ACOSS submission to the Review of Climate Change Policies

May 2017

Who we are

ACOSS is a national voice for the needs of people experiencing poverty, disadvantage and inequality and the peak body for the community services and welfare sector.

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.

What we do

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.

ACOSS would like to thank members of the ACOSS Climate and Energy Policy Network for input and guidance into this submission. ACOSS takes responsibility for final views and recommendations.

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Executive Summary

Australia's energy system is in crisis.

The lack of certainty in climate and energy policy is the single biggest driver of higher electricity prices. In some regions, security and reliability has been severely compromised.

Vulnerable communities and people experiencing poverty and disadvantage are being hit first and worst by the impacts of climate change and failure to deal with it. Climate change is a social justice priority.

Instead of leadership, coordination and stability, Australian people have suffered some 10 years of inaction and finger-pointing between the federal and state governments.

Australia is particularly vulnerable to a lack of action on climate change and uncertainty in energy policy. We have about 3 million people living in poverty. Long-term unemployment has tripled since the GFC, with only one job for every 10 people looking for work. We have a housing and energy affordability crisis while individuals are bowing under skyrocketing household debt. By continuing to rely on old industries we contribute to conflict over resources and destabilization of the global economic system. Our population is exposed, concentrated on our coastlines, yet far-flung in remote and regional locations.

Without strong national action on climate change, energy prices will continue to increase, job losses will affect whole communities, and extreme weather events will cause devastation affecting everyone, including our most vulnerable.

Delaying action in climate and energy policy will increase costs to all of us.

Solutions to address climate change are well developed. Individuals, businesses, investors, communities, people have decided and are doing their bit. It is government that lags dangerously behind. National action which is inclusive and equitable is needed now.

Vulnerable communities and people experiencing poverty and disadvantage are usually the first and hardest hit by the impacts of climate change because they are least able to cope, adapt and recover. Tackling climate change is a social justice issue.

Australia must urgently adopt national policies and action that will contribute to limiting global warming to 1.5 degrees in order to prevent further damaging climate change. So far, we are failing.

Australia is particularly vulnerable to the impacts of climate change and lack of national policy to address it.

There are about 3 million people, including more than 750,000 children, living below the poverty line. Housing and energy prices and levels of household debt are at unprecedented levels. Despite being one of the wealthiest countries in the world, we have the second highest rate of poverty among wealthy OECD countries, after the United States.

Our economy is experiencing major changes, with long-term employment tripling since the Global Financial Crisis. Jobs in traditional industries are being lost and not replaced. Our climate is susceptible to extremes of weather conditions. Most of the population is concentrated in coastal regions with the vast interior more sparsely populated across regional and remote areas.

People on low and modest incomes and vulnerable communities are already being hit hard by the impacts of climate change and a lack of national policies and action to properly tackle it. The impacts are already serious.

Energy prices are skyrocketing. Electricity prices have increased by more than 80 per cent since 2008, disconnections have increased by 47 per cent, forcing many Australians to ration energy and risk their health and wellbeing by foregoing heating and cooling. It is not just the price of electricity that hurts vulnerable households, it is the total cost of securing energy needs and capacity to pay. These factors are influenced by how much energy is needed, energy market design, access to energy efficiency, renewable energy and technology, housing circumstances, access to adequate income; and access to adequate energy concessions. Those most impacted by rising energy prices include people who are facing long-term unemployment and surviving on the lowest social security payments like the Newstart Allowance, single parent households, people who are renting, people with a disability or medical condition and their carers, Aboriginal and Torres Strait Islanders, and people in low-paid casual employment - the so-called 'working poor'.

Efforts to provide affordable, reliable and clean energy - dubbed the energy trilemma - are failing and low income and disadvantaged households are bearing the brunt. A decade of policy instability, inaction, lack of national coordination and blame-shifting is the central cause of the deterioration of every element of the energy trilemma. Policies to deliver energy security must cut across energy, climate and social policy. These policies must address and achieve the following five outcomes: energy priced efficiency; informed and enabled consumers; energy efficient and productive homes; robust consumer protections; all households have the capacity to pay. Key policy solutions should include:

+ Energy priced efficiently - mix of carbon price, regulation and off-budget measures; managed coal generator retirement and replacement in the interests of the public, energy consumers, and communities; reform of the National Energy Market to support decarbonisation.

- Informed and enabled consumers - develop a low-cost, no-frills retail energy market offer; provide assistance to vulnerable households to engage with social support services and the energy market through appropriate tailored support programs.
- Energy efficient and productive homes - introduce minimum rental standards for rental properties in all Australian jurisdictions; invest in energy efficient public and community housing; program to access energy efficient products and distributive energy for low income and disadvantaged households.
- Robust consumer protections - change disconnection laws to prevent disconnections because of inability to pay; and implement nationally consistent best practice consumer framework applied to all energy products and services.
- All households have the capacity to pay - increase to social security benefits particularly Newstart; and better targeted percentage based energy concessions.

People are losing jobs as a direct result of policy uncertainty and investor behaviour. Policies are needed to properly plan and actively manage the impacts of changing industries as we transition to a clean economy. Workers need support to secure new employment, education and training to aid employment in a cleaner economy.

Communities are being devastated by extreme weather events, with deaths from heatwaves already a growing phenomenon. Policies also need to provide adequate protections from the increase in extreme weather events, and to support communities to be more prepared for and to adapt to weather changes that are now inevitable. Greater attention needs to be paid to climate adaptation, resilience and emergency responses including support for the community sector which currently delivers key services across local communities and is at the forefront of responding to crisis and recovery. The community sector needs to be supported to play a lead role in building more resilient communities into the future.

1. Recommendations

Emissions targets

Recommendation 1: The Australian Government undertake a review:

- To set a 2050 target in line with the global goal of limiting warming to well below 2°C and pursue 1.5°C;
- And update of the 2030 target (and ideally set a 2025 target), in line with the processes under the Paris Agreement where countries must reconsider and resubmit their 2030 target by 2019-2020 at the latest;
- Using a long-term carbon budget approach to determine targets that is consistent with at least a 75 per cent probability of keeping global warming well below 2°C and 50 per cent chance of limiting warming to 1.5°C;
- Utilising an equity-based carbon budget that accounts for historical obligations, wealth and per capita emissions;
- Including an analysis of economy wide and sectoral strategies that can achieve targets consistent with the Paris Agreement Goals.

Recommendation 2: The Australian Government utilises the following process for ongoing review of targets:

- Undertake a review between now and June 2018, of 2025, 2030 and 2050 emissions reduction targets;
- Submit Australia's 2050 strategy to the United Nations Framework Convention on Climate Change (UNFCCC) before the end of 2018, in line with the processes under the Paris Agreement, and resubmit a revised 2030 target by no later than 2019;
- Review targets (including the 2050 target) every five years, including development of a considered five-yearly review process that aligns with the delivery of Australia's Nationally Determined Contributions under the Paris Agreement, with the next formal review in 2022/23.
- Reviews to include:
    - Update on targets
    - Updates to economy wide and sectoral strategies
    - Adaptation target and strategy
    - International Finance obligations
- Noting the formal process does not prevent any government from increasing its targets outside of the formal review process.

Energy markets and renewable energy

Recommendation 3: The Federal Government request expansion of the current National Electricity Objective (NEO) and Australian Energy Market Agreement (AEMA) to include social equity and decarbonisation objectives to support decarbonisation.

Recommendation 4: The Federal Government recommends COAG Energy Ministers require that NEM governing bodies explicitly outline their social, economic and environmental considerations in its decision-making.

Recommendation 5: The Federal Government work with Council of Australian Governments (COAG) Energy Ministers to develop a plan and policy framework to phase out coal-fired power stations and incentivise uptake of renewable energy and supportive clean technologies, at least cost. Policies should include a mix of market mechanisms, regulation and other supportive measures.

Energy prices and consumer protection

Recommendation 6: The Federal Government COAG Energy Ministers request a review of the current National Energy Customer Framework (NECF) to provide greater consistency between states and reflect best practice consumer benefits.

Recommendation 7: The Federal Government work with COAG Energy Ministers to support the establishment of a nationally consistent consumer protection framework that includes the following principles:

- 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.

Recommendation 8: The Federal Government work with COAG Energy Ministers to support the establishment of a range of no-regrets initiatives to help give effect to the principles, including:

- 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 people from vulnerable demographics to access new products and services.
- Targeting concessions to address need rather than tying them to specific supply arrangements.

Recommendation 9: The Federal Government support the establishment of a clear set of 'road rules' addressing the market entry and participation decisions from providers that includes restrictions to monopolistic networks in new more highly contestable markets.

Recommendations 10: The Federal Government work with COAG Energy Ministers to commission trials of cost-reflective pricing for low incomes and disadvantaged households, to:

- Measure outcomes and impacts of cost-reflective pricing on low income and disadvantaged households.
- Trial different approaches.
- Assess whether cost-reflective pricing is suitable for low income and disadvantaged households.

Recommendation 11: The Federal Government work with COAG Energy Ministers to agree to establish a free national independent dispute resolution body on energy products and services, to reduce the incidence of disengaged consumers paying much higher retail prices than warranted.

Recommendation 12: The Federal Government work with COAG Energy Ministers to request that market regulators review retailer marketing practices, including 'pay on time discounts' and 'limited benefit periods', and their impacts on low income and disadvantaged households. Recommendations also to be made to regulate retailer marketing practices.

Recommendation 13: The Federal Government work with COAG Energy Ministers to request that market regulators establish a base level of protection that applies to all electricity consumers, regardless of the products or services used to obtain supply.

Recommendation 14: The Federal Government provides funds to develop and promote an independent comparative tool of electricity products and prices.

Recommendation 15: The Federal Government work with COAG Energy Ministers to request that market regulators review and consider the introduction of new models of energy retailing, including public interest retailers with the explicit aim of lowering energy prices for low income consumers.

Recommendation 16: The Federal Government provides funds for relevant organisations to provide enhanced support for low income and disadvantaged consumers to understand the complex array of choices and obtain a product or service that is fit-for-purpose.

Recommendation 17: The Federal Government work with COAG Energy Ministers to take on board the following recommendations for the roll out of smart metres in each state:

- Increase awareness of in-home displays to improve energy literacy. This includes providing people with more information on in-home displays on such topics as how to purchase, install, connect and use them. Energy literacy promotional materials produced by the Victorian government and energy companies are good examples of this.
- Reduce cost of in-home displays for households facing disadvantage:
    - Encourage or require energy companies to provide, install and assist households to use in-home displays for free if they are in an energy hardship program; and

- Invest in a Victorian government-style energy efficiency program for households experiencing disadvantage, which includes an additional subsidy to offset the purchase cost of in-home display units.

- Provide better data to compare energy costs.
- Make it easier for households to connect an in-house display unit, by:
    - Ensuring all smart meters have a functioning wireless connection system.
    - Requiring energy distributors to have a simple, automatic way to connect an in-home display unit to a smart meter, with an alternative available by telephone for those needing assistance.
    - Requiring energy price information to be sent by retailers through smart meters to in-home displays.
- Regulate the costs of pre-connecting in-home display units to reduce or eliminate the cost of pre-connecting in-home displays.
- Protect the privacy of smart meters - avoid providing detailed dates of previous occupants but enable provision of historical comparison.
- Enable in-home displays to read data from non-standard smart metres.
- Improve the function of in-home display units, i.e. enable concession rates to be factored into costs displays.

Recommendation 18: The Federal Government commission the development of a comprehensive consumer education strategy by a trusted, independent source.

Recommendation 19: The Federal Government review energy incentives and their impacts on low income and disadvantaged households with the aim to consider less regressive incentives, such as an income-proportionate strategy, government budgets, or at a minimum provide compensation to eligible households.

Recommendation 20: The Federal Government work with state and territories to review both federal and state energy concessions schemes, taking into account:

- Inconsistencies in eligibility.
- The need to better meet the needs of all low income households, with a preference for a percentage of costs based concession.
- The need to improve emergency relief payments to simplify application processes and provide greater clarity for customers.
- The importance of promotion of available support by all sectors.

Recommendation 21: In order to address the extreme pressure of energy affordability for people on very low incomes, the Federal Government improve the adequacy of income payments like Newstart and Youth Allowance.

Recommendation 22: The Federal Government maintain the Energy Supplement for current and future pensioners, allowance and family payment recipients.

Recommendation 23: The Federal Government should improve social security payments, especially to Newstart and Youth Allowance, to ensure all people have an adequate income to meet rising transport, housing and electricity prices and other essential costs of living.

Recommendation 24: The Federal Government fund research to better understand energy affordability and vulnerability that utilises the 2017 release of the 2013-14 Household Expenditure Survey to align research into energy affordability and vulnerability with the methodologies in and publication of the ACOSS Poverty in Australia series.

Recommendation 25: The Federal Government commission the following research work:

- Measure the likely impact of a range of climate and energy policies on electricity prices against different levels of emissions reduction ambitions (noting most CAOG states have long-term 2050 emissions reduction targets and renewable energy targets).
- Analyse how the price changes would affect a range of low income and disadvantaged household types.
- Identify and analyse policy measures capable of addressing price impacts and other barriers to participate in the clean energy transition.

Recommendation 26: The Federal Government work with their housing ministerial counterparts to align electricity and vulnerable household policy, advocacy and research initiatives with corresponding housing affordability initiatives.

Housing

Recommendation 27: The Federal Government commission research to determine the broader economic and societal benefits from energy efficiency programs e.g. lower risk of hospitalisation for heat stress/cold; increased household expenditure on other necessities, to establish the cost benefits involved in the introduction of energy efficiency programs and reallocate funding accordingly.

Recommendation 28: That the Federal Government review taxation policy with a view to designing and implementing landlord tax incentives for energy efficiency measures.

Recommendation 29: The Federal Government work with COAG state Energy Ministers to adopt and implement energy efficiency standards for rental properties and introduce mandatory disclosure of energy and water efficiency of all properties at point of sale (like those implemented by the ACT Government and being considered by the Victorian Government).

Recommendation 30: The Federal Government provide additional funding for targeted retrofits for the worst performing and highest risk social housing stock in each state. Additional funding should be provided for upgrades of the poorest quality social housing, which uses large amounts of energy for heating and/or cooling. Partnerships can help the government to target upgrades where they are most urgently needed.

Recommendation 31: The Federal Government support the Good Shepherd Microfinance to establish, in conjunction with private banks, a micro-finance or other suitable financial support program to help with up-front costs of energy efficiency upgrades.

Recommendation 32: That the Federal Government establish a face-to-face assistance program to provide targeted energy efficiency advice and assistance for low income households and people who are unable to access written or online information.

Transport

Recommendation 33: The Australian Government:

- Invest in better and cleaner (zero emissions) public transport. This should be the highest national transport infrastructure priority.
- Implement stronger vehicle emissions standards.
- Support infrastructure roll-out and non-regressive incentives to electrify the passenger vehicle system.
- Purchase electric vehicles for the government fleet.
- Transition our electricity grid from fossil fuels to renewable energy and to fully realise reduced emissions from electric vehicles.
- Shift freight to rail.
- Invest in infrastructure that supports walking and cycling, which provide low-cost alternatives to private motor vehicle use and also have the potential to reduce the burden on health budgets.

Workers

Recommendation 34: The Federal Government work with COAG Energy Ministers to establish a new independent body to manage coal closure, oversee worker support, and coordinate plans for regional economic diversity.

Recommendation 35: The Federal Government work with COAG Energy Ministers to establish an industry-wide multi-employer pooling and redeployment scheme which provides retrenched workers with the opportunity to transfer to roles with renewable or low emission generators as well as remaining fossil fuel generators. The recently announced Victorian scheme should also be extended.

