and energy literacy to be able to comprehend and take action from the information.
- Time and energy – many disadvantaged households are facing multiple stressors, which limit their ability to take

on additional tasks, such as hunting for a better energy deal.

At present, many of these prerequisites are not being adequately addressed for all segments of the population. As a result, many households – particularly disadvantaged ones – are facing barriers to participation. These include:

- Language
- Geography – reduced competition in regional areas, and lack of retail competition in specific geographic areas including regional QLD and WA
- Internet access
- Trust in providers
- Trust in the outcomes of switching, or engagement in distributed energy resources
- Lack of straightforward access to data to enable independent third parties to assess and provide services such as recommending different tariffs. This includes states with smart meters such as Victoria.

In relation to engaging in basic distributed energy such as solar, the barriers include:

- Resources or capital – many households simply do not have sufficient capital to invest in upgrades, nor the desire to go into debt
- Control – renters are often not in a position to take actions such as energy efficiency upgrades or the installation of solar because they do not have the authority to do so
- Misaligned incentives – landlords face misaligned incentives to install energy efficiency or solar upgrades

5.4 Greater consumer focus

During the consultations, a need was identified for electricity market regulators engaged in all levels of the market to be more consumer focused. This includes:

- Understanding customer needs and preferences and finding out how to best meet those needs and preferences. In practice, this approach can take different forms, such as customer groups and consumer advocates directly engaging with regulators in developing policy, regulation and decisions. In other cases, the formal analysis of customer needs and preferences could be an important input in regulatory decision making.
- Better informing consumers of decision-making and their rights.

⁸⁴Based on the differences between standing offers and market offers in each jurisdiction, reported in AEMC 2016 Residential Price Trends Report.

⁸⁵'Submission to the Independent Review into the Future Security of the National Electricity Market: Preliminary report', Consumer Action Law Centre, 2017.

⁸⁶Ibid.

⁸⁷'Making energy visible', VCOSS, April, 2016, <http://vcoss.org.au/document/making-energy-visible/>

⁸⁸'Switched on Communities' VCOSS, 2017, <https://www.vcoss.org.au/our-work/switched-communities>

5.5 Two complementary priority solutions

Disadvantaged households need tailored, trusted, ongoing support to engage with their energy use and with the energy market. Support should cover a variety of issues, based on the customer's needs. Customers struggling to pay their energy bills are likely to need financial management and energy-related advice. This should be available prior to customers getting into substantial debt as well as in response to debt and disconnection. Many households are also likely to need support engaging in retail markets and in gaining trusted information to assist in accessing solar and other distributed energy resources. Current programs are often curtailed by a severe lack of resources relative to the level of need.

One example of how to educate and enable low-income and disadvantaged consumers is the Switched on Communities program managed by the Queensland Council of Social Service (QCOSS) in South East Queensland.⁸⁸ Community

organisations receive funding to implement tailored approaches to target specific customer groups to help their clients better understand their bills, compare electricity plans and access the support options available if they experience financial difficulty (see Box 2 for more information). The funding for the program is provided by the Queensland State Government and energy retailer AGL.

It is important to ensure that low-income and disadvantaged customers who do not engage in the market are not unduly penalised. A solution is to require retailers to develop a low-cost, no-frills retail energy market offer that disadvantaged and disengaged customers can default to if they cannot or do not engage in competitive retail energy markets. While there was broad support in the consultations for a low-cost default product, some community organisations held a different view primarily concerned with cost allocation. Detailed policy design including how costs are allocated needs further consideration.

Box 2: Switched on Communities in south east Queensland

The Switched On Communities program was a Queensland Department of Energy and Water Supply program, sponsored by AGL and administered by QCOSS to assist people who experience disadvantage or financial hardship to get better outcomes in the competitive energy market. Grants of up to \$100,000 were made available to not-for-profit organisations in South East Queensland to design and run energy awareness programs to suit their client's needs.

The successful community organisations to receive Switched On Communities grants were:

- Salvation Army – utilised a dedicated phone line with trained energy counsellors.
- Multilink – informed culturally and linguistically diverse communities through workshops and materials in 5 languages.
- Queenslanders with Disability Network - engaged people with intellectual disability through interactive games and workshop activities.
- COTA Qld – provided peer educators for consumers over 55 years of age.
- Laidley & District Community Organisation – provided home visits and one-on-one sessions with advocacy.
- Coast2Bay Housing Group – trained tenancy case workers and other staff of housing-related service

providers in energy literacy.

- Encircle – provided one to one training with family support, Homestay and Older people's action program.
- Mangrove Housing – Created 'Bring Your Bill' awareness sessions, produced an information kit embedded into tenant induction packs, and trained low income households.
- Palm Beach Neighbourhood Centre – provided staff training for community organisations, ran community workshops, and provided one-on-one sessions, with referrals and advocacy provided.

All programs utilised the Australian Energy Regulators independent price comparator website www.energymadeeasy.gov.au to show clients how to navigate the multitude of energy plans on offer since deregulation in 2016. Community awareness of the electricity market prior to the Switched On Communities activities was low to very low, with many participants not able to name their retailer or the type of offer they were currently on. Each organisation was able to give feed-back on specific barriers to market participation that their clients encountered, and the innovative solutions they came up with to address them. The program finished on June 30 2017, with the final outcomes report still pending.



6. OUTCOME 3: ENERGY CONSUMED EFFICIENTLY AND PRODUCTIVELY



RECOMMENDATIONS

3.1 Federal and state governments and local councils work cooperatively together to co-fund ongoing programs for disadvantaged and low-income households that provide access to energy-efficient technologies, solar PV and other distributed energy resources and provide a trusted source of information. Higher levels of support should be provided to the most disadvantaged households.

3.2 Federal government supports state and territory governments to introduce minimum energy efficiency standards for rental properties in all Australian jurisdictions (with reference to local climatic conditions) to improve affordability and health and wellbeing outcomes for tenants in the poorest quality dwellings. Simultaneously, the federal government reviews tax policy to ensure existing tax measures support energy efficiency upgrades.

3.3 Federal and state governments provide additional support to upgrade all public and community housing stock to provide energy efficiency at best practice standards.

How much energy households use and how efficiently they use it directly impacts their energy bills.⁸⁹

Our consultation highlighted two priority areas for ensuring energy is consumed efficiently and productively:

- Improving residential energy efficiency, particularly in disadvantaged and low-income households.
- Ensuring access to distributed energy resources including, but not limited to, rooftop solar.

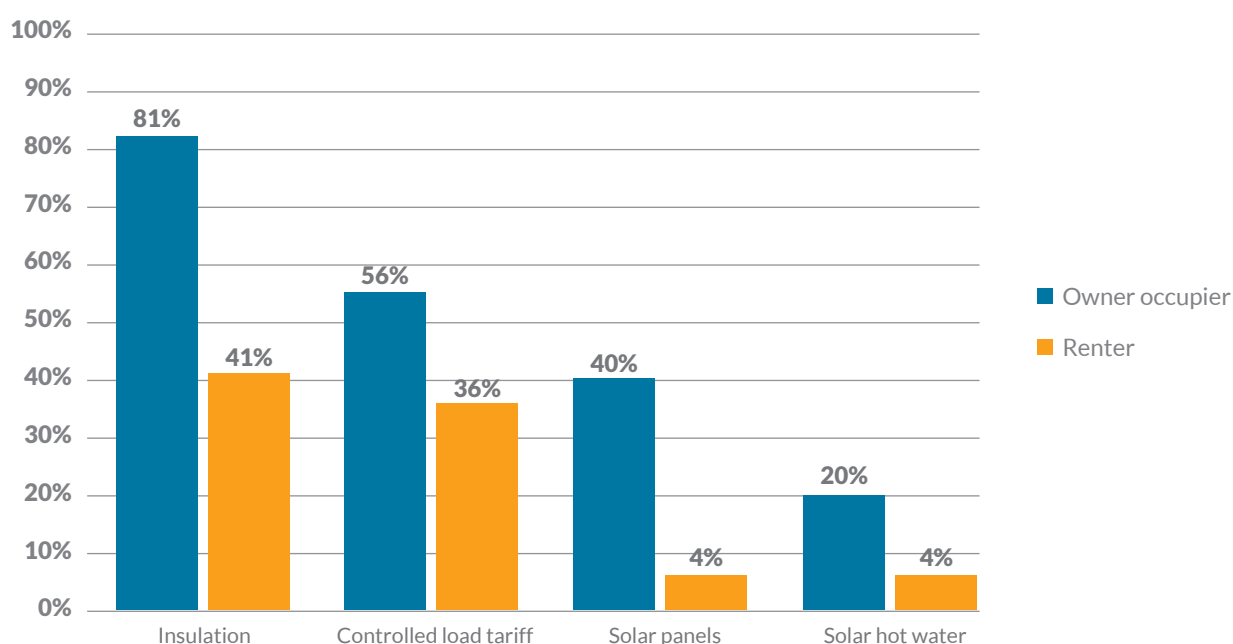
Low income and disadvantaged households are more likely to live in inefficient homes and have less efficient appliances. As a result, they end up paying more for basic energy services.⁹⁰ There is an opportunity here to provide significant emissions reduction and cost savings by improving the energy efficiency of households.

According to ABS 2008 data, almost one-half (49 per cent) of people on low incomes are living in rental properties (where low-income is defined as the bottom quintile of household incomes). People on low incomes are twice as likely to be renting as those in the highest income quintile.⁹¹

Rental properties have significantly less energy efficient features and distributive energy (see figure 10 for example of Queensland households).

Figure 10: Proportion of Queensland households with energy efficiency features⁹²

Proportion of Queensland households with energy efficiency features



⁸⁹In most cases. Recently there have been examples of new retail market offers, which essentially offer uncapped usage at a fixed price.

⁹⁰Energy Efficiency and People on Low Incomes', ACOSS, 2013, http://www.acoss.org.au/images/uploads/ACOSS_ENERGY_EFFICIENCY_PAPER_FINAL.pdf

⁹¹Australian Social Trends', Australian Bureau of Statistics, 2008, ABS 4102.0

⁹²'Choice and Control? The experiences of renters in the energy market', QCOSS, June, 2017, <https://www.qcoss.org.au/sites/default/files/QCOSS%20Choice%20and%20Control%20-%20the%20experience%20of%20renters%20in%20the%20energy%20market.pdf>

Renters are in a particularly difficult position because they have limited ability to make changes to the properties they live in and landlords have little incentive to invest in upgrades which do not benefit themselves (see Box 3 for examples of renters attempts to improve energy efficiency).

Box 3: Experience of renters seeking energy efficiency improvements

'I attempted to have insulation installed under the government's free scheme. The owner told us to get quotes, then said he would have the job done by someone who was doing all his properties. It never happened.'

'I asked to have solar panels installed, made all the enquiries re: cost etc., but the request was rejected.'

'My current landlord denied me the right to install flyscreens, despite it being a capital improvement which would improve the value of the property... They were... uninterested in tenant comfort and energy savings.'

'I am charged quite a lot of money for energy, around \$420 per bill, just for two tenants. {The retailer} said

there might also be something wrong with the thermostat as the hot water system in the garage takes ages to heat up, which results in hundreds of extra dollars per bill. The landlord will not get this fixed.'

'I requested that they [lessor] remove the gas from our property (as the bill is around \$100/Quarter and we use about \$4 of gas) & put an electric oven in so we only had one bill (the property needed a new oven). They declined.'

'[I] cancelled gas account as could not pay both electricity and gas bill, so chose just to have electricity to the property – no hot water, no gas stove – that's the reality...'

Source: QCOSS (2017) Choice and Control? The experience of renters in the energy market.⁹³

Ensuring low-income and disadvantaged households have more efficient homes and appliances enables consumers to get better value from their energy use. For example, housing energy performance has been the focus of a number of policy recommendations. In Victoria, raising a home from a 2-star to 5-star energy rating can result in a 32 per cent total energy saving, or up to \$600 in annual household savings a year.⁹⁴

Arguably the most important and cost-effective energy efficiency programs have been minimum standards for new residential buildings and minimum standards for appliances. Minimum standards for appliances are particularly important as they eventually flow through to all stock. Examples of savings include: a 25 per cent reduction in energy used by dishwashers compared to 10 years ago; a 27 reduction in energy used for lighting since the phase-out of inefficient lighting began in 2009; and a 50 per cent improvement in the efficiency of small split-system air conditioners since 2001.⁹⁵

While the benefits are clear, low-income and disadvantaged households are often unable to capitalise due to cost and access. At the state level, there are multiple promising initiatives targeted at disadvantaged households, for example:

- NSW has prioritised large scale programs targeted to low-income households, such as the Home Energy Action (HEA) program, which helps low-income household's access efficient appliances. The program follows up from their large-scale Home Power Savings Program, which 'helped more than 220,000 low-income households collectively save 120,000 MWh of electricity and over \$36 million on their power bills each year'.⁹⁶
- South Australia delivers support to low-income households through the Retailer Energy Efficiency Scheme (REES), which includes a priority group where a fixed percentage of savings needs to occur and where there is a requirement for a certain number of

⁹³ 'Choice and Control? The experiences of renters in the energy market', QCOSS, June, 2017, <https://www.qcoss.org.au/sites/default/files/QCOSS%20Choice%20and%20Control%20-%20the%20experience%20of%20renters%20in%20the%20energy%20market.pdf>



Participants from the BSL's Home Energy Efficiency Program. Photo © Cara Bradley, BSL

energy audits. The audits have been very popular and are regularly over-subscribed.

- The Clean Energy Finance Corporation Community Housing Program is providing finance to fund improvements in the energy performance of community housing.⁹⁷
- The NSW Office of Environment and Heritage and the Victorian Department of Human Services are running pilots for energy efficiency upgrades in the social housing stock.

Lessons can be drawn from these and other successful programs. To this end, Energy Consumers Australia is working from the Low Income Efficiency Program

(LIEEP) to develop 'a best practice voluntary guideline for service providers which will seek to reduce the barriers to disadvantaged consumers in effectively engaging with energy productivity measures and services.'

However, in the consultations a number of problems were identified with energy efficiency programs:

- With some notable exceptions, many programs run for short and uncertain periods of time. This increases their transaction costs and reduces certainty for industry.
- Many of the programs are not of a sufficient scale to address the problem they face. They often invest in

⁹⁴'One Million Homes Roundtable Summary Report', Environment Victoria, May, 2013, http://environmentvictoria.org.au/wp-content/uploads/2016/06/OneMillionHomes_RoundtableSummaryReport.pdf

⁹⁵'About the E3 Program', Energy Rating, <http://www.energyrating.gov.au/about>

⁹⁶'Government programs and financial help', NSW Office of Environment & Heritage, <http://www.environment.nsw.gov.au/households/government-programs.htm>

⁹⁷'CEFC Community Housing Program', CEFC, www.cleanenergyfinancecorp.com.au/where-we-invest/a-better-built-environment/cefc-community-housing-program.aspx

Box 4: Energy efficiency and solar for community housing⁹⁸

The St George Community Housing project has been exploring what can be done in community energy space. In partnership with the NSW government, St George Community Housing is retrofitting 1400 community housing developments across Sydney. The state government is contributing half the funds to the \$5.4 million project, which is expected to cut energy

bills across the SGCH properties by about \$800,000 a year. The outcome is an average of \$570 dollars each year per property that tenants won't be spending on their energy bills. The project will include the installation of rooftop solar PV, ceiling insulation and LED lighting, and the replacement of electric water heaters with heat pump systems.

only small ticket items and not where large-scale savings can be made, such as hot water and insulation.

- Only some tailored programs include rooftop solar PV.

There is a need for federal and state governments and local councils to work cooperatively together to co-fund ongoing programs for disadvantaged and low-income households that provide access to energy efficient technologies, solar PV and other distributed resources and provide a trusted source of information. Higher levels of support should be provided to the most disadvantaged households.

A high priority should also be given to upgrading the public and community housing stock, which is essential to improve affordability for some of the most disadvantaged in the community (see Box 4 for example). Governments should be showing leadership and noting that investment in energy efficiency and renewable energy for the most disadvantaged in our society would meet multiple government objectives.

Energy performance ratings and disclosure at point of sale or lease have worked well in the commercial buildings sector and can be beneficial in the residential sector. We note the Council of Australian Governments' National Energy Productivity Plan 2015–2030 (NEPP) includes a commitment to 'improve residential building energy ratings and disclosure'.