Recommendation 36: The Federal Government work with COAG Energy Ministers in key affected states to develop a fair and reasonable labour adjustment package consistent with community expectations that supports workers to transition into new, decent and secure jobs. This includes:

- Job placement networks.
- Retraining.
- Financial and personal support.

- Travel subsidies and relocation assistance.

Recommendation 37: The Federal Government work with COAG Energy Ministers in key affected States to facilitate the establishment of regional development coalitions and develop specific plans and measures to renew and diversify the economy of affected regions.

Recommendation 38: The Federal Government work with COAG Energy Ministers to undertake the following:

- Develop a National Electricity Blueprint, which sets out long term objectives and a pathway for transition in the energy sector. The blueprint should:
    - Address security, affordability, social good, investment certainty, the needs of vulnerable households, decarbonisation, and just transition.
    - Recognise the implications for energy infrastructure of the changing technology mix and required planning for managing the transition for the electricity sector.
    - A road map, including mapping of optimal sites for renewable energy and storage solutions to maximise grid security and reliability.
    - Orderly closure of coal-fired power stations and just transition measures.
- Establish an energy transition authority with sufficient powers and resources to plan and implement the blueprint and coordinate the transition in the energy sector, including a just transition for workers and communities. In light of the new body, review how the current framework of overlapping state and federal policy, market operator and regulatory bodies could be simplified and streamlined. This would include how a stronger consumer framework, which better recognizes and considers low income and disadvantaged households, can be built into the National Electricity Market (NEM) governance.
- Ensure future planning, modelling and forecasting is stress tested against rapidly changing technology, frequent change in technology price, climate policy, consumer preference, impacts of low income and disadvantaged Australians and the wider social good.
- Consider establishing dynamic work groups and pilots to work quickly through opportunities, challenges and solutions.
- Ensure that forecasting is transparent, accessible, and scenario based, with more emphasis on market intelligence and real-time updates, rather than annual or semi-annual publications.
  Implement rule changes to support uptake of new technologies and modernise the electricity grid. This would include areas around grid connections, reviewing bidding time frames for wholesale energy contracts, facilitating network payments to households and business with solar and battery, facilitating peer-to-peer trading.

Extreme weather and vulnerable communities

Recommendation 39: The Federal Government strengthen climate resilience for Australians by:

- Updating the National Climate Resilience and Adaptation Strategy 2015 to specifically include vulnerable Australians and the community services sector as one of its eight priority sector and policy areas. Including social inclusion and equity elements into climate adaptation strategy.
- Developing policies and measures to support people living in poverty or disadvantage to adapt, cope and recover better. The following would need to be considered:
    - Upgrading homes for more efficient heating and cooling to reduce energy bills, including minimum rental standards and upgrade of public and community housing stock.
    - Provision of relevant information about the effects of climate change and the actions people can take.
    - Including social inclusion elements into climate adaptation strategies.
    - Better transport options, especially public transport, for people to access services.
    - Develop and strengthen local communities' capacity to adapt to local factors and assist people and support one another in times of adversity caused by climate change.
    - Planning for those who are dependent on others due to their young or old age, disability or ill health.
    - Services that assist people of all cultures and languages.
    - Fund community sector organisations to expand direct monitoring of vulnerable people during emergencies, especially those who are homeless, living in general public housing and in rooming houses.

Recommendation 40: The Federal Government assist in the improvement of CSO (Community Service Organisation) sector preparedness, by:

- Establishing a funding program to support the community sector to:
    - Raise awareness about the serious risks to its service delivery and to people experiencing poverty and inequality from climate change and worsening extreme weather impacts.
    - Undertake climate change and extreme weather risk assessments and develop and implement disaster management and service continuity plans.
    - Deliver emergency RediPlan to community sector clients.
    - Invest in climate change and extreme weather preparedness and response training for staff and volunteers engaged in direct service provision as well as management and administrative roles.
- Working with state governments to ensure contracts for service delivery provide greater flexibility to community service organisations and enable them to participate effectively in disaster response and recovery efforts. Specifically, they should include mechanisms that:

- Ensure timely compensation for their contributions to response and recovery efforts.
- Ensure they are not penalised for failing to meet contractual obligations due to their participation in disaster response and recovery.

- Provide funding to:
  - Implement the *Resilient Community Organisations Toolkit* within the community sector.
  - Undertake adaptation and preparedness benchmarking specific to community service provision that enable organisations, their funding agencies and insurers to plot progress towards risk reduction, resilience and adaptive capacity.
- Work with state and local governments and formal emergency service agencies to recognise the critical role the community services sector plays in emergency management and resource, facilitate and support its effective participation in planning, response and recovery at all levels.

2. About this submission

"Unconstrained climate change would have serious economic, environmental and social impacts on Australia. Avoiding unconstrained climate change will provide important benefits and opportunities to Australia. However, emissions reductions on the necessary scale will also require substantial change and present significant challenges for Australia as well as other countries. Delayed, unpredictable and piecemeal action will increase the costs and challenge of achieving the goal. "

Australian Climate Roundtable[1]

ACOSS welcomes the opportunity to make a submission to the 2017 Climate Change Review. ACOSS' concern about the impacts and mitigation of climate change is a result of our role representing the interests of people on low-incomes and those experiencing the impacts of poverty and disadvantage in Australia, as well as our role as the peak body for the community services sector.

Our work in this area flows from clear evidence that:

- People experiencing poverty and disadvantage are usually the first and hardest hit by the impacts of climate change, yet they often have the least capacity to cope, adapt and recover.
- If the transition to a clean net zero economy is not managed well and is not inclusive and equitable, people experiencing poverty and disadvantage are likely to be worse off.

It is in the interest of people experiencing poverty and disadvantage, as well as all Australians, that the world acts urgently to reduce greenhouse gas emissions in line with the Paris Agreement goals of limiting global warming to well below 2°C and to pursue 1.5°C. This requires Australia to act urgently and do its fair share to reduce emissions. In doing so it will be vitally important to ensure the transition to clean economy is not detrimental to people experiencing poverty and disadvantage, but rather is inclusive and equitable.

ACOSS believes there is emerging consensus across the community, business, union, farming and environment sectors that Australia urgently needs early, stable, predictable, scalable, and least cost climate policy. That climate policy must utilise a mix of market mechanisms, regulation and on-budget measures in a way that spreads the costs fairly, supporting international competitiveness while protecting vulnerable communities and individuals. ACOSS has been working closely with other members of the Australian Climate Roundtable, including Business Council of Australia, Australian Industry Group, National Farmers Federation, Aluminium Council, Australian Energy Council, Australian Council of Unions, WWF, Australian Conservation Foundation, the Investor Group on Climate Change

[1] Australian Climate Roundtable, extract from principles

and the Climate Institute, and their members, to build consensus. ACOSS has recently undertaken extensive national consultations across the community sector to further develop consensus and policies to empower vulnerable people as we transition away from fossil fuels to a clean economy. Addressing Climate Change is the biggest economic, social and environmental issue of our time. We are united in our desire for urgent action and in the core principles to guide the solutions. We now need political leadership.

This submission will cover the following elements outlined in the discussion paper:

- Australia's Paris target.
- Households, small to medium-sized enterprises and the built environment.
- Transport.

With respect to 'Electricity Generation', ACOSS provides the following submission:

- ACOSS submission to the Finkel Review, which can be found at attachment A.
- ACOSS, Brotherhood of St Laurence and The Climate Institute Report "Empowering Vulnerable Households through Electricity Decarbonisation". To be submitted separately.

Both documents argue that electricity is an essential service. It is critical to the health, wellbeing, economic participation and social inclusion of all Australians. Access to reliable, affordable and sustainable energy is a human right, however, a decade of policy change, inaction, lack of national coordination and finger pointing has left the electricity system in disarray with skyrocketing pricing and an increase in disconnections, with vulnerable households bearing the brunt.

While the transition to a modern clean electricity sector is desirable, we risk leaving behind vulnerable households through inequitable distribution of energy market costs and the creation of a two-tier system. Price of electricity is only part of the story. What hurts vulnerable households is the total cost of securing their energy needs and their ability to pay. Factors affecting total cost and ability to pay include level of income, housing quality and efficiency, housing tenure, how much energy is needed and is used, ability to engage, communications barriers and levels of consumer protection.

Governments, regulators and decision makers must therefore also consider factors outside the National Energy Market (NEM) with the outcomes for vulnerable consumers explicitly considered when solutions to energy security and climate change challenges are put forward. At the heart of the decision making should be the goal of ensuring the transition does not disadvantage vulnerable households and is inclusive and equitable.

It is proposed that in the short-term if solutions are pursued to achieve the following five outcomes, we can better ensure effective decarbonisation of the electricity supply chain while preserving universal access to affordable energy services.

- Electricity priced efficiently (including integrated climate policy).

- Informed and engaged consumers.
- Energy consumed efficiently and productively.
- Robust consumer protections.
- All households have a capacity to pay their energy bills.

What has been missing from the debate is how we can better design the electricity system and supporting structures to reflect the essential nature of electricity and treat it is as a social good. The benefits of such a focus will extend beyond ensuring the health and wellbeing of individuals, to assist in creating a more resilient and productive society and economy.

Additional measures will be needed to ensure the transition from fossil fuels to renewable energy is also 'just' for employees and communities impacted by the transition. For example the impact of unplanned and disorderly closure is likely to profoundly affect regional communities that are reliant on coal power and mining jobs.[2]

The remaining discussion paper topics listed below will not be discussed in detail in this submission:

- Resources, manufacturing and waste.
- Land and agriculture.
- International Units.

Instead, ACOSS defers to the Australian Climate Roundtable climate policy principles[3] (the Roundtable principles) to provide guidance on these topics and broader climate change policy design (see attachment B). The Roundtable principles were developed and adopted by the Australian Climate Roundtable, which brings together a broad cross section of business, environmental, community and union groups, including ACOSS.

The Roundtable principles note that unconstrained climate change would have serious economic, environmental and social impacts on Australia and highlights the importance of having early, stable, predictable, scalable and least-cost climate policy.

> *"The ideal climate policy would be capable of achieving deep reductions in Australia's net emissions in line with our overall goal; provide confidence that targeted emissions reductions actually occur; be based on an assessment of the full range of climate risks; be well designed, stable and internationally linked; operate at least cost to the domestic economy while maximising benefits; and remain efficient as circumstances change and Australia's emissions reduction goals evolve."*

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[2] ACTU (2016) *Sharing the challenges and opportunities of a clean energy economy: A just transition for coal-fired electricity sector workers and communities.* http://www.actu.org.au/media/1032953/actu-policy-discussion-paper-a-just-transition-for-coal-fired-electricity-sector-workers-and-communities.pdf

[3] http://www.australianclimateroundtable.org.au/

The Roundtable principles include further detail on cost control, trade competitiveness, innovation, equity, stability, adaptation, the use of any revenues, administration and review. On equity, the principles state:

> *"The costs of climate policy should be spread fairly within the Australian community and policy should:*
>
> - *protect the most vulnerable individuals;*
> - *avoid disproportionate impacts on vulnerable people, low income households and the organisations that support them; and*
> - *Assist the successful transition of communities that are especially vulnerable to economic shocks or physical risks as a result of climate change or climate policy.*
>
> *Equity should be explicitly addressed in the policy design process, including immediate impacts and those on future generations of Australians."*

ACOSS would add that the transition also needs to be inclusive.

Finally, ACOSS notes that greater attention needs to be paid to climate adaptation, resilience and emergency response. This is particularly true for people affected by poverty and disadvantage who will be the first and hardest hit by the impacts of a changing climate and least capacity to cope, adapt and recover.[4] If not addressed, this will lead to significant social justice issues and increase pressure on the need for financial and services support. Further, failure to reduce emissions and limit global warming will result in an acceleration of climate impacts, and place a greater burden on vulnerable households, government budgets and future generations. Section 6 provides further details and recommendations.

[4] Mallon, K, Hamilton, E, Black, M, Beem, B & Abs, J (2013) Adapting the community sector for climate extremes: Extreme weather, climate change & the community sector – Risks and adaptations, National Climate Change Adaptation Research Facility, Gold Coast, 286 pp. www.nccarf.edu.au/publications/extreme-weather-climate-change-community-sector

Introduction

Climate change and vulnerable Australians

Unconstrained climate change will have serious economic, environmental and social impacts on Australia. As climate change accelerates, Australians will face: increases in heatwave related deaths; increase in extreme weather events such as bushfires and severe storms resulting in injury and displacement; chronic respiratory conditions; allergies and asthma; aggravated chronic disease; spread of infectious disease; and stress-related mental health conditions[5].

In Australia, average temperatures have risen by just 1°C since 1910,[6] and already it is having a profound impact on our climate system, our environment, economy and society. We have had the hottest 14 years on record in the past 15 years. In the Australian Summer and early Autumn of 2016/2017, there were over 200 weather related records broken[7] including hottest summer on record, record heatwaves, 100 bushfires in New South Wales alone, record breaking floods, massive bleaching of the Great Barrier reef for the second year in a row, and one of the biggest cyclones in Australia's history causing massive flooding in Queensland and Northern New South Wales.

These events have had a devastating impact on many Australians, their health, their homes and their livelihoods. Vulnerable Australians, including those living in poverty or with a disadvantage are more susceptible to these impacts as they have less capacity to cope, adapt and recover. For example, heatwaves kill more Australians than any other natural disaster and key risk factors for heat-related health impacts are often twice as prevalent for people on low incomes, compared to those with medium to high incomes.[8] In heatwaves, the highest mortality rates exist for people on low incomes, people over 80 years of age and people with health issues[9]. Low income housing in Adelaide, Sydney, Melbourne and Brisbane is typically found in city areas with the highest land surface temperatures, so those most vulnerable to heat-related health impacts often live in areas where exposure to heat is greatest[10].

Indirect impacts will also be felt through increased prices for food and other essentials as those sectors and households deal with climate change impacts. For example, food prices during the 2005- 2007 drought increased at twice the rate of the Consumer Price Index (CPI) with fresh fruit and vegetables the worst hit, increasing 43 per cent and 33 per cent

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[5] http://www.climatecouncil.org.au/uploads/1bb6887d6f8cacd5d844fc30b0857931.pdf%20
6 http://www.bom.gov.au/state-of-the-climate/
7 https://www.climatecouncil.org.au/angry-summer-report
[8] PWC (2011) Protecting human health and safety during severe and extreme heat events, A national framework, Price Waterhouse Coopers, Nov 2011, page 40
[9] Ibid
[10] CSIRO (2013) Pathways to climate adapted and healthy low income housing, Final Report CSIRO, National Climate Change Adaptation Research Facility

respectively.[11] The CSIRO estimates that because of climate change related heat increases, energy requirements to cool a typical slab-on-ground, brick veneer home will increase by 75-115 per cent in Melbourne, and 95-359 per cent in Brisbane by 2070,[12] further putting pressure on low income and disadvantaged households.

If climate change impacts are not mitigated this will lead to significant social justice issues and increase pressure on governments for financial and service support, as evidenced by the ever growing cost of climate change related, post-disaster recovery and reconstruction.

ACOSS supports the goals of the new global climate change agreement, the Paris Agreement, to limit global warming to well below 2°C and pursue a limit of 1.5°C. Therefore, ACOSS supports the rapid transition to a zero carbon economy in line with the Paris goals. As a wealthy developed country, with one of the highest per capita emissions and a top 15 emitter overall, ACOSS expects Australia to take a leadership role.

But ACOSS warns that without appropriate measures in place the transition is likely to have a regressive impact on people experiencing poverty and other forms of disadvantage. It is therefore important that outcomes for vulnerable Australians are explicitly considered when mitigation solutions are being developed and implemented. The transition must be inclusive and equitable.

This sentiment was, for the first time, acknowledged in the Paris Agreement which explicitly requires all parties to consider people in vulnerable situations when defining actions to both mitigate and adapt to climate change. In Australia there has been insufficient focus and profile on this issue.