However, these mechanisms do not protect low-income and disadvantaged households who have very little ability to choose their accommodation. Introducing minimum energy performance standards for existing residential buildings, with a particular focus on rental properties to overcome the landlord-tenant split incentive, ensures that all households should be able to achieve an acceptable minimum level of energy efficiency. This measure received very strong support throughout our consultations and should be a priority

for governments. It was noted that implementation of such standards would need to be done in ways that minimised the risk of raising accommodation prices. Minimum standards for residential properties are currently being reviewed by NSW and Victorian governments.

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Box 5: Program helps low-income households switch to efficient hot water systems

Many low-income households incur high energy bills simply because the appliances they use are old and inefficient. This is particularly the case with hot water systems, which account for around 20% of an average household's energy use. With the support of the Australian Government's Low Income Energy Efficiency Program, the Brotherhood of St Laurence developed the Home Energy Efficiency Upgrade Program. It helped 750 low-income households in Victoria switch from old hot water systems to highly efficient new ones, using a combination of concessional finance, subsidies and the Brotherhood as a trusted intermediary in making the purchase. Most households reported that without the program they would have waited until their hot water system broke down to replace it, and that often results in a rushed decision to buy a system that costs less to buy but more to run. With the Brotherhood's program 73% of participants a highly efficient solar or heat pump hot water system, and the remainder acquired an efficient instant gas or gas storage system. All will benefit from lower energy bills and contribute to a reduction in carbon emissions. The project demonstrated that - with the right mix of information and incentives - certain low income households can switch to more efficient appliances, even if they cost more up front.





7. OUTCOME 4: ROBUST CONSUMER PROTECTIONS

RECOMMENDATIONS

4.1 COAG Energy Ministers undertake a review of disconnection laws in light of the essential nature of electricity, with a view to ending the tactic of disconnecting households because of inability to pay.

4.2 COAG Energy Ministers request a review of the current National Energy Customer Framework (NECF), with the following reforms in mind:

- Introduce governing principles along the following lines:
 - It should be easy for people to engage and make effective decisions.
 - Appropriate consumer protections should be applied to all energy products and services.
 - The benefits of a transforming market should be shared across the whole community.
- Review of current best practice protections in line with principles.
- Establish a range of no-regrets initiatives:
 - Testing the need for, and form of, market interventions against real consumer decision-making.
 - Ensuring adequate access to justice by expanding the jurisdiction of energy Ombudsman schemes.
 - Requiring energy service providers to identify the consumer's purpose in acquiring a service, to ensure providers are appropriately identifying programs to help vulnerable demographics access new products and services.
- Apply updated consumer protection framework in all states, with derogations for stronger protections allowable.

4.2 COAG Energy Ministers investigate additional measures that retailers could implement for those customers identified through Payment Difficulties or Hardship initiatives in order to prevent re-occurring hardship. These measures could include energy education, access to financial counselling, and support to access energy efficiency upgrades and distributive energy.

The need for robust consumer protection for disadvantaged households reflects the fact that electricity is recognised as an essential service, and some form of universal access to affordable energy services is required.

We note that the current transition is happening so rapidly that current consumer protections are already inadequate.

Our consultation highlighted three priority areas for ensuring robust consumer protections:

- Rethinking the policy around disconnection.
- Ensure best practice consumer protections apply in all states.
- Review the current consumer protection framework to reflect the changing market and support a more inclusive and equitable energy system, including an expanded role for the State Ombudsman.

7.1 Disconnections

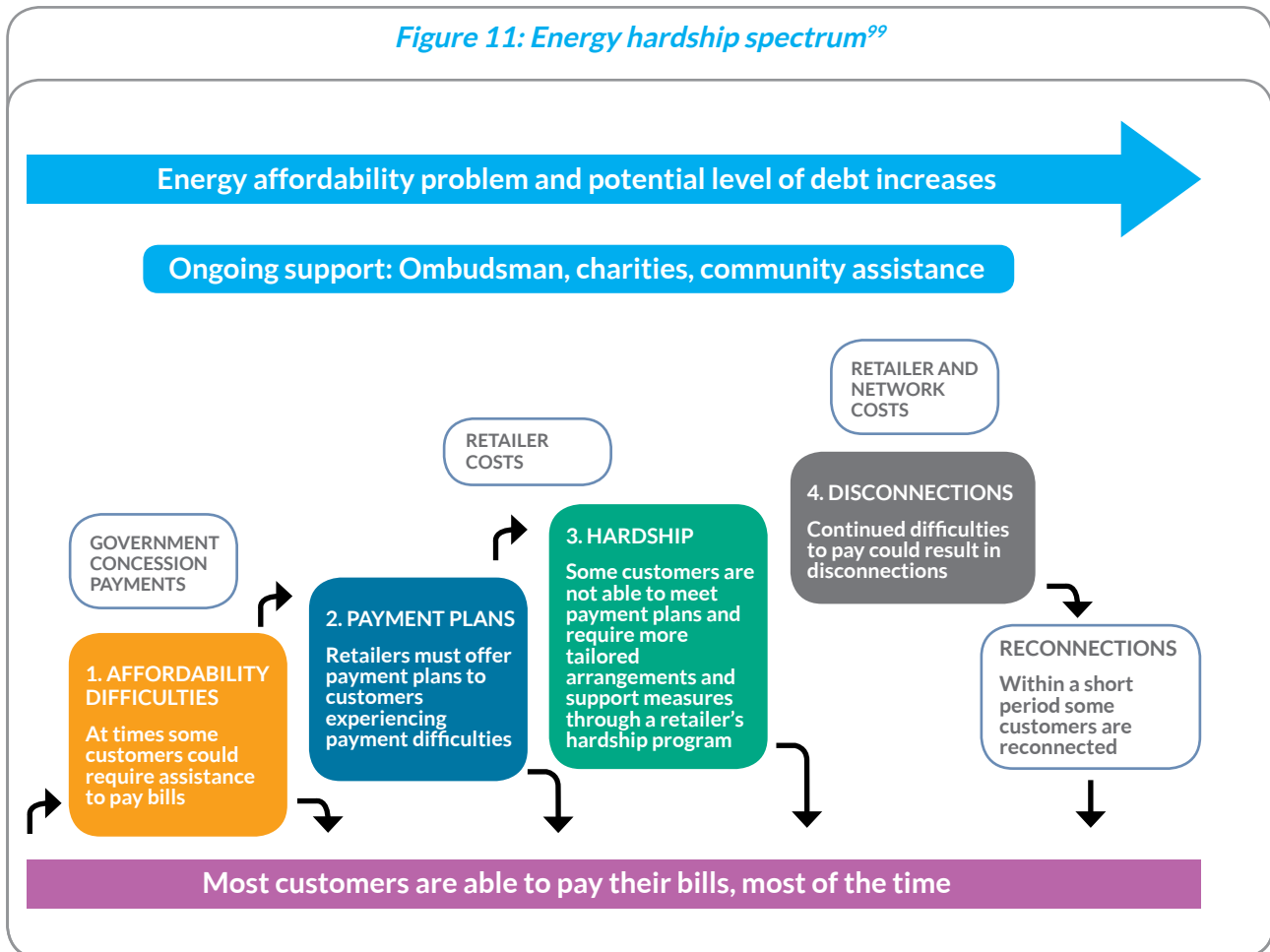
Access to reliable and affordable electricity is considered essential and a basic human right, critical to the health, wellbeing, economic participation and social inclusion of Australians. This was acknowledged by the Productivity Commission in recommending separate consumer law protections for energy consumers (PC 2008, p108):

'There are good reasons to supplement the generic consumer law with specific measures to protect and empower energy consumers. They are essential services, with disconnection having potential harmful effects; billing is lumpy increasing the risk of financial stress for low-income households; price menus and product bundling can be complex; and some areas of supply are not yet fully competitive.'

However, under current consumer protection laws, if customers fail to pay their electricity or gas bills after a number of support mechanisms are implemented, as outlined in figure 11, a household can be disconnected as a last resort.