Australians most vulnerable to climate change impacts and mitigation measures include:

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

Over 13 per cent of the Australian population lives well below the poverty line.[13] These people face situations where they are unable to afford or participate in what are seen as the basics of a socially acceptable existence. A very similar percentage of the population is living in poverty today compared with ten years ago.[14] To illustrate the challenge it is worth noting

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[11] Climate Council (2016) Feeding a Hungry Nation: Climate Change, Food and Farming in Australia. https://www.climatecouncil.org.au/uploads/7579c324216d1e76e8a50095aac45d66.pdf
[12] CSIRO (2013) *Op.Cit.*
[13] http://www.igcc.org.au/resources/Pictures/Adaptation_FINAL.pdf
[14] *Ibid*

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. The number of Australians that struggle with climate change impacts and rising cost of living, like energy affordability, are much higher than the poverty figures.

The heightened vulnerability of these groups arises from a number of factors, including that they:

- Tend to live in areas more likely to be adversely affected by climate change (e.g. areas exposed to heatwaves, floods, storms or bushfires) and have far less ability to move or make other necessary adjustments to their living circumstances;
- Tend to have the least efficient, highest energy consuming appliances;
- Spend a greater proportion of total weekly household income on housing, energy and water and are therefore more vulnerable to price increases for these necessities;
- Are less likely to have the financial capacity or access to implement energy efficiency, adaptation measures, or to purchase renewable energy technologies such as solar and batteries;
- Are more likely to live in public housing or the private rental market and therefore lack the power or adequate incentives to introduce adaptation, energy efficiency measures or renewable energy sources; and
- Are less socially connected.

The impact of climate change will also differ depending on location, including factors such as geography, access to services, and demographics. For example, regional communities, particularly the more remote ones, are likely to experience greater challenges with ability to adapt, cope and recover from extreme weather events.

Aboriginal and Torres Strait Islander communities are likely to face the greatest challenges and will require specialist attention. Aboriginal and Torres Strait Islander communities already experience multiple existing challenges including remoteness, poor health, inadequate infrastructure, lack of educational and employment opportunities, and low incomes. Climate change impacts and poor mitigation measures will exacerbate many of these pre-existing challenges.

In addition, communities in transition, for example coal regions such as the Latrobe Valley in Victoria, the Hunter Valley region in New South Wales, Gladstone and Rockhampton in Queensland, and Collie in Western Australia will also need specific attention.

The research and experience of ACOSS' 3,000 members clearly shows the Australian Government needs to do more to protect vulnerable individuals, households and communities from dangerous climate change.

Early and strong action is needed to protect vulnerable Australians from dangerous climate change

ACOSS is concerned that the world is not on track to achieve the Paris Agreement goals and the Australian Government is not doing all it can.

A 2016 United Nations Environment Programme (UNEP) report argues that the world is currently tracking well above the Paris Agreement goals, towards a temperature rise of between 2.9°C and 3.4°C.[15] A more recent journal article in *Science Advances*, argues that previous climate models have underestimated the acceleration and we are more likely on track for a 4.78°C to 7.36°C.[16] Neither scenario is good, especially for vulnerable Australians who will bear the brunt. For example, a 2°C rise is expected to increase mortality among people aged 65 and over in Australian capital cities by 89-123 per cent. At 3°C, twice as many temperature-related deaths are expected when compared with no climate change.[17]

The UNEP report argues that the world will need to cut emissions a further 25 per cent by 2030 on current commitments,[18] or further still if other predictions prove more likely.

The Australian Government is not doing enough. The Government's current target of 5 per cent reduction by 2020 (on 2000 levels) and 25-26 per cent reduction by 2030 (on 2005 levels), is not in line with the Paris Agreement.[19] The Climate Institute's analysis finds that if other nations were to have a similar 2030 emission reduction targets to that of the Australian Government, the result would be 3-4°C of global warming.[20]

Australia can and should do more. Australia is 15th in the world in terms of carbon pollution and has the highest per capita emissions in the developed world. Australia is also one of the wealthiest countries in the world, ranked second on the global per capita wealth table[21] and possesses some of the world's most abundant and efficient renewable energy resources.

Analysis by the Climate Change Authority, The Climate Institute and WWF-Australia finds that to do its fair share of the global task Australia will need to reduce its greenhouse gas

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[15] UNEP (2016) Emissions Gap report 2016 http://www.unep.org/
[16] Friedrich, T., Timmermann, A., Tigchelaar, M. et al (2016) Nonlinear climate sensitivity and its implications for future greenhouse warming, Vol.2, non. 11, e10501923
http://advances.sciencemag.org/content/2/11/e1501923.full
[17] Garnaut (2008). Garnaut Climate Change Review, Chapter 6
[18] UNEP (2016) Emissions Gap report 2016 http://www.unep.org/
[19] http://www.climateinstitute.org.au/verve/_resources/TCI-CPCA-Election-2016.pdf
[20] *ibid*
[21] http://www.theaustralian.com.au/business/news/australians-rank-second-in-global-percapita-wealth-table/news-story/06e23e9a23b9cfe9d60cba2b37f1b94e

emissions to net zero ***before*** 2050.[22] The Climate Institute[23] and WWF-Australia[24] also estimate that to contribute its fair share to limit warming to 1.5°C, Australia would need to reduce emissions by 45 per cent on 2005 levels by 2025, 65 per cent by 2030 and net zero emissions soon after 2040.

The Climate Change Authority[25] and Climate Works and ANU[26] has found that with the right policies stronger emissions reductions targets of 45 per cent plus by 2030 and net zero emission before 2050 can be achieved. The Climate Works and ANU modelling focus on four pillars:

1. Ambitious energy efficiency improvements throughout the economy.
2. Low carbon electricity supplied by 100 per cent renewables.
3. Electrification and fuel switching towards biofuels and gas.
4. Reducing non-energy emissions through carbon farming and forestry, process improvements and CCS in energy intensive industrial applications.

Climate Works and Australian National University (ANU) also found that Australia does not need to rely on technological breakthroughs to achieve major reductions in emissions. The technologies required for decarbonisation are either available or under development. Further work in commercialising and deploying existing technologies will reduce their cost, and improve their performance.[27] Their research shows that emissions reductions are achieved through changing practices and technologies within sectors, not through significant changes to Australia's economic structure.

An ANU report by Jotzo and Kemp reports that all industries that are growing in the base case (no emissions reductions) continue to grow in low emissions scenarios, including mining.[28] Some sectors such as food, vehicle, clothing, textiles and footwear manufacturing,

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[22] http://www.climateinstitute.org.au/verve/_resources/TCI_Beyond_the_Limits_FINAL23082016.pdf and http://www.climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/submissions/2015/WWF%20Australia.pdf; and http://www.climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/submissions/2015/WWF%20Australia.pdf

[23] http://climateinstitute.org.au/verve/_resources/National_Agenda_FINAL23082016.pdf

[24] http://www.climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/submissions/2015/WWF%20Australia.pdf

[25] Climate Change Authority (2015) Australia's Climate Policy Options. http://climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/SpecialReport2/Options%20paper%20Final.pdf

[26] ClimateWorks, ANU, CSIRO (2014) Pathways to Deep Decarbonisation in 2050. http://climateworksaustralia.org/sites/default/files/documents/publications/climateworks_pdd2050_technicalreport_20140923.pdf and ClimateWorks and WWF (2015) A prosperous netw zero pollution starts today. http://awsassets.wwf.org.au/downloads/fs094_a_prosperous_net_zero_pollution_australia_starts_today_26nov15.pdf

[27] ClimateWorks, ANU, CSIRO (2014) Pathways to Deep Decarbonisation in 2050. http://climateworksaustralia.org/sites/default/files/documents/publications/climateworks_pdd2050_technicalreport_20140923.pdf

[28] Jotzo and Kemp (2015) Australia can cut emissions deeply and the cost is low.

as well as agriculture, all improve under emissions reductions policies driven by carbon pricing.[29]

The report[30] argues Australia's economy would continue to grow to approximately two and a half times its current size by 2050, while emissions are cut drastically below current levels in keeping with targets outlined above.

As shown in box 1 major studies have shown that delaying action increases future costs.[31]

Further, global and national reviews by for example, Todd Stern,[32] the Garnaut Climate Change Review[33] and others, have found the long-term economic costs of inaction are greater than the costs of action.

Box 1: Major studies concluding the costs of delay are high

"Delaying global action by 3 years adds around 20 per cent to the first year entry mitigation cost; a further three years adds a further 30 per cent to the first year mitigation cost. [...] Depending on countries' emission reduction targets and the ability to source permits from other countries, a 3-year delay of mitigation action results in higher mitigation costs of 2 to 10 per cent in 2050." – **Treasury, (2011), "Strong Growth, Low Pollution: Modelling a Carbon Price," ed. Department of Treasury, pg3**

"The longer emissions reductions are delayed, the faster the available global emissions budget will be used up, requiring greater efforts to reduce emissions in future and eventually ruling out the possibility of limiting warming to 2 degrees or less"[1]– **CCA (2014, February). Reducing Australia's Greenhouse Gas Emissions: Targets and Progress Review. Final Report, pg44**

"Changing paths later would also likely mean increased disruption to the economy, for example through the need for early retirement of industrial or electricity generation assets that are emissions intensive."[1] - **Climate Works Australia and the ANU, 2014, pg35**

https://ccep.crawford.anu.edu.au/files/uploads/ccep_crawford_anu_edu_au/2015-05/australia_can_cut_emissions_and_the_cost_is_low-_jotzo_and_kemp_april_2015_-_submission_to_dpmc.pdf

[29] Treasury (2011) Strong Growth, Low Pollution, Modelling a Carbon Price. http://carbonpricemodelling.treasury.gov.au/content/report.asp

[30] Jotzo and Kemp (2015) Australia can cut emissions deeply and the cost is low. https://ccep.crawford.anu.edu.au/files/uploads/ccep_crawford_anu_edu_au/2015-05/australia_can_cut_emissions_and_the_cost_is_low-_jotzo_and_kemp_april_2015_-_submission_to_dpmc.pdf

[31] *Ibid*

[32] Stern, N. (2006). "Stern Review on The Economics of Climate Change (pre-publication edition). Executive Summary". HM Treasury, London.

[33] Garnaut, R. (2011) The Garnuat Review 2011: Australia in the Global response to Climate Change. http://www.garnautreview.org.au/update-2011/garnaut-review-2011/garnaut-review-2011.pdf

There is an overwhelming case for Australia to take stronger action now to reduce Australia's emissions and take a leadership role internationally. In ACOSS' view early and strong action will maximise the chance of limiting climate change impacts on vulnerable Australians and minimise future costs on the next generation. Appropriate policies and measures, however, must be put in place to ensure that the transition to net zero emissions does not disadvantage vulnerable households and is inclusive and equitable.

Good policy design can protect Australians experiencing poverty and disadvantage

There is no 'silver bullet' policy to reduce greenhouse gas emissions in line with the global goal of limiting warming to **well** below 2°C of pre-industrial levels. Countries around the world are using a mix of carbon pricing, regulation, incentives and supportive measures.

Over the years research by CSIRO and ANU[34] and ACOSS, Australian Conservation Foundation (ACF) and Choice[35] looking at impacts of climate policy on vulnerable households have concluded that Australia can make deep cuts in its greenhouse emissions without reducing living standards, and with good policy design can avoid net adverse impacts on low income or vulnerable households, even if carbon prices are very high.

These reports argue most of the impact would be felt through price rises primarily in electricity, water, transport and food.

Both the CSIRO and ANU research[36] and the ACOSS, ACF and Choice report[37] argued that in general the following policies could avoid net adverse impacts on low income earners:

- Energy Efficiency measures for low income and disadvantaged households that account for awareness and behaviour, home modifications, standards for buildings and appliances, and upgrades for equipment and appliances.
- Development of tariff structures that appropriately recognise the essential nature of energy and water while pricing to encourage efficient consumption.
- Emissions trading scheme with a portion of the revenue raised used to improve the tax system, social security payments, invest in energy efficiency, and improve concessions and hardship programs.

Since 2008, however, the condition of Australia's energy system has hit crisis levels, with energy prices skyrocketing, and security and reliability being compromised in some regions. A decade of policy change, inaction, lack of national coordination and finger pointing between the federal government and the states is a central cause.

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[34] http://library.bsl.org.au/jspui/bitstream/1/1555/1/Energy_Affordability_Living_Standard.pdf
[35] Energy and Equity : Preparing households for climate change: efficiency, equity and immediacy.
[36] http://library.bsl.org.au/jspui/bitstream/1/1555/1/Energy_Affordability_Living_Standard.pdf
[37] ACF, ACOSS, Choice (2009) Energy and Equity : Preparing households for climate change: efficiency, equity and immediacy.

According to the Australian Energy Council the lack of national climate and energy policy certainty is now the single biggest driver of higher electricity prices, equivalent to a carbon price of $50 a tonne.[38] In addition, we have seen new technologies, like distributed energy, change the way some consumers engage in the energy market. For low income and disadvantaged households a two tiered system could be created between the haves and have nots, further exacerbating the differences.

Recent research from Andrew Nance[39] commissioned by ACOSS, Brotherhood of St Laurence and The Climate Institute, identifies the need to focus on five outcomes areas, particularly in the electricity sector:

- Electricity priced efficiently (including integrated climate policy) - noting a carbon price on its own might not be enough and would be better combined with regulation and off budget measures, as well as network reforms.
- Informed and enabled consumers.
- Energy consumed efficiently and productively.
- Robust consumer protections.
- All households have a capacity to pay their energy bills.

We now need a more planned and managed transition, with new consumer protection frameworks, better education and engagement, network reforms, updated best practice consumer protections, as well as energy efficiency measures, tariff structures that recognise electricity as an essential service, and carbon price. **The documents at appendix A and the ACOSS, BSL and TCI report to come, will provide more detail on the transition policy**.

ACOSS advocates that the transition to a cleaner economy must be least-cost, inclusive, equitable, and must not disproportionately affect disadvantaged households. The costs of climate policy should be spread fairly within the Australian community and that good policy design should:

- protect the most vulnerable individuals;
- avoid disproportionate impacts on vulnerable people, low income households and the organisations that support them;
- ensure they are not left behind or shut out from new technology and distributed energy; and
- Assist the successful transition of communities that are especially vulnerable to economic shocks or physical risks as a result of climate change or climate policy.

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[38] Australian Energy Council (2017) Submission to Independent Review into the Future Security of the National Electricity Market Preliminary Report.
[39] Nance, A (2017) *Energy Access and Affordability Policy Researc*h http://www.acoss.org.au/wp-content/uploads/2017/03/EnergyAccessandAffordabilityPolicyResearchFINAL20March2017.pdf

Equity, inclusivity and disadvantage should be explicitly addressed in the policy design process, including immediate impacts and those on future generations of Australians.

2 Australia's Paris Target

Australia has committed to considering a potential long-term emissions reduction goal for Australia beyond 2030. What factors should be considered in this process?

Setting a long-term emissions targets is important because it provides *guidance* for strategic policy decisions, builds confidence in and certainty about the general direction of policy development, and removes barriers to important investment decisions. Without clarity on a long-term national-target and trajectory, a vacuum exists which can delay or deter investment decisions, or lead to asset stranding.