⁹⁸ Murray Trembath, 'St George Community Housing tenants to benefit from "green" energy upgrades', St George & Sutherland Shire Leader, August 4, 2016, <http://www.theleader.com.au/story/4071387/power-bills-to-be-cut/>

Figure 11: Energy hardship spectrum⁹⁹



Alarmingly, but not surprisingly given the rising electricity prices, household disconnection rates have grown significantly in the last six years. A study by KPMG found that between 2015/2016 around 160,000 households were disconnected for non-payment of their electricity or gas bill, up approximately 47 per cent since 2009/10.¹⁰⁰

A study by the Public Interest Advocacy Centre (PIAC)¹⁰¹ in 2013 found people more likely to be disconnected from utilities were (see box 5 for some case studies):

- Unemployed people (40 per cent in the survey compared to 6 per cent in the general NSW population).
- Sole parents (29 per cent compared with 16 per cent).
- Aboriginal and/or Torres Strait Islander people (15 per cent compared to 3 per cent).

- Almost half (45 per cent) of respondents reported a household member with one of a number of listed health conditions. Mental health issues were present in 30 per cent of households disconnected from utilities.
- Renting (43 per cent compared to 24 per cent) or living in public housing (24 per cent compared to 3 per cent).
- 44 per cent of those surveyed were in paid employment, the 'working poor'.

This was a change from previous reports, where most people who were disconnected were receiving welfare payments.

Further, a Victorian Government investigation into disconnections found:

- Customers in payment difficulty often use more energy than other customers.

⁹⁹ 'Quantifying the cost of customers experiencing difficulties in paying energy bills', Energy Consumers Australia, KPMG, November, 2016, http://energyconsumersaustralia.com.au/wp-content/uploads/KPMG-ECA_Estimating_costs_associated_with_payment_difficulties_and_disconnections_October_2016.pdf

¹⁰⁰ Ibid.

¹⁰¹ Allison Wallace, 'Cut Off III: the social impact of utility disconnection', PIAC, April 14, 2013, <https://www.piac.asn.au/2013/04/11/cut-off-iii-7993/>

- Existing hardship programs were generally ineffective at preventing customers from accumulating further debt.
- By the time help is offered, it is often too late to assist customers in managing their debt.
- Some retailers offer more help than others. There is no consistent or minimum standard of assistance.

And a recent study by St Vincent de Paul in Victoria revealed that advanced metering is also increasing disconnection.¹⁰²

Disconnections negatively impact on health and wellbeing, prevent heating and cooling, affect food storage and consumption, hygiene maintenance, and ability to participate in education and employment (see Box 6 for case studies). KPMG has estimated the annual cost incurred by retailer and customers associated with disconnections and subsequent reconnections is approximately \$11 million.

Box 6: Case studies of Disconnections

27 year old Emira (a public housing tenant from regional Victoria) detailed the experience of having her energy disconnected while trying to escape a violent relationship: 'I had a domestic issue and [the retailer] was demanding money that day. I was more worried about my son's safety: I just wanted to get him out of there. I hung up the phone and they rang me back in half an hour, while I'm trying to get ready to get out... but they don't care. They just want their money.' Originally from Bosnia, she now has no family in Victoria. She is not currently working and receives a Centrelink payment. She was disconnected for 5 days. Emira says a friend provided some food for Jack, while she went without. It was cold and they used blankets to keep warm. Emira worried about the impact on Jack. Emira sought help from the St Vincent de Paul Society (Vinnies), who helped them pay for reconnection.

Sarah is an inner-Melbourne woman in her forties in a private rental apartment. With a tertiary degree and regular work, Sarah had always been able to manage her finances; but things changed after she was held up in an armed robbery, and later assaulted. She developed post-traumatic stress disorder (PTSD), anxiety and depression. Suffering regular panic attacks and agoraphobia, she stopped working and fell behind on bills. She was disconnected by her energy company over \$220. She told RMIT researchers that '...given that they knew my situation and in the end I only owed \$220.00... I just wonder whether there are better ways to go about addressing these issues than just cutting someone's power off.' After speaking to MoneyHelp, Sarah received support from Energy and Water Ombudsman Victoria, who negotiated with the energy retailer for reconnection.

Karen is a single mother of four experiencing domestic violence who had her parenting payment switched to Newstart allowance when her children were removed because of the domestic violence. Karen was suffering depression, anxiety and post-traumatic stress, at one point she was hospitalised. Of the \$500 per fortnight, \$350 went to rent. Karen visited her children 250 km away three times a week using most of her leftover money on petrol. Karen amassed \$5,000 in rent and bill debts. Because Karen had been on a hardship program before but had been disqualified when she missed payments, the retailer would not let her back on. She was disconnected. Her food went off, the fridge blew up because of water melting into the motor, she could not cook or have warm showers. She eventually got help from Energy and Water Ombudsman Victoria, who spoke to the gas and electricity retailers on her behalf, discovering the energy company had not been applying concessions Karen was eligible for, which reduced some of the debt.

Lyn is 58 years old. She lives with her daughter in Melbourne's north, and they have experienced several energy disconnections. Lyn is a survivor of domestic violence, and her financial problems stem from there. After years of abuse, Lyn took out an intervention order against her husband. After periods of work, Lyn suffered four heart attacks related to a nervous system condition and has been unable to work since. Debts piled up. Sometimes Lyn would go several days without eating so she could feed her daughter. Lyn was disconnected in the middle of winter. Lyn and her daughter used public showers and cooked on park BBQs. Centrelink referred her to a financial counselling service. The counsellor discovered Lyn was eligible for a medical cooling concession, and helped her get reconnected.

Source: Consumer Action Law Centre (2015) *Heat or Eat: Households should not be forced to decide whether they heat or eat*.¹⁰³

The research above indicates that householders who find themselves disconnected are in challenging circumstances and the current system is failing them. As a result of the investigation and consultation, the Victorian state government recently proposed a code change in an attempt to reduce disconnections, where certain conditions must be met before a customer can be disconnected from their energy supply. These conditions include the following:

- The retailer must have provided three minimum levels of assistance to which the customer is entitled.
- The retailer must have issued a disconnection warning notice.
- The retailer must have used its best endeavours to contact the customer prior to disconnection (after the relevant warning notice period is over).

While an improvement, responding by providing more payment options still seems inadequate to address a systemic problem. The critical need to provide education and support to address underlying problems to prevent repeated hardship to customers was raised in a number of consultations.

Some consumer advocates have called for retailers to be removed from decision-making and for an independent panel to make the decisions.

In the consultations, there was an overwhelming concern that disconnections are an inappropriate response to an essential service and basic human right. Some conversations were had around whether 'restricting electricity' as a last resort might be more appropriate than disconnection, but even this solution has its drawbacks.

Given the essential nature of electricity and the negative impacts of disconnections on individuals, families and society, consultation participants called for alternative measures to be explored instead of disconnections, with a view to ending the tactic of disconnecting households because of inability to pay. Detailed policy, including cost implications, needs further exploration.

7.2 Consumer protection framework

7.2.1 Current consumer protection framework should reflect 'best practice'

In considering the essential nature of electricity, the Productivity Commission called for the development of

a national energy consumer protection scheme and for that scheme to apply to all jurisdictions:

... Australian governments should agree to the longer-term goal of a national consumer protection regime for energy services, with a single set of requirements to apply in all jurisdictions participating in the national energy market. Those requirements should be enforced by the Australian Energy Regulator.

This recommendation led to the creation of the National Energy Customer Framework (NECF). The NECF complements the generic consumer protections provided by Australian Consumer Law in the jurisdictions that choose to adopt the framework.

However, the NECF does not currently apply in Western Australia or the Northern Territory, and only applies in a limited manner in Victoria, and Tasmania hasn't applied the gas rules. It is often implemented differently in each state, with some states making their own variations (called 'derogations'), some of which are viewed as highly beneficial to low-income and disadvantaged households and should be implemented in other jurisdictions. For example, good derogations in Queensland include caps on exit fees at \$20, and a requirement for retailers to provide customers with 'individualised, advance notice of price increases including loss of a discount or benefit'. Both of these derogations help encourage active participation in the market as consumers are directly notified when their prices go up so have an opportunity to seek a better offer and have comfort in knowing they won't be penalised for doing so.

Victoria has developed its own consumer protection framework that is considered by many to be stronger than the NECF. For example, Victoria's Wrongful Disconnection Compensation Scheme means that every time a retailer disconnects someone without following correct procedure (i.e. without offering them concessions or a payment plan etc.) they have to pay the customer a certain amount for every day they went without power.

The Hardship Review conducted by the Victorian Essential Services Commission in 2016 and the subsequent Payment Difficulties Safety Net project can be regarded as a test case in robust consumer protection. This sits alongside recent work by the Australian Energy Regulator under the NECF on a

¹⁰² 'Households in the dark. Mapping electricity disconnections in South Australia, Victoria, New South Wales and South East Queensland', St Vincent de Paul Society and Alviss Consulting, May, 2016, <https://www.vinnies.org.au/content/Document/VIC/2016-June-Households-in-the-dark2.pdf>

¹⁰³ 'Heat or Eat: Households should not be forced to decide whether they heat or eat', Consumer Action Law Centre, 2015, <http://consumeraction.org.au/wp-content/uploads/2015/08/Heat-or-Eat-Consumer-Action-Law-Centre.pdf>

Sustainable Payment Plans Framework.¹⁰⁴ Both initiatives are aiming for ‘best practice’ in the way customers are treated. More consideration can and should be given to offering additional support to prevent ongoing hardship such as energy education, support to improve energy efficiency and possibly even solar PV’s.

Best practice measures should be reviewed and included in the NECF and applied across jurisdictions.

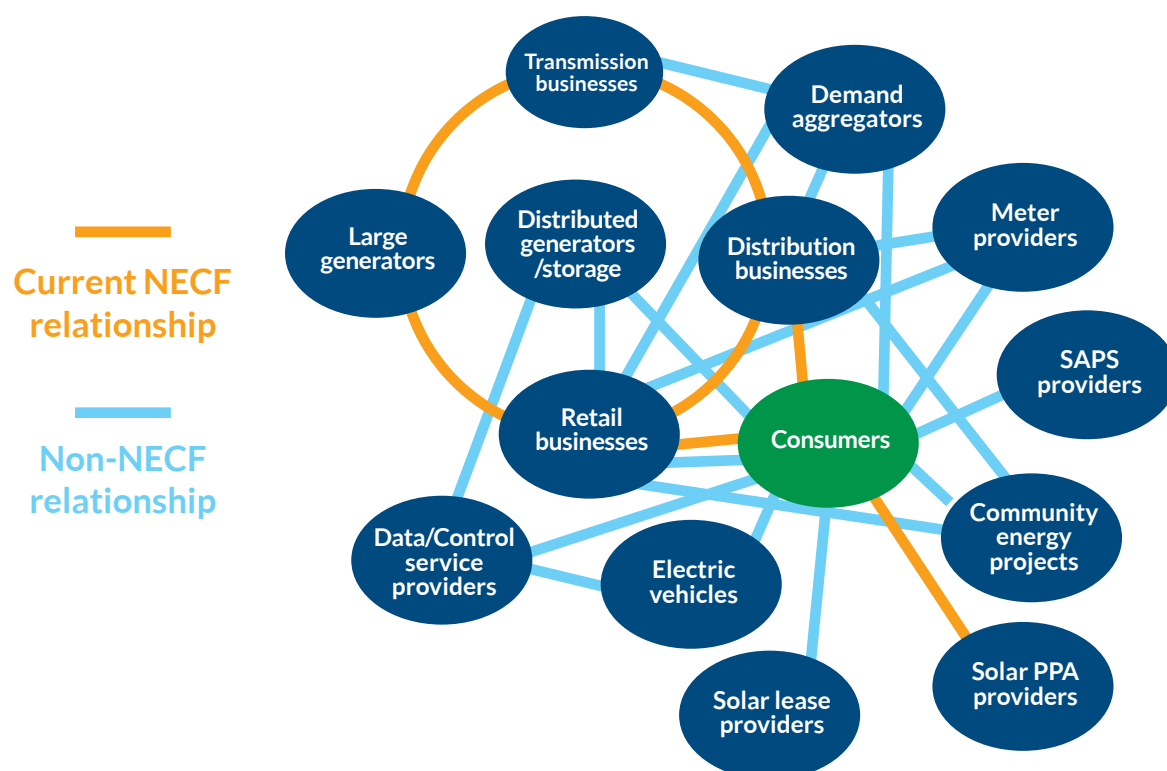
7.2.2 Consumer protection framework needs to be expanded

The energy market is becoming more complex for consumers, with new products and services such as solar leasing and energy storage management emerging in response to changing technologies. As noted by the Alternative Technology Association (ATA) in their recent report ‘Empowering the Future: Appropriate Regulation and Consumer Protection in Emerging Energy Markets’:

‘...such ‘behind the meter’ products and services are not regulated beyond the generic provisions of Australian Consumer Law (ACL), and these customers are not benefiting from the many ‘energy-specific’ customer protections that have developed over time – special rules such as supply guarantees and hardship provisions – that reflect the vital importance of an energy supply.’¹⁰⁵

The ATA has identified 20 possible future relationships arising from potential new services in the energy market, more than half of which involve consumers directly. As shown in figure 12, all of the new services and relationships currently sit outside of the current NECF and the equivalent Victorian Framework, which is primarily delivered by the Energy Retail Code. This means these new energy services are currently sitting outside energy-specific consumer protections.

Figure 12. The connecting bars represent current and potential future energy relationships.
Those in red are covered by National Energy Consumer Framework (NECF) today; those in blue are not.¹⁰⁶



¹⁰⁴ Sustainable payment plans – A good practice framework for assessing customer’s capacity to pay Version 1; AER, July, 2016, <https://www.aer.gov.au/system/files/AER%20Sustainable%20payment%20plans%20framework%20-%20Version%201%20-%20July%202016.pdf>

¹⁰⁵ Dean Lombard, ‘Empowering the Future: Appropriate regulation and consumer protection in emerging energy markets’, ATA, November, 2016, http://www.ata.org.au/wp-content/uploads/2016/11/Empowering-the-future-appropriate-regulation-and-consumer-protections-in-emerging-energy-markets_ATA.pdf

The ATA also identified the services that may be provided by any of the entities noted in Figure 12, which may involve the operation, leasing and/or outright sale of household-scale energy generation, consumption, and management. These services include:

- Residential demand response
- Energy generation systems
- Energy storage systems
- Electric vehicles
- Operation of smart appliances
- Direct load control
- Optimisation services across multiple loads and energy sources
- Load shedding
- Community owned decentralised renewable energy
- Energy sold between consumers on the same distribution network (wheeling arrangements, or micro grids)
- Solar energy sold in land sharing community arrangements between strata owners, strata corporations and tenants

- Energy sold through urban-regional council partnerships
- Energy sold via smart meters (which will offer possibilities for third parties to be involved in providing a range of smart meter services)
- Off-grid energy sales
- Groups of investors who generate renewable energy to sell for their own use
- Small off-grid networks

The ATA note that these services don't all require the same consumer protections; but they all require some consumer protections, depending on the severity of impact on the consumer of market failure or financial hardship.

The Consumer Action Law Centre's (CALC) report *Power Transformed: unlocking effective competition and trust in the transforming energy market* outlines the potential detriment for consumers in the new energy market¹⁰⁷ (see Table 2).



¹⁰⁶ Ibid.

¹⁰⁷ 'Power Transformed', Consumer Action Law Centre, July, 2016, <http://consumeraction.org.au/wp-content/uploads/2016/07/Power-Transformed-Consumer-Action-Law-Centre-July-2016.pdf>

Table 2. Potential detriment for consumers in the new energy market

Detriment	Example
Lack of access to basic consumer protection	Many new products and services may fall outside of the current regulatory framework, and protections that ensure a right to supply, hardship arrangements and access to ombudsman schemes may not apply.
Buck-passing and blame shifting	When disputes arise in new products which may require a network of relationships to deliver, the potential for buck-passing and blame-shifting between parties is high.
Miss-selling	As products get more complex, some companies may turn to sales tactics relying on product complexity to mask inappropriate or unsuitable products and services.
Poor decision-making	Consumers may find it difficult to make decisions in their own interest when the number of choices, and complexity of those choices increase.
Long lock-in contracts	Long-lock in contracts (e.g. 15 years for a solar leasing) reduce consumer choice and flexibility.
Complex Financing Tools	New financing arrangements for products and services (e.g. solar leases and power purchase agreements) are complex and may include unclear costs and inconsistent regulatory oversight.
Inability to access the new market	Some consumers may face systematic barriers to participation in the new personalised electricity market; these people may include those with low incomes, poor literacy skills, language barriers and renters.
Difficulty comparing products and services	Bundled products and services that are increasingly marketed to individuals based on their personal usage profiles may become more difficult to compare because inclusions, exclusions and technology may differ.
Market failure due to segmentation	Downward pressure on energy prices through mass market competition may be undermined in a market where retailers can increasingly identify and target active, affluent households with individual deals.
Exclusion through complexity	People who could benefit from switching to new products and services may not engage if the information is too complex, or if the reason for participation is not clear.
Hardship in off-grid scenarios	Off-grid households may experience a reduced supply or loss of supply if they fall into hardship, or during a dispute with their technology provider.
Reduced choices in off-grid communities	Consumers in off-grid communities may have a reduced ability to choose their preferred electricity provider and may face higher costs where retail competition is reduced.