Setting a ***credible*** long-term target will:

1. **Ensure we are acting in line with the Paris Agreement**: Ensure Australia is on track to contribute to the global goal of limiting warming well below 2°C and pursue 1.5°C. This will be important to build confidence and trust in the international community and drive more ambitious action and hopefully a race to the top. If Australia and the world are not on track to avoid more dangerous climate change, Australia will be faced with:
    - Increased costs of climate impacts.
    - Increase costs to adapt to climate change impacts.
    - Significant economic, environmental and social repercussions.
2. **Provide guidance to government policy makers and regulators**: Setting a long-term target will enable the identification of objectives, actions and policies that are needed in both the short and long-term to achieve long-term goals. It also allows for costs and opportunities to be factored into mainstream decision making. The Australian Climate Roundtable has concluded that the most serious and immediate barrier to Australia's successful transition is not the technical or economic challenges involved – substantial though they are – it is the absence of broad political agreement on a scalable approach to climate and energy policy.[40]
3. **Send investment signals**: A credible international commitment to reduce emissions to a certain level over the long term will provide an important signal for long-term investment decisions. This will in turn enhance the ability of businesses to develop strategies that will deal with the risks and opportunities of a carbon constrained future and the process of transition. A report by the Climate Institute and AGL notes that "Without clarity on a long-term national-target and trajectory, a vacuum exists which can delay or deter investment decisions, or lead to asset stranding. The misalignment between international commitments and domestic policies has been repeatedly identified by investors and large companies as causing

40 http://www.australianclimateroundtable.org.au/

uncertainty that is detrimental to our short and long-term prosperity.".[41] For example, investments in the electricity sector involve capital commitment to assets with a lifespan of 30 to 40 years.

4. **Community certainty and confidence**: A long-term target consistent with the Paris Agreement will provide the community with a measurement against which they can assess the activities of corporate, regulatory and government organisations and hold them to account. It can also create hope, increase participation in solutions, and reduce fear and uncertainty.

If the target is not seen as credible and consistent with the Paris Agreement, the established science on climate change, and the concept of a 'fair share', investors and the community will lose confidence.

It is important to note that the targets that were announced before Paris were largely justified against the global goal to limit warming to **below** 2°C. Post-Paris, countries are now updating and examining their 2050 targets in light of the Paris Agreement objective to limit warming to 1.5-2°C. All countries are required to set a long-term target and report on the strategies planned to get there by 2018.

While the Paris Agreement does not recommend a long-term or mid-century emissions reduction goal, it does for the first time refer to the need to achieve net zero emissions sometime in the second half of the century, with the time frame to be determined by "the best available science".

In a recent international report by Climate Analytics titled "*Implications of the 1.5 degree limit in the Paris Agreement for Climate Policy*", they note the best available science currently states that limiting warming to 1.5-2°C requires:

- global carbon dioxide emissions to reach zero around 2050, which requires the decarbonisation of the energy system in this time frame; and
- all greenhouse gases (i.e. including methane, HFCs etc.) to reach zero by around 2070.

Article 4 in the Paris Agreement also states that developing countries will take longer to achieve this goal than developed countries. Therefore, according to a report by the Climate Institute and energy company AGL, to be in line with the objectives of the Paris Agreement, developed countries' emissions would need to be around net zero emissions by 2050[42].

As noted above, to do its fair share of the global task to limit warming to 1.5°C, The Climate Institute[43] and WWF-Australia[44] estimate that given its wealth and historic emissions,

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[41] TCI and AGL (2017) Reducing the Horizons of Uncertainty: Setting Australia's post-2030 emission goal. http://www.climateinstitute.org.au/verve/_resources/TCI_AGL_Targets_Policy_Brief_FINAL_(1).pdf

[42] *Ibid*

[43] http://climateinstitute.org.au/verve/_resources/National_Agenda_FINAL23082016.pdf

[44] http://www.climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/submissions/2015/W

Australia would need to reduce emissions by 45 per cent on 2005 levels by 2025, 65 per cent by 2030 and net zero emissions between 2040 and 2050. The final date would largely be dependent on short and medium term targets, with the Government's current 2030 targets requiring net zero to be achieved by around 2040.[45]

ACOSS recommends the Australian Government undertake a review:

- To set a 2050 Target in line with the global goal of limiting warming to well below 2°C and pursue 1.5°C.
- Including a review of the 2030 Target (and ideally set a 2025 target), in line with the processes under the Paris Agreement where countries must reconsider and resubmit their 2030 target by 2019-2020 at the latest.
- Using a long-term carbon budget approach to determine the targets that is consistent with at least a 75 per cent probability of keeping global warming well below 2°C and 50 per cent chance of limiting warming to 1.5°C.
- Utilising an equity-based carbon budget that accounts for historical obligations, wealth and per capita emissions.[46]
- Including an analysis of economy wide and sectoral strategies that can achieve targets consistent with the Paris Agreement Goals.

What process could Australia use to implement its Paris commitment to review targets every five years?

ACOSS recommends the Australian Government approach reflects the timeframes laid out in the Paris Agreement and implements the **following processes to review Australia's targets:**

- Undertake a review between now and June 2018, of 2025, 2030 and 2050 emissions reduction targets.
- Submit Australia's 2050 strategy to the UNFCCC before the end of 2018 In line with the processes under the Paris Agreement, and resubmit a revised 2030 target by no later than 2019.

WF%20Australia.pdf

[45] See for example page 20 of TCI and AGL (2017) Reducing the Horizons of Uncertainty: Setting Australia's post-2030 emission goal.
http://www.climateinstitute.org.au/verve/_resources/TCI_AGL_Targets_Policy_Brief_FINAL_(1).pdf

[46] The Climate Institute and AGLs policy brief "Reducing the horizons of uncertainty: Setting Australia's post-2030 emission goal", they outline a number of methods to determine 2050 target including using IPCC methodology, and based on comparison targets of other countries. The former requires more ambitious short and medium term targets and the later is likely to mean we will overshoot the Paris goals. An equity based carbon budget approach is fairer.

- Review targets (including the 2050 target), every five years, including development of a considered five yearly review process that aligns to the delivery of Australia's Nationally Determined Contributions under the Paris Agreement, with the next formal review in 2022/23.
- Reviews to include:
    - Update on targets
    - Updates to economy wide and sectoral strategies
    - Adaptation target and strategy
    - International Finance obligations
- Noting the formal process does not prevent any Government from increasing its targets outside of the formal review process.

What are the issues in the transition to a lower emissions economy with respect to jobs, investment, trade competitiveness, households (including low income and vulnerable households) and regional Australia?

One critical point to note is that it is not the target that determines the cost of reducing emissions but the policies and measures implemented to deliver the target.

As noted above we know that:

- Unconstrained climate change would have serious economic, environmental and social impacts on Australia. Australians experiencing poverty and disadvantage will be the first and hardest hit by climate change impacts, as they have least ability to cope, adapt and recover. Rapid decarbonisation in line with Paris Agreement is essential.
- The long-term economic costs of inaction are greater than the costs of action.
- Delaying action increases future costs.
- Australia does not need to rely on technological breakthroughs or structural changes to the economy to achieve major reductions in emissions. The technologies required for decarbonisation are either available or under development.
- All industries continue to grow and some sectors improve under emissions reductions policies. Australia's economy would continue to grow to approximately two and a half times its current size by 2050 under ambitious targets.

Thus, taking deep effective action now to avoid unconstrained climate change will provide important benefits and opportunities to Australia.

Emissions reductions on the necessary scale will also require substantial change and present significant challenges for Australia, including vulnerable Australians.

- Low income and disadvantaged households are also likely to be worse off if the transition is not managed well for the reasons outlined in the introduction. Unaffordable energy bills are a key issue facing vulnerable households at the moment.
- Opportunities presented with distributed energy (i.e. solar and battery storage) if not managed well could create a two-tiered system further exacerbating the differences between the haves and have nots.

There will need to be specific policies to ensure the transition to a clean economy is inclusive and equitable for people experiencing poverty and disadvantage.

Implementing an effective, long-term stable climate policy is a major priority. A decade of policy change, inaction, lack of national coordination and finger pointing between the federal government and the states is a central cause. According to the Australian Energy Council the lack of national climate and energy policy certainty is now the single biggest driver of higher electricity prices, equivalent to a carbon price of $50 a tonne.[47]

As outlined in the ACR principles, the ideal climate policy would need to:

- Be capable of achieving deep reductions in Australia's net emissions in line with our overall goal;
- Provide confidence that targeted emissions reductions actually occur;
- Be based on an assessment of the full range of climate risks;
- Be well designed, stable and ideally internationally linked;
- Operate at least cost to the domestic economy while maximising benefits;
- Remain efficient as circumstances change and Australia's emissions reduction goals evolve;
- Prevent the unnecessary loss of competitiveness of Australia's trade exposed industries and net increases in global emissions that might otherwise occur due to the uneven international application of climate policies;
- Compliance costs and regulatory burdens should be kept to a minimum;
- Policy should stimulate and support research, development, demonstration and commercial deployment of new and improved low-emissions technologies and processes to minimise the long-term costs, and maximise the economic opportunities, in achieving the long-term goal;
- The costs of climate policy should be spread fairly within the Australian community.

[47] Australian Energy Council (2017) Submission to Independent Review into the Future Security of the National Electricity Market Preliminary Report.

ACOSS supports a mix of measures that include a market based mechanism (preferably one that raises revenue to support vulnerable households), regulation and on-budget measures.

In addition, ACOSS advocates that the transition to a cleaner economy must be inclusive, equitable and should not impact disproportionately on disadvantaged households. These principles should underpin policy solutions. The costs of climate policy should be spread fairly within the Australian community and that good policy design should:

- Protect the most vulnerable individuals;
- Avoid disproportionate impacts on vulnerable people, low income households and the organisations that support them;
- Ensure they are not left behind or shut out from new technology and distributed energy; and
- Assist the successful transition of communities that are especially vulnerable to economic shocks or physical risks as a result of climate change or climate policy.

In ACOSS' policy work around decarbonisation of the electricity sector, we note that price is only part of the story and that it's the *total cost* and *ability to pay* that impact on energy stress and vulnerability, which can be influenced by a range of factors like housing circumstances, household energy needs, access to concessions etc. The policies needed to empower vulnerable households to respond to decarbonisation of electricity can apply to other services, where policy response needs to achieve five outcomes:

- Services priced efficiently (including integrated climate policy);
- Informed and enabled consumers;
- Energy consumed efficiently and productively;
- Robust consumer protections; and
- All households have a capacity to pay.

ACOSS' submission to the Finkel Review, which can be found at attachment A, and the ACOSS, Brotherhood of St Laurence and The Climate Institute Report "Empowering Vulnerable Households through Electricity Decarbonisation" to be submitted separately provide detailed recommendations.

Many of the recommendations will require financial support. ACOSS stresses the support should not be financed through regressive means, like electricity bills, and should come from on-budget or tax system, and could include:

- Revenue raised through phasing out Fossil fuel subsidies like fuel tax rebate, concessional rate on airline fuel, statutory effective life caps for the oil and gas sector, and exploration of oil and gas;
- GST revenue from electricity bills;

+ Carbon price, such as an emissions trading scheme, where part of the revenue raised is targeted to support low income and disadvantaged households.

3 Electricity Sector

ACOSS responses to this section can be found in:

- ACOSS' submission to the Finkel Review, which can be found at **Attachment A**. The submission makes 34 recommendations.
- ACOSS, Brotherhood of St Laurence and The Climate Institute's report "Empowering Vulnerable Households through Electricity Decarbonisation". To be submitted separately.

4 Households, Small to Medium Enterprises, and the Built Environment

What are the opportunities and challenges of reducing emissions for households, SMEs and the built environment? Are there any implications for policy? Are there particular concerns or opportunities with respect to jobs, investment, trade competitiveness and regional Australia that should be considered for households, SMEs and the built environment?

1. Energy Efficiency for Vulnerable Households

There are significant emission reduction opportunities and cost savings to be had from improving the energy efficiency of households. This is especially true for low income and disadvantaged households who could significantly reduce energy bills through improved household energy efficiency. There are, however, major barriers.

According to the Australian Sustainable Built Environment Council (ASBEC), modelling indicates that cost-effective energy efficiency and fuel switching can reduce projected 2050 emissions from buildings by more than half. Combining these measures with distributed solar PV can eliminate the remaining emissions, allowing Australia to achieve zero carbon buildings by 2050 if the necessary barriers are overcome.[48]

According to ASBEC, in 2013, energy use from residential buildings was responsible for slightly more than half (51 per cent) of total emissions in the buildings sector. As such, the household sector can make a significant contribution to emissions reduction.

The biggest gains in household emissions reductions could come from people on low incomes, who are more likely to live in energy inefficient houses as evidence by lower incidence of insulation and higher rates of ownership of inefficient appliances that are cheap to buy but expensive to run.[49] Significant support, however, would be needed.

A report in 2008 by CSIRO[50] titled *Energy Affordability Living Standards and Emissions Trading* and a 2010 report by ACOSS, ACF and Choice prepared by Adj. Prof. Allan Pears

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[48] ASBEC (2016) Low Carbon, High performance: How Buildings can make a major contribution to Australia's emissions and productivity goals. http://www.asbec.asn.au/wordpress/wp-content/uploads/2016/05/160509-ASBEC-Low-Carbon-High-Performance-Full-Report.pdf

[49] ACOSS (2013) Energy Efficiency and People on Low Incomes. http://www.acoss.org.au/images/uploads/ACOSS_ENERGY_EFFICIENCY_PAPER_FINAL.pdf

[50] Hatfield-Dodds, S. and Denniss, R (2008) Energy Affordability, Living Standards and Emissions Trading: Assessing the Social Impacts of Achieving Deep Cuts in Australian Greenhouse Gas Emissions. http://climateinstitute.org.au/verve/_resources/energy_affordability_living_standard_and_emissions_trading_-_assessing_the_social_impacts_of_achieving_deep_cuts_in_australian_emissions_discussion_paper_june_22_0

titled *Energy and Equity*, both recommended improvements to energy and water efficiency for low income and disadvantaged households as a critical measure to combat price hikes. These reports noted energy efficiency would significantly reduce consumption of energy and water, reduce utility bills and cut greenhouse gas emissions.

As outlined in a report prepared by ACOSS in 2013, *Energy Efficiency and People on Low Income,*[51] raising a home from a 2-star to 5-star energy rating can result in a 54 per cent reduction in energy required for space heating and cooling in Victorian homes. This equates to a 32 per cent total energy saving, or up to $600 in annual household savings a year.[52]

There are, however, persistent barriers that prevent people on low incomes from investing in energy efficiency as a way of reducing costs. These barriers include:

- Lack of access to capital for high value energy efficiency upgrades;
- The inability of tenants to improve the energy efficiency of rental properties, and lack of requirements or incentives for landlords to invest in energy efficiency;
- Information barriers - such as literacy and language, confusion about product and programs and where to find reliable information, and poor knowledge of the most effective ways to save energy.

According to ABS 2008 data,[53] 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), and people on low incomes are twice as likely to be renting as those in the highest income quintile. Further, ABS data[54] finds that single parents are disproportionately impacted with lone parents more likely to be renting than couples. Newly arrived migrants are also over-represented as renters. Most (74 per cent) low income renters are renting from a private landlord (DSE 2009) and private renters are significantly more likely to enter energy hardship programs than owner occupiers.[55]

ASBEC argues the introduction of mandatory minimum standards for rental properties for example could be justified as a consumer protection measure.[56]

ASBEC also suggest that State and Territory governments should establish mandatory minimum standards for public-owned housing that increase over time and facilitate

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8.pdf

[51] ACOSS (2013) Energy Efficiency and People on Low Incomes.

[52] OME 2013: One Million Homes Roundtable Summary Report: May 2013

[53] ABS 2008: Australian Bureau of Statistics, Australian Social Trends, 2008, ABS 4102.0

[54] *ibid*

[55] IPART 2010: Independent Pricing and Regulatory Tribunal of New South Wales (IPART) (2010). Residential energy and water use in Sydney, the Blue Mountains and Illawarra: results from the 2010 household survey. Sydney, IPART.