CALC notes that ‘different people will have different needs in the new energy market. Strong innovation policy may be sufficient to support some, while others may be more reliant on effective competition, clear education campaigns, or more traditional essential service regulation to continue to get fair and affordable energy supply in a decentralised and tech-heavy energy market.’¹⁰⁸ CALC goes on to advocate that in order to support the needs of all consumers, it is important to:

- Provide meaningful information and choices which take into account real consumer decision-making biases;
- Ensure the adequacy of consumer protections across all products and services; and
- Share the benefits of energy market innovation across the whole community, including the disadvantaged demographics who may face barriers to accessing new products and services.

Further, the ATA contends that ‘by extending appropriate regulation to all energy products and services, the evolving energy market will better embrace the growing diversity and pace of innovation, while promoting:

- Horizontal equity with regard to consumer access to a sufficient supply of energy;
- Innovation and competition in provision of energy services; and
- Consumer confidence in the energy market’

The ‘Power Transformed’ report, whose reference group included a mix of representatives from consumer advocates, retailers, transmission businesses, government, and academia, argues that while energy businesses and governance institutions are best placed to develop initiatives and interventions, the following principles are required to guide these developments, to ensure that support for better consumer outcomes and trust are embedded into the development of products, services and regulations:

- Principle 1: It should be easy for people to engage to make effective decision;
- Principle 2: Appropriate consumer protections are applied to all energy products and services; and
- Principle 3: The benefits of the transforming energy market should be shared across the whole community.

The ‘Power Transformed’ report also argues that from a consumer perspective, no-regrets initiatives that could be adopted in the short to medium-term include:

- Testing the need for, and form of, market interventions against real consumer decision-making.
- Ensuring adequate access to justice by expanding the jurisdiction of energy Ombudsman schemes.
- Requiring energy service providers to identify the consumer’s purpose in acquiring a service, to ensure it is appropriate.
- Identifying programs to assist disadvantaged demographics in accessing new products and services.
- Targeting concessions to address need rather than tying them to specific supply arrangements.

Both the CALC and the ATA advocate for an expanded role for state-based ombudsmen. ATA note that extending coverage of energy ombudsman schemes to cover providers of other energy products and services requires a number of changes including developing new membership categories and fee structures within ombudsmen, which may not be simple but is solvable. An extended role for ombudsmen is currently being explored in Victoria, New South Wales and South Australia.¹⁰⁹

ACOSS, BSL and TCI acknowledge that expanding and developing more consumer-focused customer protection frameworks will likely incur additional costs which should be shared between government, retailers, civil society and consumers.

Different people will have different needs in the new energy market.

¹⁰⁸ Ibid.





8. OUTCOME 5 – ALL
HOUSEHOLDS HAVE A CAPACITY
TO PAY THEIR ENERGY BILLS

RECOMMENDATIONS

5.1 The federal government improves the adequacy of income payments including Newstart and Youth Allowance.

5.2 Federal and state governments jointly review concession schemes to assess:

- Opportunities to improve and better target concessions to disadvantaged households, with a preference towards a more equitable percentage-based system, and to harmonise their structure across jurisdictions, where substantive differences exist.
- Ways to improve emergency relief payments, to simplify application processes, and provide greater clarity for customers.
- Ways to better promote availability of concessions nationally.

5.3 Federal and state governments align policy, advocacy and research initiatives with corresponding housing affordability initiatives. Expand scope to include stronger integration with understanding of transport costs.

As indicated earlier, electricity prices have risen steeply. With more and more households participating in retail payment options, seeking hardship payments and being disconnected, demonstrating many people's 'capacity to pay' is no longer possible.

Our consultation highlighted two priority areas for ensuring there is an adequate safety net for low-income and disadvantaged households:

- Improving capacity to pay by increasing social security payments, in particular Newstart and Youth Allowance.
- Improve energy concessions.

8.1 Inadequate social security payments

According to Poverty in Australia 2016,¹⁰⁹ 13.3 per cent of the population (three million people) lived below the poverty line in 2013-14. Of those people, 57.3 per cent relied on income support payments as their main source of income. To illustrate the challenge these people face it is worth noting that those on Newstart Allowance are at least \$100 per week below the poverty line, and those on Youth Allowance are at least \$150 per week below the poverty line. These are untenable situations given increases in energy costs sustained over the last decade.

Social security reforms over the last few years have meant there is a growing number of people shifting off other payments to receive lower-rate social security payments (mainly Newstart), which increases the likelihood they will live in poverty. At the same time, a larger proportion of people receiving Newstart have a partial work capacity due to illness or disability or because they are primary carers of children. These groups have more difficulty finding suitable employment and remain on unemployment payments for extended periods of time.

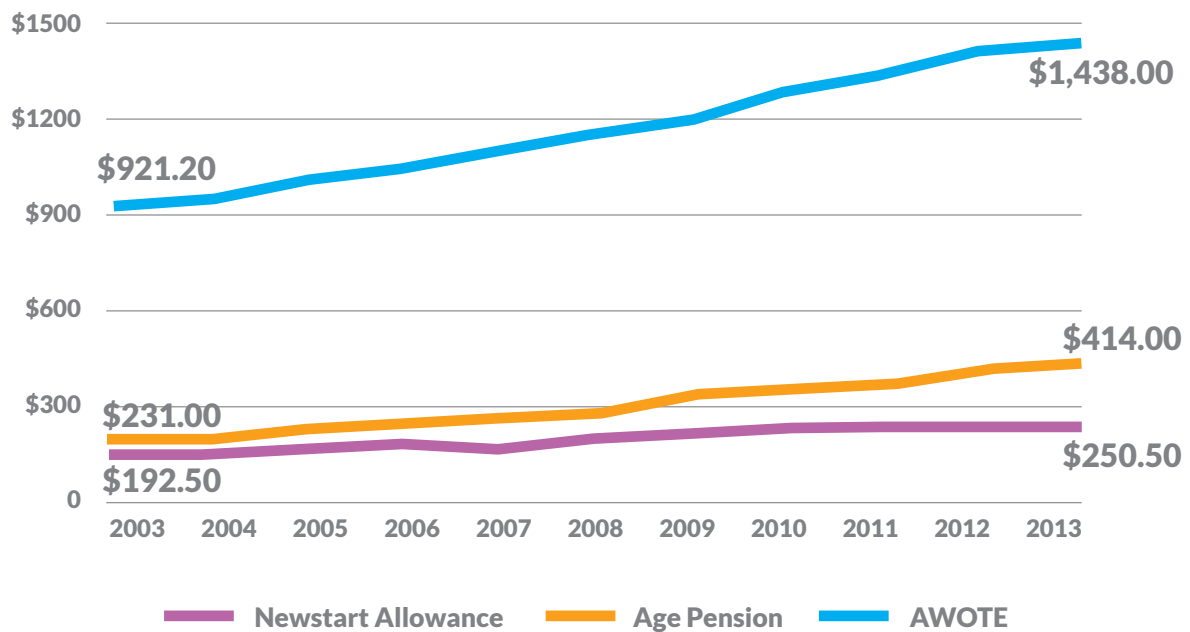
At 5.7 per cent in June 2017,¹¹¹ unemployment remains stubbornly high. Further, over half a million people – 70 per cent of those receiving unemployment payments – have had to rely on income support for more than 12 months and many face major barriers to work.

Most income support payments are indexed to price inflation rather than wage inflation. And some payments have recently had increases frozen for the next three years. People on allowances such as Newstart, for example, are particularly disadvantaged because their allowances have not increased in real terms since 1994 (see figure 12).

With more and more households participating in retail payment options, seeking hardship payments and being disconnected, demonstrating many people's 'capacity to pay' is no longer possible.