[56] ASBEC (2016) Low Carbon, High performance: How Buildings can make a major contribution to Australia's emissions and productivity goals. http://www.asbec.asn.au/wordpress/wp-content/uploads/2016/05/160509-ASBEC-Low-Carbon-High-Performance-Full-Report.pdf

financing mechanisms (e.g. the Greener Government Building or NSW Government Resource Efficiency Program models) for upgrades of public housing. ABARE note there are currently more than 320,000 public housing dwellings in Australia, so the above measures could unlock emissions reductions at the same time releasing some of the pressure that public housing maintenance costs put on government budgets.[57]

The ABARE report notes that delaying implementing energy efficiency measures will have costs. For example, just five years of delay in implementing the opportunities in buildings could lead to more than $24 billion in wasted energy costs and over 170 megatonnes of lost emission reduction opportunities through lock-in of emissions intensive assets and equipment.

ACOSS supports the call for a greater focus on energy efficiency measures, particularly to support low income and disadvantaged households who are bearing the brunt of high electricity prices.

ACOSS understands that the National Energy Productivity Plan includes a focus on examining ways to provide best practice services to consumers. Energy Consumers Australia received $2 million in funding over three years to improve energy efficiency in low income households, building on the outcomes from the Low Income Energy Efficiency Program (LIEEP) to provide practical benefits.

ACOSS recommends the Australian Government:

- Commission research to determine the broader economic and societal benefits from energy efficiency programs e.g. lower risk of hospitalization for heat stress/cold; increased household expenditure on other necessities, to establish the cost benefits involved in the introduction of energy efficiency programs and reallocate funding accordingly.
- Support state and territory governments to adopt and implement energy efficiency standards for rental properties, raise minimum energy efficiency standards for all new builds, introduce mandatory disclosure of energy and water efficiency of all properties at point of sale, and review taxation policy with a view to designing and implementing landlord tax incentives for energy efficiency measures.
- Invest in new builds and building upgrades for highly efficient public housing.
- *Provide* additional funding[58] for targeted retrofits for the worst performing and highest risk social housing stock in each state; Partnerships can help government to target upgrades where they are most urgently needed.

[57] Ibid

[58] ACOSS is aware and supportive of the Clean Energy Finance Corporation's (CEFC) community housing energy efficiency fund and the projects they have supported to date, but would like to see more systematic Government support.

- Establish a face to face assistance program to provide targeted energy efficiency advice and assistance for low income households and people who are unable to access written or online information.

The above package of reforms can lead to significant benefits, including:

- economic stimulus;
- enterprise and community development;
- skill development and employment stimulus;
- reduce energy costs for low income and disadvantaged households, which can have budgetary benefits to business and Government;
- improve health, wellbeing and economic participation of low income and disadvantaged households;
- improved adaptation to climate change impacts; and
- reduced emissions.

2. Energy efficiency in the community sector

The community sector can be part of the solution but will need support. The community sector has over 50,000 charities, with a total income of $134.5 billion and employs over 1.2 million people.

Given the size of the sector there is significant capacity to reduce emissions through energy efficiency, and other measures. United Communities in South Australia was the first registered charity in Australia to receive certification under the Federal Government's Carbon Neutral Program. This resulted in savings of more than $1,000,000 over the life of the program from reductions in electricity consumption (29 per cent), company fleet fuel (14 per cent), and waste to landfill (76 per cent) while also lowering their carbon footprint by 34 per cent.

Welfare services and providers tend to be energy and emissions intensive and have relatively little discretion in consumption (i.e. most expenditure is for essential and basic goods and services including fuel and energy). Few have any capacity to raise revenue from the people who use their services or ready access to capital. Like low income households, most welfare services operate from premises and with equipment and vehicles that use energy and water relatively inefficiently. Targeted support from governments could go a long way to working with the community sector to reduce its emissions and better respond to any energy price increases.

ACOSS recommends the Australian Government:

- Establish an energy efficiency incentives program for not-for-profit organisations.

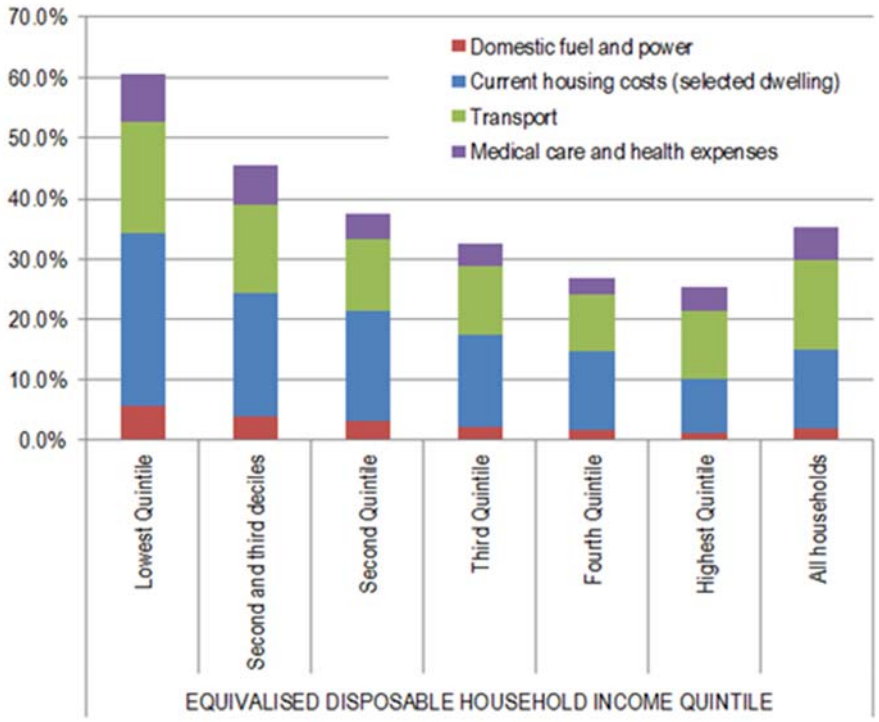
5 Transport

What are the opportunities and challenges of reducing emissions in the transport sector? Are there particular concerns or opportunities with respect to jobs, investment, trade competitiveness, households and regional Australia associated with policies to reduce emissions in the transport sector?

All Australians can experience transport disadvantage, however, the nature of this disadvantage differs. For people experiencing poverty and disadvantage, transport difficulties tend to relate to the ability to access transport and the costs of travel whereas for other groups transport difficulties tend to relate to traffic congestion and time availability.[59]

As with electricity, and indeed non-discretionary spending in general, people experiencing poverty and disadvantage spend a greater portion of their disposable income on transport than people on higher incomes (See figure 1).

Figure 1



According to the ABS, Australians in the bottom income quintile are much more likely to experience transport difficulties than those in the top income quintile (9.9 per cent and 1.3 per cent respectively) (Australian Bureau of Statistics [ABS], 2006).

The most vulnerable groups tend to be:

[59] Currie, G., Richardson, T., Smyth, P., Vella-Brodrick, D., Hine, J., Lucas, K., Stanley, J., Morris, J., Kinnear, R., & Stanley, J. (2010). Investigating links between transport disadvantage, social exclusion and well-being in Melbourne - Updated results. *Research in Transportation Economics*, *29*, 287-295

- People with a disability
- Single parents with children
- Aboriginal and Torres Strait Islanders

What further exacerbates the problem is more people experiencing poverty and disadvantage live in outer suburban areas and regional areas where access to public transport is limited.

Transport is critical for education, economic participation and social inclusion and support. A study in Western Australia found that vulnerable households sometimes placed a higher priority on remaining mobile than electricity.[60] The research also revealed the cost that fuel used for transportation has on job search and employment decisions. Nearly one quarter of respondents in the lowest income bracket indicated that concerns over the cost of getting to an interview had affected their decision whether or not to attend and almost one third of all respondents indicated that the cost of transport fuel had influenced their decision on whether to take a particular job.

The further development of electric cars and household battery storage will offer significant opportunities for reducing fuel costs, however, electric vehicles and household batteries are not yet reasonably affordable for the average Australian let alone people experiencing poverty or disadvantage.

Policy solutions must ensure that if transport costs increase significantly as a result of decarbonisation policies, assistance will need to be provided to low income and disadvantaged households.

ACOSS recommends the Australian Government:

- Invest in better and cleaner (zero emissions) public transport. This should be the highest national transport infrastructure priority.
- Implement stronger vehicle emissions standards.
- Support infrastructure roll out and non-regressive incentives to electrify the passenger vehicle system.
- Purchase electric vehicles for the government fleet.
- Transitioning our electricity grid from fossil fuels to renewable energy, to fully realise reduced emissions from electric vehicles.
- Shift freight to rail.
- Invest in infrastructure that supports walking and cycling which not only provide low-cost alternatives to private motor vehicle use, but also have the potential to reduce the burden on health budgets.

[60] BankWest Curtain Economics centre (2016) Energy Poverty in Western Australia. http://bcec.edu.au/assets/bcec-energy-poverty-in-western-australia.pdf

- Improve social security payments, in particular Newstart and Youth Allowance, and in general ensuring that all Australians have an adequate income to meet rising transport, housing and electricity prices.

6 Climate Resilience

Greater attention needs to be paid to climate adaptation, resilience and emergency response, both in terms of supporting people affected by poverty and disadvantage who will be the first and hardest hit by the impacts of a changing climate and have the least capacity to cope, adapt and recover,[61] and supporting Community Services Organisation who play a significant role in supporting vulnerable people during extreme weather events.

If not addressed, this will lead to significant social justice issues and increase pressure on the need for financial and services support.

1. Strengthening climate resilience amongst people experiencing poverty and disadvantage.

> *'Resilience is best built well before and far beyond the management of disasters and emergency risks. As well as promoting the wellbeing of socially vulnerable people in emergencies, its broader benefits include the social and economic wellbeing of our communities, state and nation.' (VCOSS, 2014)*[62]

In addition to people affected by poverty and disadvantage being more vulnerable to climate change impacts, a UK study[63] finds that they:

- Contribute the least to causing climate change;
- Pay, as a proportion of income, the most towards implementation of certain policy responses and benefit least from those policies; and
- Are less able to participate in decision-making around policy responses.

Research by academics at the University of Adelaide[64] note there is an emerging concern that the negative effects of climate change will be disproportionately experienced by those who are economically and socially disadvantaged, further widening the gap between them and more advantaged population groups.

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[61] Mallon, K, Hamilton, E, Black, M, Beem, B & Abs, J 2013, Adapting the community sector for climate extremes: Extreme weather, climate change & the community sector – Risks and adaptations, National Climate Change Adaptation Research Facility, Gold Coast, 286 pp. (www.nccarf.edu.au/publications/extreme-weather-climate-change-community-sector)

[62] VCOSS (2014) Disadvantage and disaster: Social vulnerability in emergency management http://vcoss.org.au/documents/2014/06/VCOSS_Disadvantage-and-disaster_2014.pdf

[63] Joseph Rowntree Foundation (2014) Climate Change and Social Justice: An Evidence Review. https://www.jrf.org.uk/report/climate-change-and-social-justice-evidence-review

[64] Nursey-Bray, M J, Fergie, D, Arbon, V, Rigney, L, Palmer, R, Tibby, J, Harvey, N and Hackworth, L (2013) Community Based Adaptation to Climate Change: The Arabana, South Australia. https://www.nccarf.edu.au/sites/default/files/attached_files_publications/Nursey-Bray_2013_Community_based_adaptation_Arabana.pdf

Australian research finds that people most vulnerable to climate impacts include.[65]

- People on low incomes
- The unemployed
- People living in poor quality housing or in the private rental market
- Frail older people
- Aboriginal and Torres Strait Islander peoples
- Single parents
- Newly arrived migrants and refugees
- People with a disability and their carers.

The literature finds some groups at greater risk[66] include:

- People experiencing homelessness
- People with a disability
- Women and children at risk of family violence
- Frail older people

People experiencing poverty or disadvantage are often worse off in extreme weather events, because they don't have the power, the capacity, choice, social connections,[67] or means to respond. Box 2 summarizes some of the challenges vulnerable people faced in the direct aftermath of Hurricane Sandy in New York, where disadvantaged individuals and households were stranded, left to suffer and sadly lost their lives. In Australia renters in towns in North Queensland struggled in the days and weeks after the recent cyclone Debbie to have their homes repaired to make them habitable and were given no support or alternate accommodation.[68] Heatwaves kill more Australians than any other natural disaster.[69] During heatwaves, the highest mortality rates exist for people on low incomes, people over 80 years of age and people with health issues. As outlined in box 3, poor inefficient housing, lack of cooling devices, high energy costs, and living in rental properties are significant contributors to heatwave deaths.

[65] ACOSS (2013) Submission to Senate Inquiry into recent trends in and preparedness for extreme weather events. http://www.acoss.org.au/images/uploads/ACOSS_submission_to_Senate_Inquiry_into_extreme_weather.pdf
[66] *Ibid*
[67] Social exclusion has been found to increase the sense of vulnerability and ability to cope.
[68] https://www.cqnews.com.au/news/renters-claim-no-one-cares-after-debbie/3174232/
[69] PWC 2011: Protecting human health and safety during severe and extreme heat events, A national framework, Price Waterhouse Coopers, Nov 2011, page 40

Box 2: Impacts on vulnerable people after Hurricane Sandy.[70]

Tens of thousands of New York public housing residents were trapped without power, heating or access to medical or other support services for up to two weeks in the aftermath of Hurricane Sandy (New York Times, 9th December 2012). The extensive flooding caused by the storm surge directly impacted 402 public housing buildings resulting in the loss of power to 77,000 residents; 34,565 residents also lost access to heating and water supplies. Without power, lifts and lights in the affected buildings could not operate, effectively stranding tens of thousands of residents – many of whom were elderly or living with a disability or chronic health problem – in freezing and pitch black apartments. People in wheelchairs were unable to evacuate, diabetics were left without access to insulin and residents attempting to heat their homes using their stoves suffered carbon monoxide poisoning. In the storm's immediate aftermath, the government agency responsible for public housing struggled to respond in a timely manner due to poor long-term planning prior to the event: it took almost two weeks for power to be restored and for a coordinated approach to be established to locate residents and assess and support their needs.

Box 3: Impacts of extreme heat on vulnerable households

In the Feeling the Heat report, VCOSS documented some of the impacts of extreme heat as described by community organisations:

- Vulnerable people living in public housing properties, rooming houses and caravans that were described by staff as 'hot boxes' and who had no access to cooling or cool areas
- Lifts out of action in high rise accommodation because of heat-related power shortages
- Landlords who did not allow air-conditioning or fans because of operating costs
- Lack of access to drinking water, particularly for people who are homeless and sleeping rough, as well as those living in accommodation that restricts access to kitchens and bathrooms.

[70] ACOSS (2013) Submission to Senate Inquiry into recent trends in and preparedness for extreme weather events.
http://www.acoss.org.au/images/uploads/ACOSS_submission_to_Senate_Inquiry_into_extreme_weather.pdf

- *'Older people and people with disabilities in public housing particularly seemed really concerned about their own health and articulated frequently that they felt especially vulnerable and that there should be special measures put in place to help protect them.'*
- *'They [caravans] are just so small … they are just those old fashioned round ones, the windows are really small, the doors are small, there is no way you can get significant airflow … and often there are women and children living in those environments too.'*
- *'I know of two community housing providers that made it their policy to go and knock on at least the older people's doors at least once a week … when they got a call or heard that someone was worried about someone else, they would kind of draw straws over who would go and knock on the door. They were all afraid someone would be dead, because it was happening so regularly…'*
- *'Increasingly, rooming houses in ordinary suburban areas don't have any communal areas, so even the lounge room will be converted to a bedroom. So you can have severe over-crowding of an ordinary suburban property without a communal area and, when it's hot, people are much more likely to seek refuge outside their bedroom so that increases the risk of conflict.'*
- *'In the previous summer, in rooming houses where people were running cooling devices, we did see operators basically coming around to the residents and saying you've got to stop using your air-conditioning because it's costing me too much … they would issue very strict and harsh instructions about the use of air-conditioners. '*
- *'There was no water in this supported residential service. This has since been addressed … there is a water machine now, but clients had to knock on the locked door of the kitchen to get a glass of water. '*

Even after an extreme weather event and its direct aftermath, people experiencing poverty or disadvantage before the event are often left worse off after the event. For example, after the Queensland floods vulnerable people were worse off as a result of:[71]

+ Lack of or under-insurance (see Box 4 for more on insurance) and the rejection of flood insurance claims, which left people unable to live in or to repair their homes;
+ Loss of employment through disruptions to and closures of local businesses;
+ Loss of rental tenancies and inability to meet higher bond payments and rents;
+ Increased pressure on public housing waiting lists; and

[71] Queensland Council of Social Service (2011): Submission to the Queensland Floods Commission of Inquiry. Available at: http://www.floodcommission.qld.gov.au/__data/assets/file/0008/6983/Qld_Council_of_Social_Service_QCOSS.pdf

- Increased living costs.

Box 4: Vulnerable people and insurance

There is now strong scientific evidence that global warming is leading to more frequent and intense extreme weather events. A report released by the Investor Group on Climate Change, *Assessing Climate Change Risks and Opportunities for Investors*, states that insurance costs from extreme weather events have risen in Australia since 2000. This is leading to increases in insurance premiums, and even a withdrawal of some insurers from high exposure regions. For example, following extensive floods in Queensland during 2010-11, insurance premiums increased substantially and insurance companies refused to offer new insurance policies for flood damage in Roma and Emerald.

Low income and disadvantaged households face significantly lower levels of financial resilience and inclusion, increasing the likelihood that they are under- or non-insured. Financial education, access to financial products, and ensuring financial inclusion policies and practices are adopted by the insurance industry can support financial resilience and encourage the uptake of insurance among people living on low incomes.

In addition, the insurance products available to vulnerable households are both unaffordable and inaccessible. The lack of appropriate products, including insurance for individual items or goods, alongside the increasing cost of insurance and the lack of flexibility in payment options, puts this protective mechanism out of reach. Increasing affordability and accessibility can ensure that products are fit for purpose and ensure that people protected against loss.

To help ensure all Australians have access to appropriate insurance, particularly those living on low incomes, VCOSS made the following recommendations to Senate Inquiry into Australia's general insurance industry.[72]

1. To encourage understanding and uptake of insurance, and to meet the particular needs of people living on low incomes, the insurance industry should:
    a. encourage and promote targeted financial resilience programs
    b. adopt financial inclusion policies, including hardship programs.
2. To increase the affordability and accessibility of insurance products for people living on low incomes a range of products, payment options and mechanisms should be made available to make premiums easier to manage, including:
    a. increasing the number of targeted products through more insurance companies
    b. providing options for small amounts of cover

[72] VCOSS (2017) Helping Low-income Australians access insurance: VCOSS submission to the Senate Inquiry into Australia's general Insurance Industry. http://vcoss.org.au/documents/2017/02/SUB240217_General-insurance-inquiry-FINAL.pdf

c. improving promotion of existing products targeted to people on low incomes

d. developing new products such as 'renters' insurance

e. considering exempting people on low-incomes from insurance stamp duties

f. offering fortnightly or weekly payment options

g. offering Centrepay payment options

h. providing information in Plain English as well as in other languages

i. offer free and impartial advice about insurance

j. partner with community organisations to develop trust and deliver appropriate products

The Brotherhood of St Lawrence has recommended the establishment of a dedicated not-for-profit (NFP) insurance platform.[73]

Researchers at Adelaide University found that amongst people experiencing poverty and disadvantage, there was a high level of acceptance of climate change, though not all thought it would affect them. Most were making adaptations in response to changes in the weather or rising costs of living and were willing to do more.[74]

To date, the federal government's response to supporting vulnerable Australians and households has been inadequate. While the *National Climate Resilience and Adaptation Strategy* 2015 now includes in its principles of 'effective resilience and adaptation', the need to support those who may be vulnerable,[75] which ACOSS welcomes, the strategy, however, fails to include vulnerable Australians and the building capacity of the community services sector as one of its eight priority sector and policy areas

To assist Australians experiencing poverty and disadvantage to adapt to a changing climate, policy must seek to:

+ Facilitate the upgrade of homes for more efficient heating and cooling to reduce energy bills;

[73] Brotherhood of St Lawrence (2017) Uninsured Australia: The case for not-for-profit insurance. https://www.bsl.org.au/fileadmin/user_upload/documents/media/Robinson_Uninsured_Australia_2017.pdf

[74] Nursey-Bray, M J, Fergie, D, Arbon, V, Rigney, L, Palmer, R, Tibby, J, Harvey, N and Hackworth, L (2013) Community Based Adaptation to Climate Change: The Arabana, South Australia. https://www.nccarf.edu.au/sites/default/files/attached_files_publications/Nursey-Bray_2013_Community_based_adaptation_Arabana.pdf

[75] "We support those who may be vulnerable to climate-related impacts, or who have limited capacity to respond. We do this through our policy design choices and the social welfare system." P.g. 9 of *National Climate Resilience and Adaptation Strategy* https://www.environment.gov.au/system/files/resources/3b44e21e-2a78-4809-87c7-a1386e350c29/files/national-climate-resilience-and-adaptation-strategy.pdf

- Provide relevant information about the effects of climate change and the action that people can take;
- Incorporate social inclusion elements into climate adaptation strategies;
- Provide improved transport options, particularly public transport, that allow people to access services;
- Develop and strengthen local communities' capacity to adapt to local factors and assist people and support one another in times of adversity caused by climate change;
- Consider the needs of those who are dependent on others due to their young or old age, disability or ill health;
- Provide services that assist people of all cultures and languages;
- Fund community sector organisations to expand direct monitoring of vulnerable people during emergencies – especially those who are homeless, living in general public housing and in rooming houses.

Ultimately, governments at all levels need to recognise that Australians are both motivated and able to make changes in their lifestyle and behaviour toward more sustainable practices, and so there must be a focus on more education and assistance programs designed to assist Australians to make better decisions about lifestyle and behaviour choices.

A report by Deloitte Access Economics, *The economic cost of the social impact of natural disasters*[76], argues that funding of disaster mitigation measures should not only focus on building physical infrastructure such as flood levees, but include funding for social and psychological measures too. Their analysis found the social costs of natural disasters in 2015 were at least equal to the physical costs – if not greater.

Deloitte's report suggests there would need to be an increase in community awareness, education and engagement programs that enhance social capital by building social networks and connections. It also argues that while these preventative measures require up-front funding, they yield a return on investment by lessening the overall impact of a natural disaster on individuals, businesses, governments and communities.

ACOSS recommends the Australian Government:

- Update the *National Climate Resilience and Adaptation Strategy* 2015, to specifically include vulnerable Australians and the community services sector as one of its eight priority sector and policy areas. Include social inclusion and *equity elements* into climate adaptation strategy.

[76] "We support those who may be vulnerable to climate-related impacts, or who have limited capacity to respond. We do this through our policy design choices and the social welfare system." P.g. 9 of *National Climate Resilience and Adaptation Strategy* https://www.environment.gov.au/system/files/resources/3b44e21e-2a78-4809-87c7-a1386e350c29/files/national-climate-resilience-and-adaptation-strategy.pdf

- In developing policies and measures to support people living in poverty or disadvantage to adapt, cope and recover, better consider the following:
    - Upgrade homes for more efficient heating and cooling to reduce energy bills, including minimum rental standards and upgrade of public and community housing stock;
    - Provide relevant information about the effects of climate change and the action that people can take;
    - Include social inclusion elements into climate adaptation strategies;
    - Better transport options, especially public transport, for people to access services;
    - Develop and strengthen local communities' capacity to be able to adapt to local factors and assist people and support one another in times of adversity caused by climate change;
    - Planning for those who are dependent on others due to their young or old age, disability or ill health;
    - Services that assist people of all cultures and languages, and
    - Fund community sector organisations to expand direct monitoring of vulnerable people during emergencies – especially those who are homeless, living in general public housing and in rooming houses.

2. Strengthening climate resilience of community services organisations

Priority four of the *The Sendai Framework for Disaster Risk Reduction 2015-2030*, adopted at the UN World Conference in 2015, focuses on the need for "Enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction."[77]

As noted in the previous section people experiencing poverty and disadvantage need additional support to cope, adapt and recover for extreme weather events. Community service organisations (CSO) are embedded within their communities, deliver key services across local communities, have in-depth knowledge of local people, history, risks and vulnerabilities and are best placed to understand and identify their support needs. The services they provide are a critical feature of Australian society, complementing the income support system as well as health and education systems. As such, community service organisations comprise an essential component of the social infrastructure. Indeed, for

[77] Sendai Framework for Disaster Risk reduction 2015-2030. http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf

many people experiencing poverty, disadvantage and social exclusion, these organisations are often the primary source of connection to the broader community and form the basis of their resilience to everyday adversity as well as in times of crisis.

Worryingly, major research project by NCCARF, ACOSS and Climate Risk[78] found that:

- CSOs are highly vulnerable and not well prepared to respond to climate change or extreme weather events, with many small and medium-sized organisations at risk of permanent closure as a result of major damage to physical infrastructure and disruptions to critical services. For example, the survey results demonstrate that one week after an extreme weather event 50 per cent of organisations that sustain serious damage to their premises would still be out of operation; 25 per cent might never provide services again;
- The detailed consequences of major disruptions to social service provision for people experiencing poverty and inequality – for whom CSOs are the shock absorbers for everyday adversity as well as crises – are very serious as they give rise to the basic threats to human survival: homelessness, deprivation, hunger, isolation and death;
- Despite the size of the problem of CSO vulnerability and the severity of its consequences, the literature review clearly shows that to date the community sector has been overlooked in the climate change adaptation policy settings and research agendas of developed economies as evidenced by major gaps in the academic and grey literature;
- CSOs have a stated desire to prepare for and adapt to climate change and extreme weather impacts and if well prepared they have inherent skills, assets and capabilities to contribute to community resilience to climate change and in response to disasters. These include the ability to educate, contact, locate and evacuate vulnerable people with specialist needs; specialist skills such as counselling, case management and volunteer management; and specialist assets and facilities such as disability transport;
- CSOs perceive an overwhelming range of barriers to action. Key amongst these is a lack of financial resources and skills and the concern that adaptation is 'beyond the scope' of the sector's core business. The issue of scope is central to establishing if increasingly frequent and intense extreme weather events represents a new 'normal' for CSO operation;
- Knowledge of the risks, experience of an extreme event and organisational size are indicators of organisational resilience to climate change impacts, including extreme weather events. Given that organisations have little or no control over their size or the occurrence of extreme events, raising awareness about the direct and serious

[78] Mallon, K, Hamilton. E, Black, M, Beem, B, and Abs, J. (2013) Adapting the Community Sector for Climate Extremes. https://www.nccarf.edu.au/sites/default/files/attached_files_publications/Mallon_2013_Adapting_community_sector.pdf

ways in which climate change and worsening extreme weather events will affect their ability to provide services and therefore to fulfil their mission to people experiencing poverty and disadvantage becomes critical.

As a result of the project ACOSS received funding to develop a Resilient Community Organisations Toolkit, to help organisations measure and improve their resilience to disasters and emergencies. The Toolkit includes:

- A benchmarking system so organisations can assess their current state of preparedness and identify areas for improvement.
- Six Steps to Disaster Resilience, which provide resources organisations need to take action.

Funding is now needed to implement the Resilient Community Organisations Toolkit throughout the community sector.

Despite their connection with local communities and their ability to provide critical information and services during and after extreme events, the lack of formal recognition and resourcing of community service organisations to participate in emergency planning and response has also meant that understanding and supporting the preparedness of this critical sector has been overlooked.

For example, a survey of the community sector found the lack of adequate financial resources and contracting for service arrangements between government funding agencies and community service organisations were key barriers to climate change adaptation. Lack of financial resources prevents organisations from engaging in resilience and capacity building to prepare for disasters. Inflexible contracts for service provision place limits on their capacity to participate effectively in emergency response and recovery efforts and to meet increased demand for services during and after disasters.

This lack of adequate financial resources is exacerbated for many community service organisations by rigid service funding contracts, which fail to make allowances for the impacts of disasters on organisations' capacity to deliver services as contracted or provide for a pre-agreed proportion of resources to be used in the delivery of services to meet needs during crisis and recovery.

Build on previous recommendations ACOSS has made in this area,[79] **ACOSS recommends the Australian Government:**

Assist in the improvement of CSO sector preparedness, by:

- Establishing a funding program to support the community sector to:

[79] ACOSS (2013) Extreme Weather, climate Change and the community sector. http://www.acoss.org.au/images/uploads/ACOSS_submission_to_Senate_Inquiry_into_extreme_weather.pdf

- Raise awareness about the serious risks to its service delivery and to people experiencing poverty and inequality from climate change and worsening extreme weather impacts;
- Undertake climate change and extreme weather risk assessments and develop and implement disaster management and service continuity plans;
- Deliver emergency RediPlan[80] to community sector clients; and
- Invest in climate change and extreme weather preparedness and response training for staff and volunteers engaged in direct service provision as well as management and administrative roles.

+ Working with state governments to ensure contracts for service delivery must provide greater flexibility to community service organisations and enable them to participate effectively in disaster response and recovery efforts. Specifically, they should include mechanisms that:
  - Ensure timely compensation for their contributions to response and recovery efforts; and
  - Ensure they are not penalised for failing to meet contractual obligations due to their participation in disaster response and recovery.

Building resilience

+ Provide funding to:
  - Implement the *Resilient Community Organisations Toolkit* within the community sector; and
  - Undertake adaptation and preparedness benchmarking specific to community service provision that enable organisations, their funding agencies and insurers to plot progress towards risk reduction, resilience and adaptive capacity.

Sharing risks

+ Work with state and local governments and formal emergency service agencies to recognise the critical role the community services sector plays in emergency management and resource, facilitate and support its effective participation in planning, response and recovery at all levels.

[80] RediPlan is a free disaster preparedness guide that assists households prepare for any emergency in four simple steps.

Attachment A

ACOSS Submission to the Finkel Review:

ACOSS Submission to Independent Review into the Future Security of the National Electricity Market – Preliminary Report

About ACOSS

ACOSS is a national voice for people experiencing poverty, disadvantage and inequality. Our vision is for a fair, inclusive and sustainable Australia where all individuals and communities have the opportunities and resources they need to participate fully in social and economic life.

ACOSS has seventy five members – 8 state and territory Councils of Social Service and sixty seven national member organisations (the majority of which are peak bodies for their specific service sector, while a smaller number are national welfare agencies). Our membership represents over 3,000 organisations plus additional individuals across every state and territory through the combined network of the Councils of Social Service.

Contact for this submission

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1 Summary and Recommendations

ACOSS welcomes the opportunity to make a submission to the Preliminary Report of the Independent Review into the Future Security of the National Electricity Market.

As a national voice for people experiencing poverty, disadvantage and inequality, ACOSS is concerned that low income and disadvantaged households are bearing the brunt of an electricity sector in disarray, and fears low income and disadvantaged households will be further disadvantaged if the transition to a modern, clean electricity sector is not inclusive and equitable.

ACOSS agrees with the Preliminary Report, that Australia needs to find solutions to the energy trilemma, which in ACOSS's view is essential to improving the health and wellbeing of people experiencing poverty and disadvantage.