¹⁰⁹ Dean Lombard, 'Empowering the Future: Appropriate regulation and consumer protection in emerging energy markets', ATA, November, 2016, http://www.ata.org.au/wp-content/uploads/2016/11/Empowering-the-future-appropriate-regulation-and-consumer-protections-in-emerging-energy-markets_ATA.pdf

Figure 13: Trends in payment rates compared with average wages



Source: ACOSS 2016 Poverty in Australia Figure 18

However, as outlined in the introduction, while electricity prices from 1984 to 2007 roughly matched inflation, after 2007 electricity prices accelerated ahead of inflation, increasing 83 per cent between 2008 and 2013 (unlike social security payments).

There is a real need to lift the safety net of social security payments in Australia in line with the increasing costs of living, including housing affordability and energy prices. The most critical of these is Newstart.

8.2 Concessions

Energy concessions provide an important buffer against high prices, but they vary in amount, coverage and eligibility from jurisdiction to jurisdiction. Some of the lowest income households – such as those on the woefully inadequate Newstart – miss out on the Commonwealth utility support (pension supplement or utility allowance). Those on Newstart also miss out on

state energy concessions in some jurisdictions. Refugees are ineligible for concessions. Householders who are working but on relatively low, or variable incomes, may also miss out on concessions altogether.

The KPMG report notes that the changes to the assets threshold from \$1.15 million to \$823,000 from 1 January 2017 will allow fewer retirees to access the pension card and the concessions that it provides. AEMCs¹¹² customer research found that some customers who are particularly disadvantaged may not be eligible for concessions.

There are almost 40 different schemes available across Australia, (See KPMG report with a full list of jurisdictional concessions¹¹³), and as shown in Table 3 below, some states provide significantly more support than others.

¹¹⁰ The poverty line is drawn at 50 per cent of median after-tax income.

¹¹¹ '6202.0 - Labour Force, Australia, May 2017', Australian Bureau of Statistics, June 15, 2017, <http://www.abs.gov.au/ausstats/abs@/mf/6202.0>

¹¹² '2016 Retail Competition Review, Final Report', AEMC, June 30, 2016, www.aemc.gov.au/Markets-Reviews-Advice/2016-Retail-Competition-Review

¹¹³ Quantifying the cost of customers experiencing difficulties in paying energy bills', Energy Consumers Australia, KPMG, November, 2016, http://energyconsumersaustralia.com.au/wp-content/uploads/KPMG-ECA_Estimating_costs_associated_with_payment_difficulties_and_disconnections_October_2016.pdf

¹¹⁴ Ibid.

Table 3: Value of jurisdictional and Commonwealth rebates to customers¹¹⁴

State	Electricity rebate (\$ per customer per annum)	Gas rebate (\$ per customer per annum)	Total/combined
ACT			\$426.46
NSW	\$235.00 - \$258.50	\$90	\$325 - \$348.50
NT	\$462.82 plus an reduced consumption charge of \$0.091 per Kwh	none	\$462.82 +
QLD	\$330	\$70	Up to \$400
SA			\$215.00
TAS	\$483.80	none	\$483.80
VIC	17.5% off electricity bills	17.5% off winter gas bills	
WA			\$233.95 (incl. GST)
Cwth			\$609.20

Victoria's percentage-based electricity concession scheme was acknowledged by many in the consultation as the most equitable and comprehensive. It provides a proportional electricity concession of 17.5 per cent on bills for the entire year (after discounts). As a result, it scales to the household's energy usage, helping to better target those most in need.

AEMC retail competition report¹¹⁵ found jurisdictional differences increase the compliance burden on retailers required to administer these programs across multiple jurisdictions. This can reduce customers' choice of retailers, as often it is the smaller retailers without sophisticated systems and large compliance teams who are most affected, restricting their ability to compete. AEMC recommended that greater consistency in the mechanisms for delivering concessions (as distinct from the level of concessions) across jurisdictions would reduce this burden.

A comprehensive report by KPMG for Energy Consumers Australia estimates that the total cost to governments of energy concession schemes (electricity and gas) is forecast to be \$875m in the 2016/17 Financial Year. Total GST receipts from residential electricity and gas expenditure is estimated at approximately \$1,600m. Concession schemes can therefore be considered to return around 55 per cent of the GST revenue raised. More targeted, percentage-based schemes could provide additional savings,

especially if a concerted effort is made to improve energy efficiency in residential homes.

In addition, AEMCs¹¹⁶ customer research also suggests that some customers who may be eligible for concessions are not aware of them, indicating more concerted effort needs to be made to increase awareness.

AEMC's 2016 Retail Competition Review and the National Energy Affordability Roundtable¹¹⁷ recommended a national review of concessions across jurisdictions to improve and align these measures nationally and to improve targeting. Concessions reform, with a focus on more equitable models like percentage-based models, was seen as one of the top five priorities in our national consultations.

8.3 Capacity to pay linked to housing

There is overwhelming evidence that energy vulnerability is directly linked to housing stress. As the most significant fixed cost to the household budget, housing has a direct impact on the affordability of all other costs. This is borne out in the income data shown in figure 1 at the beginning of the report and the disconnections research by St Vincent de Paul also discussed above.

Households reliant on social security as a major portion of their household income struggle significantly with affordable housing. For example, the Anglicare member

network surveyed 75,410 rental properties across Australia and found just 21 properties were affordable for single adults living on Newstart, and only one was suitable for young people living on Youth Allowance. Despite the higher level of pensions compared to allowances, affordable rentals were extremely limited for a single person living on any government payment. Only 780 properties were affordable for those on a parenting payment and 389 for those on Disability Support Payment. Once the level of income reaches two people on the minimum wage in a household, they can access 26.2 per cent or over 19,000 properties.

And as noted in the St Vincent De Paul's disconnection research, four of the six categories of disconnections were households in housing stress (spending more than 30 per cent of income on housing costs).¹¹⁸

Policy links to housing access and affordability are evident, yet there is little evidence of institutional interaction with energy policy.

Opportunities exist to align energy affordability research with housing and poverty research when the ABS release data from the most recent Household Expenditure Survey later in 2017.

This policy outcome has roles and responsibilities spread between federal, state and territory governments and between Federal Treasury/Finance, Human Services and Housing portfolios.

Reducing housing stress does not negate the need to also reduce energy stress.

¹¹⁵ '2016 Retail Competition Review, Final Report', AEMC, June 30, 2016, www.aemc.gov.au/Markets-Reviews-Advice/2016-Retail-Competition-Review

¹¹⁶ Ibid.

¹¹⁷ 'National Energy Affordability Roundtable', EWON, May, 2013, https://www.ewon.com.au/content/Document/SCER%20Report_National%20Energy%20Affordability%20Roundtable.pdf

¹¹⁸ 'Households in the dark. Mapping electricity disconnections in South Australia, Victoria, New South Wales and South East Queensland', St Vincent de Paul Society and Alvis Consulting, May, 2016, <https://www.vinnies.org.au/content/Document/VIC/2016-June-Households-in-the-dark2.pdf>

APPENDIX 1: POLICY SOLUTIONS GENERATED FROM RESEARCH AND CONSULTATIONS

To identify areas that are seen as particularly important and urgent, ACOSS, BSL and TCI used the Nance research paper commissioned for the project, 'Energy Access and Affordability Policy Research', as a basis to consult with over 120 community, environment and energy expert stakeholders nationally. This was done through face to face and online consultation forums.

The consultations considered and discussed in depth the merits of the high-level solutions put forward in the Nance paper. At the end of each forum participants were given dots and asked to select:

- Four top priorities within each outcome – Green
- Four top priorities across ALL outcomes – Gold
- Solutions that they strongly disagreed with – Red

The table below lists the solutions under each outcome and the scores the solutions obtained from the dotocracy.

Participants were also encouraged to identify other solutions not put forward in the Nance paper. These new solutions were included in the votes for that workshop only, but were not taken forward to subsequent workshops, so were not included in the overall scoring, but were considered in developing final recommendations. These solutions have also been included in the table.