> *The heart of the Review's task is to find solutions to address the so-called energy trilemma – policies that simultaneously provide a high level of energy security and reliability, universal access to affordable energy services, and reduced emissions.*[81]

ACOSS views reliable and affordable electricity as essential. It is critical to the health, wellbeing, economic participation and social inclusion of Australians. Noting that technology, better consumer frameworks and consumer education will have limits for a range of reasons, including cost, low literacy levels, housing situations, limited internet access, and complex lives -therefore an adequate safety net will remain essential.

ACOSS also supports the imperative to reduce greenhouse gas emissions and shift away from fossil fuels to renewable energy. People experiencing poverty and disadvantage are usually the first and hardest hit by the impacts of climate change caused by the burning of fossil fuels such as coal and gas, yet they often have the least capacity to cope, adapt and recover.[82] Limiting global warming is critical.

Unfortunately, the Australian electricity market is not currently serving the interests of low income and disadvantaged households.

For the more than three million Australians experiencing poverty and disadvantage,[83] electricity is already unaffordable as a result of prices increasing 83 per cent in capital cities

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[81] Finkel, A (2016) Independent Review into the Future Security of the National Electricity Market: Preliminary Report, pg 10. https://www.environment.gov.au/system/files/resources/97a4f50c-24ac-4fe5-b3e5-5f93066543a4/files/independent-review-national-elec-market-prelim.pdf

[82] Mallon, K, Hamilton, E, Black, M, Beem, B & Abs, J 2013, Adapting the community sector for climate extremes: Extreme weather, climate change & the community sector – Risks and adaptations, National Climate Change Adaptation Research Facility, Gold Coast, 286 pp. (www.nccarf.edu.au/publications/extreme-weather-climate-change-community-sector)

[83] ACOSS 2016, Poverty in Australia 2016 – Australian Council of Social Service and the Social Policy Research Centre and the University of NSW www.acoss.org.au/poverty

during the period 2008 to 2013.[84] In some states there has been a threefold increase in electricity disconnections as a result of non-payment due to hardship since 2008.[85] Others are forced to ration energy, foregoing heating or cooling[86] and risking their health and wellbeing.

According to the Australian Energy Council, the lack of national climate and energy policy certainty is now the single biggest driver of higher electricity prices, equivalent to a carbon price of $50 a tonne.[87] And recent official emissions data and projections highlight that Australia's electricity sector emissions are increasing.[88]

The Preliminary Report argues that, in addition to technology change, consumers are driving the change through their choices.[89] However, consumers experiencing poverty and disadvantage do not have the same choices as other consumers. Their lack of choice is caused by a combination of lack of ability to pay (due to low paid work, low wage growth, inadequate income support, combined with high energy costs due to health requirements or low house energy efficiency); limited ability to access information; rental housing; significant health or disabilities; or other stresses that make engaging with the energy market simply not an option or a low priority. This means that the benefits of choice, i.e. installing solar and batteries, are not being distributed equitably in terms of access and affordability. If the transition is not managed with equity in mind, current inequities could be further exacerbated as consumers, feeling they may benefit from energy self-reliance, start leaving the grid, leaving behind poor and disadvantaged households (who cannot afford to go "off grid") carrying the costs of maintaining the grid and paying off past investments through higher network charges.

Now more than ever, the transition of the electricity sector and distribution of energy market costs has the potential for wide ranging and serious social equity impacts. This goes beyond the need for a focus on "price" as an objective of the National Energy Market (NEM), but also for the energy market to have regard for the distributional impacts and potential social and economic consequences for vulnerable members of the community. Given the essential nature of energy, it is important that outcomes for vulnerable consumers are explicitly

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[84] Australian Bureau of Statistics. Consumer Price Index, Australia, March 2013. Cat no. 6401.0 [released 24 April 2013]. Canberra: ABS; 2013

[85] Consumer Action Law Centre (2015) Heat or Eat: Households should not be forced to decide whether they heat or eat.http://consumeraction.org.au/wp-content/uploads/2015/08/Heat-or-Eat-Consumer-Action-Law-Centre.pdf

[86] ACOSS (2013) Energy Efficiency and People on Low Incomes. http://www.acoss.org.au/images/uploads/ACOSS_ENERGY_EFFICIENCY_PAPER_FINAL.pdf

[87] Australian Energy Council (2017) Submission to Independent Review into the Future Security of the National Electricity Market Preliminary Report.

[88]http://www.environment.gov.au/climate-change/greenhouse-gas-measurement/publications/quarterly-update-australias-national-greenhouse-gas-inventory-jun-2016

[89] Finkel, A (2016) Independent Review into the Future Security of the National Electricity Market: Preliminary Report, pg. 16.https://www.environment.gov.au/system/files/resources/97a4f50c-24ac-4fe5-b3e5-5f93066543a4/files/independent-review-national-elec-market-prelim.pdf

considered when 'solutions' to our energy security and climate challenges are put forward. It is ACOSS's view that the objectives of the NEM should be expanded to include a social equity objective.

Further, ACOSS agrees with the statement in the Preliminary Report that

> *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 in generation and network assets.*[90]

And alongside a social objective, ACOSS would support a decarbonisation objective.

Finally, as has already been alluded to, the price of electricity is only part of the story. What hurts vulnerable households is the total cost of securing their energy needs and ability to pay, which can be the result of lack of income, poor housing quality, uncertain housing tenure, communications barriers, high energy needs due to medical conditions etc. Governments, regulators and decision makers *must* therefore also consider factors outside the NEM if we are to make the modern electricity sector inclusive and affordable to low income and disadvantaged households and improve their health, well-being and ability to participate in the economy.

ACOSS would like to preface this submission noting that The Brotherhood of St Laurence, ACOSS, and The Climate Institute have received funding from Energy Consumers Australia for a joint project to engage the community and environment sectors to develop electricity sector policies that would make the transition to a modern decarbonised electricity system more inclusive and equitable. We aim to have draft recommendations by May and final recommendations by June. In the meantime, the following submission reflects some of the current concerns of ACOSS and its members, some potential solutions, and identifies where more work needs to be done, without prejudicing the final outcomes of this project.

With this is mind, ACOSS recommends the Review, in their recommendations to the Council of Australian Governments (COAG) Energy Ministers, consider the following recommendations:

Recommendation 1: That COAG Energy Ministers request expansion of the current NEO and AEMA to include a social equity objective and a decarbonisation objective to support decarbonisation.

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[90] Finkel, A (2016) Independent Review into the Future Security of the National Electricity Market: Preliminary Report, pg. 23.https://www.environment.gov.au/system/files/resources/97a4f50c-24ac-4fe5-b3e5-5f93066543a4/files/independent-review-national-elec-market-prelim.pdf

Recommendation 2: That COAG Energy Ministers require that NEM governing bodies explicitly outline their social, economic and environmental considerations in its decision-making.

Recommendation 3: That COAG Energy Ministers develop a plan and policy framework to phase out coal-fired power stations, and incentivise renewable energy uptake and supportive clean technologies, at least cost, that includes a mix of market mechanisms, regulation and other supportive measures.

Recommendation 4: That COAG Energy Ministers request a review of the current National Energy Customer Framework (NECF) to provide greater consistency between states and reflect best practice consumer benefits.

Recommendation 5: That COAG Energy Ministers support the establishment of a consumer protection framework that includes the following principles:

- 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.

Recommendation 6: That COAG Energy Ministers support the establishment of a range of no-regrets initiatives to help give effect to the principles, including:

- 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 vulnerable demographics access new products and services.
- Targeting concessions to address need rather than tying them to specific supply arrangements.

Recommendation 7: That COAG Energy Ministers support the establishment of a clear set of 'road rules' addressing the market entry and participation decisions from providers that includes restrictions to monopolistic networks in new more highly contestable markets.

Recommendations 8: That COAG Energy Ministers commission trials of cost reflective pricing for low incomes and disadvantaged households, to:

- Measure outcomes and impacts of cost reflective pricing on low income and disadvantaged households;
- Trial different approaches; and
- Assess whether cost reflective pricing is suitable for low income and disadvantaged households.

Recommendation 9: That COAG Energy Ministers commission research to determine the broader economic and societal benefits from energy efficiency programs e.g. lower risk of hospitalization for heat stress/cold; or increased household expenditure on other necessities, in order to establish the cost benefits involved in the introduction of energy efficiency programs and reallocate funding accordingly.

Recommendation 10: That the Federal Government review taxation policy with a view to designing and implementing landlord tax incentives for energy efficiency measures.

Recommendation 11: That COAG state Energy Ministers adopt and implement energy efficiency standards for rental properties, and introduce mandatory disclosure of energy and water efficiency of all properties at point of sale (like those implemented by the ACT Government and being considered by the Victorian Government).

Recommendation 12: That COAG state Energy Ministers *provide* additional funding for targeted retrofits for the worst performing and highest risk social housing stock in each state. Additional funding should be provided for upgrades of the poorest quality social housing that requires large amounts of energy for heating and/or cooling. Partnerships can help government to target upgrades where they are most urgently needed.

Recommendation 13: That Good Shepherd Microfinance be requested to establish, in conjunction with private banks, a micro-finance or other suitable financial support program to help with up-front costs of energy efficiency upgrades.

Recommendation 14: That the Federal Government establish a face to face assistance program to provide targeted energy efficiency advice and assistance for low income households and people who are unable to access written or online information.

Recommendation 15: That COAG Energy Ministers agree to establish a free national independent dispute resolution body on energy products and services, to reduce the incidence of disengaged consumers paying much higher retail prices than warranted.

Recommendation 16: That COAG Energy Ministers request the market regulator review retailer marketing practices, including 'pay on time discounts' and 'limited benefit periods' that impacts on low income and disadvantaged households; and make recommendations to regulate retailer marketing practices.

Recommendation 17: That COAG Energy Ministers request market regulators to establish a base level of protection that apply to all electricity consumers, regardless of the products or services used to obtain supply.

Recommendation 18: That COAG Energy Ministers provide funds to develop and promote an independent comparative tool of electricity products and prices.

Recommendation 19: That COAG Energy Ministers request market regulator to review and consider the introduction of new models for energy retailing including public interest retailers with the explicit aim of lowering energy prices for low income consumers.

Recommendation 20: That COAG Energy Ministers provide funds for relevant organisations to provide enhanced support for low income and disadvantaged consumers to understand the complex array of choices and obtain a product or service that is fit-for-purpose.

Recommendation 21: That COAG Energy Ministers take on board the following recommendations for the roll out of smart meters in each State:

- Increase awareness of in-home displays to improve energy literacy - provide people with more information on in-home displays, including how to purchase, install, connect and use them, in energy literacy promotional materials produced by the Victorian government and energy companies.
- Reduce cost of in-home displays for households facing disadvantage.
    - Encourage or require energy companies to provide, install and assist households to use in-home displays for free if they are in an energy hardship program; and
    - Invest in a Victorian government style energy efficiency program for households experiencing disadvantage, which includes an additional subsidy to offset the purchase cost of in-home display units.
- Provide better data to compare energy costs.
- Make it easier for households to connect an in-house display unit, by:
    - Ensuring all smart meters have a functioning wireless connection system.
    - Requiring energy distributors to have a simple, automatic way to connect an in-home display unit to a smart meter, with an alternative available by telephone for those needing assistance.
    - Requiring energy price information to be sent by retailers through smart meters to in-home displays.
- Regulate the costs of pre-connecting in-home display units to reduce or eliminate the cost of pre-connecting in-home displays.
- Protect the privacy of smart meters - avoid providing detailed data of previous occupants but enable the provision of historical comparison.
- Enable in-home displays to read data from non-standard smart meters.
- Improve the function of in-home display units, i,e, enable concession rates to be factored into costs displays.

Recommendation 22: That COAG Energy Ministers commission the development, by a trusted, independent source, of a comprehensive consumer education strategy.

Recommendation 23: That COAG Energy Ministers review energy incentives and their impact on low income and disadvantaged households with the aim to consider less regressive incentives, such as an income -proportionate strategy or Government budgets, or at a minimum provide compensation to eligible households.

Recommendation 24: The COAG Energy Council reviews both federal and state energy concessions schemes, taking into account:

- Inconsistencies in eligibility;
- The need to better meet the needs of all low income households, with a preference for a percentage of costs based concession;
- The need to improve emergency relief payments to simplify application processes and provide greater clarity for customers; and
- The importance of promotion of available support by all sectors.

Recommendation 25: In order to address the extreme pressure of energy affordability for people on very low incomes, the Federal Government, supported by COAG, improves the adequacy of income payments such as Newstart and Youth Allowance.

Recommendation 26: The Federal Government maintain the Energy Supplement for current and future pensioners, allowance and family payment recipients.

Recommendation 27: That COAG Energy Ministers establish a new independent body to manage coal closure, oversee worker support, and coordinate plans for regional economic diversity.

Recommendation 28: That COAG Energy Ministers establish an industry-wide multi-employer pooling and redeployment scheme which provides retrenched workers with the opportunity to transfer to roles with renewable or low emission generators as well as remaining fossil fuel generators. Extending the Victorian Scheme recently announced.

Recommendation 29: That COAG Energy Ministers in key affected states develop a fair and reasonable labour adjustment package consistent with community expectations that supports workers transition into new, decent and secure jobs

- Job placement networks.
- Retraining.
- Financial and personal support.
- Travel subsidies and relocation assistance.

Recommendation 30: That COAG Energy Ministers in key affected States facilitate the establishment of regional development coalitions, to develop specific plans and measures to renew and diversify the economy of affected regions.

Recommendation 31: That COAG Energy Ministers undertake the following:

- Develop a National Electricity Blueprint, which sets out long term objectives and a pathway for transition in the energy sector. The blueprint should:
    - Address security, affordability, social good, investment certainty, the needs of vulnerable households, decarbonisation, and just transition.
    - Recognise the implications for energy infrastructure of the changing technology mix and required planning for managing the transition for the electricity sector.
    - A road map, including mapping of optimal sites for renewable energy and storage solutions to maximise grid security and reliability; and
    - Plan for the orderly closure of coal-fired power stations and just transition

measures.

- Establish an energy transition authority with sufficient powers and resources to plan and implement the Blueprint and coordinate the transition in the energy sector, including a just transition for workers and communities. In light of the new body, review how the current framework of overlapping state and federal policy, market operator and regulatory bodies could be simplified and streamlined; including how a stronger consumer framework, that in particular better recognizes and considers low income and disadvantaged households, can be built into the NEM Governance.
- Ensure future planning, modelling and forecasting needs to be stressed tested against a rapidly changing technology, frequent change in technology price, climate policy, consumer preference, impacts of low income and disadvantaged Australians and the wider social good.
- Consider establishing dynamic work groups and pilots to work quickly through opportunities, challenges and solutions.
- Ensure that forecasting is transparent, accessible, and scenario based, with more emphasis on market intelligence and real-time updates, rather than annual or semi-annual publications.
- Implement rule changes to support uptake of new technologies and modernise the electricity grid, including: around grid connections, review bidding time frame for wholesale energy contracts to shorten the time frame; facilitate network payments to households and business with solar and battery; facilitate peer to peer trading; and other areas will be important.

Recommendation 32: That COAG Energy Ministers fund research to better understand energy affordability and vulnerability that utilises the 2017 release of the 2013-14 Household Expenditure Survey to align research into energy affordability and vulnerability with the methodologies in and publication of the ACOSS Poverty in Australia series.

Recommendation 33: That COAG Energy Ministers commission the following research work:

- Measure the likely impact of a range of climate and energy policies on electricity prices against different levels of emissions reduction ambitions (noting most COAG states have long-term 2050 emissions reduction targets and renewable energy targets);
- Analyse how the price changes would affect a range of low income and disadvantaged household types; and
- Identify and analyse policy measures capable of addressing price impacts and other barriers to participate in the clean energy transition.