Solutions	RED	GREEN	GOLD
Outcome 1: Electricity priced efficiently, including integrated climate policy			
Solutions identified in research paper			
S1.1 Irrespective of the mechanism(s) chosen, it is essential to minimise climate policy uncertainty. Stable climate policy is essential to efficient investment throughout the energy transition. This implies long-term consistency with Australia's international commitments.	0	34	29
S1.2 Manage the refurbishment, replacement or retirement of existing coal fired generators in ways that promote the consumer interest, public interest and the interests of affected communities.	1	35	15
S 1.3 Reconsider the extent to which decarbonisation costs are taken 'off market'.	0	3	1
S 1.4 Accelerate reform of Australian east coast gas markets.	0	5	2
S 1.5 More aggressively pursue the efficiency of retail markets.	1	8	0
S 1.6 Promote greater competition where possible.	11	3	0
S 1.7 Encourage shift of vulnerable households away from standing offer tariffs.	1	10	1
S 1.8 Promote improved grid utilisation to lower unit prices.	0	20	2
S 1.9 Carefully remove cross-subsidies with a focus on encouraging vulnerable consumers who would be better off to opt-in to smarter metering and more cost reflective tariffs.	8	10	0
S 1.10 Consider incorporating broader policy objectives into the National Electricity Objective.	1	21	6
S 1.11 Consider GST as a funding source to support vulnerable consumers.	1	8	2
S 1.12 Implement agreed Consumer Impact Principles for tariff reform – including a specific focus on fixed charges.	0	14	0

Solutions	RED	GREEN	GOLD
Outcome 1: Electricity priced efficiently, including integrated climate policy			
Solutions identified in research paper			
S 1.13 Support the development of a vibrant Community Energy sector in Australia.	0	41	7
Solutions identified in research paper			
S1.N1 Increase domestic gas reserve.	0	0	0
S1.N2 On budget measures for incentivising distributive/dispatchable energy.	0	3	3
S1.N3 Price caps.	0	2	1
S1.N4 Help people come off gas.	0	1	1
S1.N5 Network write-downs passed onto consumers.	0	3	0
S1.N6 Benchmark for fair tariffs (see home grown power plan).	0	0	2
S1. N7 Networks value local generation.	0	3	2
S1. N8 Opt in peak pricing.	0	1	0
S1.N9 Big business pay more for power and reduce impact on households.	0	0	2
S1.N10 Big business reduce demand at peak times.	0	0	0
S1.N11 Network regulatory reform.	0	4	4
S1.N12 QLD government reduce network price.	0	8	0
S1.N13 Maintain state ownership of wholesale.	0	1	1
S1.N14 More competition in wholesale.	0	3	0
S1. N15 Power purchase agreement for public housing solar.	0	2	0
S1.N16 More accountability of regulator.	0	0	1
S1.N17 Change 6.1.4 of NER to allow network payments.	0	0	0
Outcome 2: Informed and enabled consumers			
Solutions identified in research paper			
S 2.1 Development of NEM-wide awareness and engagement programs to make it easier for customers to access the best options for their circumstances and improve customer confidence in the energy markets.	0	20	3
S 2.2 Targeting vulnerable customers who are not engaged with the energy market or support services.	2	36	16
S 2.3 Strengthen the relationship between vulnerable consumers, their advocates (e.g. community workers, financial counsellors) and energy retailers.	0	30	19
S 2.4 Improving the ability of advanced metering to provide more frequent billing and near real time consumption and cost information that can minimise bill shock.	3	15	10
S 2.5 Expand information and engagement beyond purely online resources.	0	18	6

S 2.6 Incorporate Behavioural Economics into policy considerations.	3	19	4
S 2.7 Requiring statements and bills to clearly separate market-based charges (retail and wholesale) from other charges, such as regulated network charges and policy costs that apply to all customers within a jurisdiction/network.	0	29	6
New Solutions identified in consultations			
S2.N1 Utility literacy program x 2.	0	5	0
S2.N2 Home audit program.	0	2	0
S2.N3 Broker to assist home owners.	0	3	0
S2.N4 Regional energy hubs that can support greater engagement and advise on EE.	0	3	1
S2.N5 Empowerment and wellness programs.	0	2	1
S2.N6 Better bill transparency and terminology.	0	4	0
S2.N7 Hardship customers but on best deal.	0	3	1
S2.N8 Retailers make more effort to engage customers coming off discounts.	0	0	1
S2. N9 Better education on why staying on the grid is good for community.	0	2	0
S2.N10 Third Party Access to data.	0	1	0
Outcome 3 – Energy consumed efficiently and productively			
Solutions identified in research paper			
S 3.1 Overcoming landlord-tenant split incentives in rental properties (public and private).	0	34	10
S 3.2 Regulation of dwelling energy performance – minimum standards for rental properties.	0	39	23
S 3.3 Regulation of dwelling energy performance – disclosure for all residential buildings at point of sale.	0	17	3
S 3.4 Regulation of dwelling energy performance – tougher minimum standards for all new properties.	0	25	6
S 3.5 Supporting access to Distributed Energy Resources for vulnerable households.	0	18	4
S 3.6 Jurisdictions coordinating the development of NEM-wide awareness and engagement programs to make it easier for customers to access the best options for their circumstances and improve customer confidence in the energy markets (AEMC 2016a).	0	7	0
S 3.7 Coordination of state-based programs, incorporation of the implications of tariff reform and the pursuit of best practice.	0	7	0
S 3.8 Increased support for vulnerable households to access more efficient capital items.	0	27	7
S 3.9 Pursuing best practice in energy efficiency and productivity programs for vulnerable customers (including supporting ECA's Power Shift project).	0	18	0
S 3.10 On-going funding for effective energy programs that target vulnerable consumers.	0	28	8
S 3.11 A National Energy Efficiency and Productivity Agency.	0	12	4

New solutions identified in consultations			
S3.N1 More subsidised loans for efficient products.	0	1	0
S3.N2 Better urban planning.	0	1	0
S3.N3 Tenant regulation to prevent renters being locked in to electricity retailer.	0	1	0
S3.N4 Demand management target for retailers.	0	3	3
S3.N5 Solar is included in minimum standard rental properties.	0	3	0
S3.N6 solar and EE on all public and community housing.	0	7	0
Outcome 4 – Robust consumer protections			
Solutions identified in research paper			
S 4.1 Policies addressing the vulnerability of children to living in poverty as has been highlighted in ACOSS' Poverty in Australia 2016 Report – consistent with many disconnection case studies.	0	24	4
S 4.2 Expanded monitoring and consistent reporting of key indicators (Vinnies 2016, National Energy Affordability Roundtable 2013).	0	20	1
S 4.3 Nationally consistent approach to life support equipment (National Energy Affordability Roundtable 2013).	0	12	0
S 4.4 Pursuit of best practice consumer protections including concessions at a national level (National Energy Affordability Roundtable 2013, Vinnies 2016).	0	41	16
S 4.5 Policy focus on those customers identified through Payment Difficulties or Hardship initiatives that are unable to pay for ongoing consumption.	0	51	4
New Solutions identified in consultations			
S4.N1 No fault insurance.	0	0	0
S4.N2 Update consumer framework to take account of new technologies and services.	0	1	0
Outcome 5 – All households have a capacity to pay their energy bills			
Solutions identified in research paper			
S 5.1 A national review of energy concessions (National Energy Affordability Roundtable 2013, AEMC 2016a, Productivity Commission, Chester 2013, Owen 2013) to assess opportunities to better target them to customers most in need (including extending supports to the working poor) and to harmonise their structure across jurisdictions, where substantive differences exist.	0	43	18
S 5.2 A national review of emergency payments (National Energy Affordability Roundtable 2013)	1	8	1
S 5.3 Improving adequacy of some income payments such as Newstart and Youth Allowance. (Vinnies 2016, ACOSS 2016)	0	45	21
S 5.4 Forging stronger links between concession payments and energy efficiency/ productivity schemes (Chester 2013) and/or funding for Distributed Energy Resources.	0	30	2
S 5.5 Aligning research into energy affordability and vulnerability with the methodologies and publication of the ACOSS Poverty in Australia series.	0	13	2
S 5.6 Align policy, advocacy and research initiatives with corresponding housing affordability initiatives. Expand scope to include stronger integration with understanding of transport costs.	0	30	10

New solutions identified in consultations			
S5.N1 Not-for-profit retailer.	0	6	2
S5.N2 Energy as a public good/community citizenship.	0	0	5
S5.N3 Subsidies for solar come off budget and not off bill.	0	1	1
S5.N4 Scrap fossil fuels subsidies to support concessions.	0	3	3
S5.N5 Universal basic income.	0	1	0