Recommendation 34: That COAG Energy Ministers work with their housing Ministerial counterparts to align electricity and vulnerable household policy, advocacy and research initiatives with corresponding housing affordability initiatives.

To the extent that the Review considers the detail of climate policy, it should also be guided by the climate policy principles developed and adopted by the Australian Climate Roundtable.

2 Defining the Key Issues

2.1 Electricity Market: Issues for People Experiencing Poverty and Disadvantage

2.1.1 The interaction between electricity, poverty and disadvantage

Over 13 per cent of the Australian population lives below the poverty line (50 per cent of median wage).[91] These people face situations where they are unable to afford or participate in what are seen as the basis of a socially acceptable existence. When we look at the ten-year trends in poverty levels, nothing has changed: a very similar percentage of the population is living in poverty today compared with ten years ago.[92]

To illustrate the challenge people face it is worth noting that those receiving 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[93]. These are untenable situations given increases in energy costs sustained over the last decade in particular.

The number of households that struggle with energy affordability are much higher than the poverty figures. Various studies have painted a complex picture of household types that struggle with electricity affordability in Australia.[94] However, close relationships to the costs of other essentials – such as housing and transport – regularly recur. Nationally, about 30 per cent of the population are renters, many of whom receive low incomes and are unable to engage with energy markets and newer technologies, unlike homeowners. Analyses of historic income and expenditure suggest that a diverse range of household types are represented in the vulnerable household cohort, although some are at much higher rates than their proportion of the wider community. These include:[95]

- working people on the lowest incomes, who fall outside of the traditional safety nets

[91] ACOSS 2016, Poverty in Australia 2016 – Australian Council of Social Service and the Social Policy Research Centre and the University of NSW www.acoss.org.au/poverty

[92] *Ibid*

[93] *Ibid*

[94] Nance 2013, *Relative Energy Poverty in Australia* available from www.sacoss.org.au/relative-energy-poverty-australia; and Vinnies 2016. (St Vincent de Paul Society and Alviss Consulting) Households in the Dark; and Azpitarte, F, Johnson, V & Sullivan, D 2015, *Fuel poverty, household income and energy spending: an empirical analysis for Australia using HILDA data*, Brotherhood of St Laurence, Fitzroy, Vic.

[95] Nance 2013, *Relative Energy Poverty in Australia* available from www.sacoss.org.au/relative-energy-poverty-australia

of the social security system;

- single parent households;
- people living alone;
- low income renters; and
- people with medical conditions or disabilities.

Housing circumstances were found to be a clear key indicator of vulnerability – the cost of housing determines how much room exists in the household budget to pay energy bills and tenure determines the scope of actions available to change consumption, followed by transport costs.

With noticeably fewer energy-consuming appliances than higher income homes[96] energy consumption in low income homes is more directly linked to the number of people in the home.[97] This raises cost and hardship implications for families on the lowest incomes.

Single parent families have been found most likely to seek emergency assistance to help pay for their energy costs.[98] Significant hardship is also experienced by people who need to charge wheelchairs or run medical equipment at home, and by those with a medical 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.[99] Research has found that rising energy prices can drive people with medical needs to reduce their heating, even to the detriment of their health.[100]

More research needs to be conducted to gain a better understanding of vulnerability to electricity pricing in Australia and its causes.

2.1.2 Current experiences - Electricity prices

As depicted in figure 1, electricity prices for a long while rose in line with inflation. From 1984 to 2007 electricity prices across the nation rose on average by 3.6 per cent each year, compared to an average annual inflation rate of 4.[101] But after 2007 electricity prices accelerated ahead of inflation and well before the carbon price was introduced in July 2012. According to Consumer Price Index, between 2008 and 2013, the cost of electricity across Australia's capital cities increased by 83 per cent.[102]

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[96] ABS 2009a: Australian Bureau of Statistics, Household Water, Energy Use and Conservation, October 2009, ABS 4602.2, and ABS 2009b: Australian Bureau of Statistics, Household choices related to water and energy, WA, October 2009 ABS 4656.5.

[97] IPART 2011: Independent Pricing and Regulatory Tribunal, Changes in Electricity Retail Prices from 1 July 2011..

[98] Anglicare 2008: Helping with the cost of energy: Report of Anglicare Sydney's 2006 EAPA data collection, September 2008

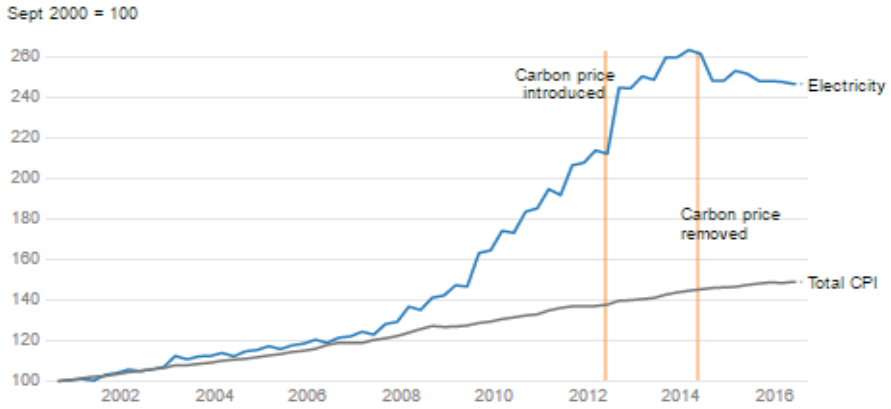
[99] Summers 2009: Michael Summers and Rex Simmons, Keeping Cool Survey: Air conditioner use by Australians with MS, MS. Australia, 2009.

[100] PIAC 2012: Public Interest Advocacy Centre, More Power to You – electricity and people with disability, 2012.

[101] *https://www.theguardian.com/commentisfree/2017/feb/16/electricity-pricing-is-bloody-confusing-thats-why-theyre-using-it-to-mislead-us*

[102] Australian Bureau of Statistics. Consumer Price Index, Australia, March 2013. Cat no. 6401.0 [released 24 April 2013]. Canberra: ABS; 2013.

Figure 1 Electricity price and total CPI 2001 to 2016



Source: Guardian ABS 6401.0, Table 9, derived[103]

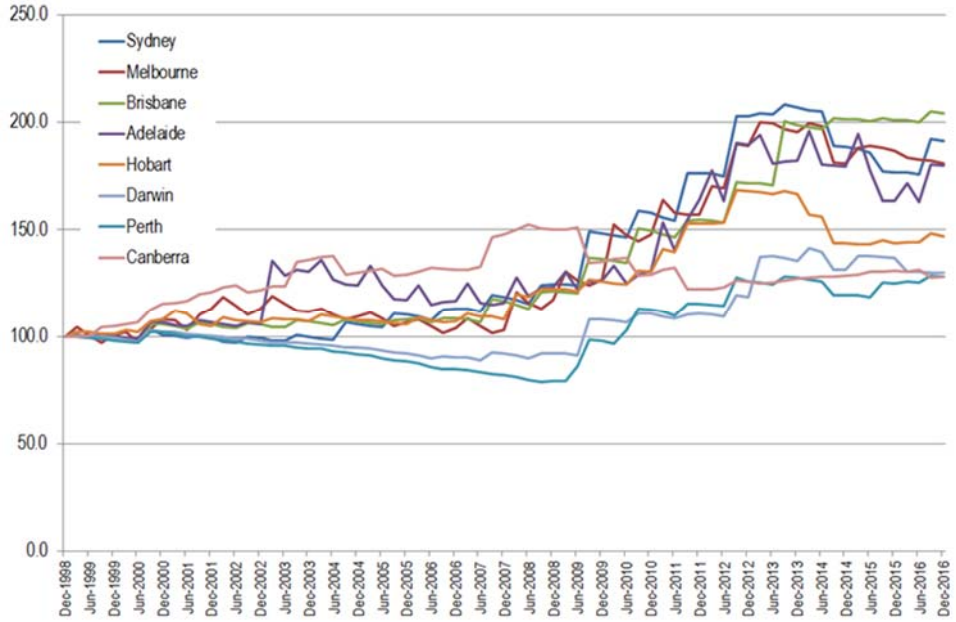
But there are significant differences between jurisdictions (see figure 2). The period from mid-2009 to mid-2012 saw the strongest growth in prices in all locations except Canberra. Price growth has been markedly lower in Tasmania, WA, ACT and NT where there is effectively no competition, jurisdictional regulators and/or Governments set retail prices and networks are in government ownership.

From mid-2016 prices started rising in SA and NSW and, according the AEMC's 2016 Residential Price Trends Report, are expected to outpace inflation in the years to 2018/19 in all jurisdictions except Queensland and Tasmania.[104]

[103] https://www.theguardian.com/commentisfree/2017/feb/16/electricity-pricing-is-bloody-confusing-thats-why-theyre-using-it-to-mislead-us

[104] http://www.aemc.gov.au/Markets-Reviews-Advice/2016-Residential-Electricity-Price-Trends

Figure 2 Electricity price 1999 to 2016 by State



Source: Real electricity price movements since 1998, Australian Capital Cities (Source: ABS Cat No. 6401.0 Table 9)

Household energy costs have been analysed between 2006 and 2016 by researchers at the Australian National University (ANU) [105], where it was found that the share of total household expenditure in 2006 for electricity costs was 1.8 per cent; and by 2016 this increased to 2.7 per cent, a 50 per cent increase in share (see table 1). The research found the largest expenditure share is in Tasmania and South Australia and the lowest shares in Western Australia and the Territories. The researcher suggests the results are partly driven by relatively high electricity costs in South Australia and Tasmania but also relatively lower overall expenditure across all household expenditure – owing to lower household incomes for these states.

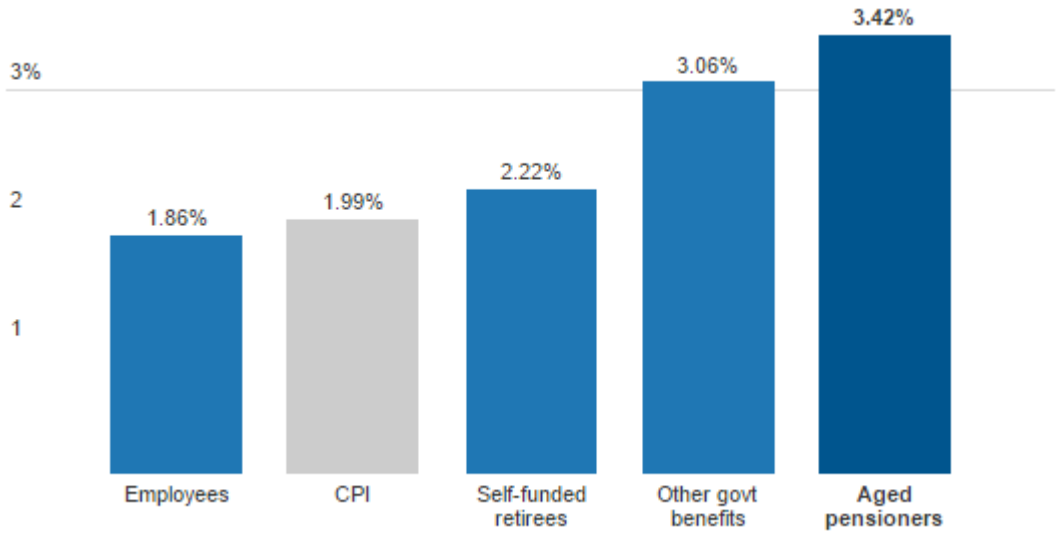
[105] Phillips, B. (2017) Research Note: Household Energy Costs in Australia 2006 to 2016. http://rsss.anu.edu.au/sites/default/files/Household%20Expenditure%20on%20Electricity%20Trends.pdf

Table 1: Household electricity expenditure 2006 to 2016 by State

State	Average Electricity Bill 2006 (pa)	Share of Expenditure 2006	Average Electricity Bill 2016 (pa)	Share of Expenditure 2016	Growth in Expenditure 2016	Real Growth in Expenditure 2016
NSW	$918	1.8%	$1,922	2.6%	109%	66%
VIC	$841	1.7%	$1,837	2.6%	119%	73%
QLD	$890	1.8%	$2,102	2.9%	136%	87%
SA	$1,110	2.6%	$2,080	3.4%	87%	49%
WA	$855	1.6%	$1,582	2.1%	85%	47%
TAS	$1,317	3.0%	$2,181	3.5%	66%	31%
ACT/NT	$1,061	1.7%	$1,785	2.1%	68%	34%
Australia	**$916**	**1.8%**	**$1,902**	**2.7%**	**108%**	**65%**

If we look across household types, weekly spending on electricity by household type is higher amongst households on Government benefits, as shown in figure 3 below.

Figure 3 Proportion of weekly spending on electricity by household type



Source: Guardian, data source ABS 6401.0, 6467.0[1]

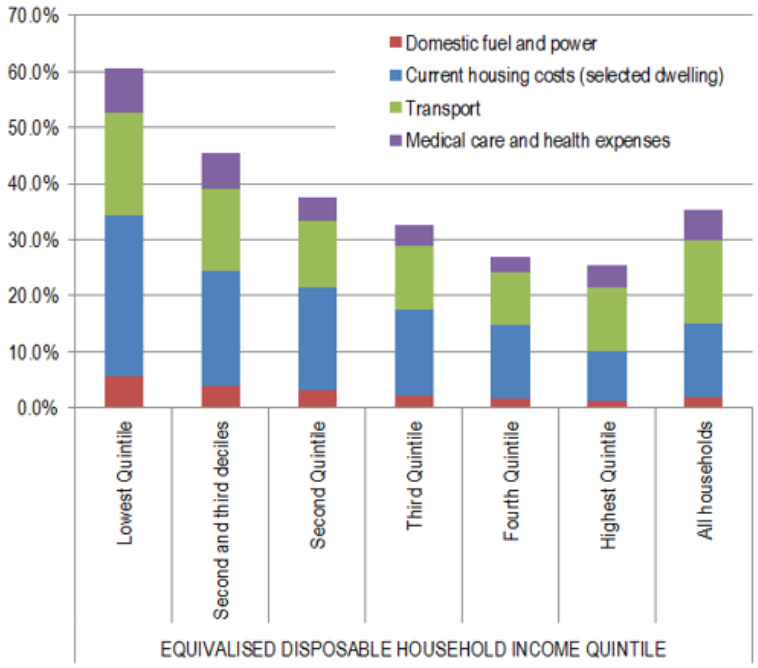
Note that the data presented here are 'averages' for the various categories of people. We know that the distribution of the proportion of weekly spend is substantial, with some people in each of these categories paying substantially more than the average for the category.

People living on low incomes, on average, use less energy than those on higher incomes,, but spend proportionally more - due to low incomes.

Figure 4 looks at average household expenditure on housing, energy, transport and health by equivalised disposable income. It shows that not only do households on the lowest incomes spend a greater proportion of income on energy than other higher income levels,

but the relative capacity to pay for energy of these households is clearly compromised by their expenditure on other necessities.

Figure 4: Average Household expenditure on housing, energy, transport and health by Equivalised Disposable Income



Source: ABS 6530.0 Household Expenditure Survey, Australia: Summary of Results 2009-10[106]

With households participating in energy hardship programs typically consuming twice the national average and spending a greater proportion of income on utilities, they are particularly vulnerable to price increases of any magnitude. In some states there has been a threefold increase in electricity disconnections as a result of non-payment due to hardship since 2008.[107]

Evidence suggests that in response to high energy costs and energy hardship, many people living with low incomes implement an 'energy rationing' response (such as avoiding heating and cooling).[108] Such responses lead to poor health outcomes, as evidenced by the fact that during heatwaves people on low incomes are amongst those with the highest mortality rates.[109]

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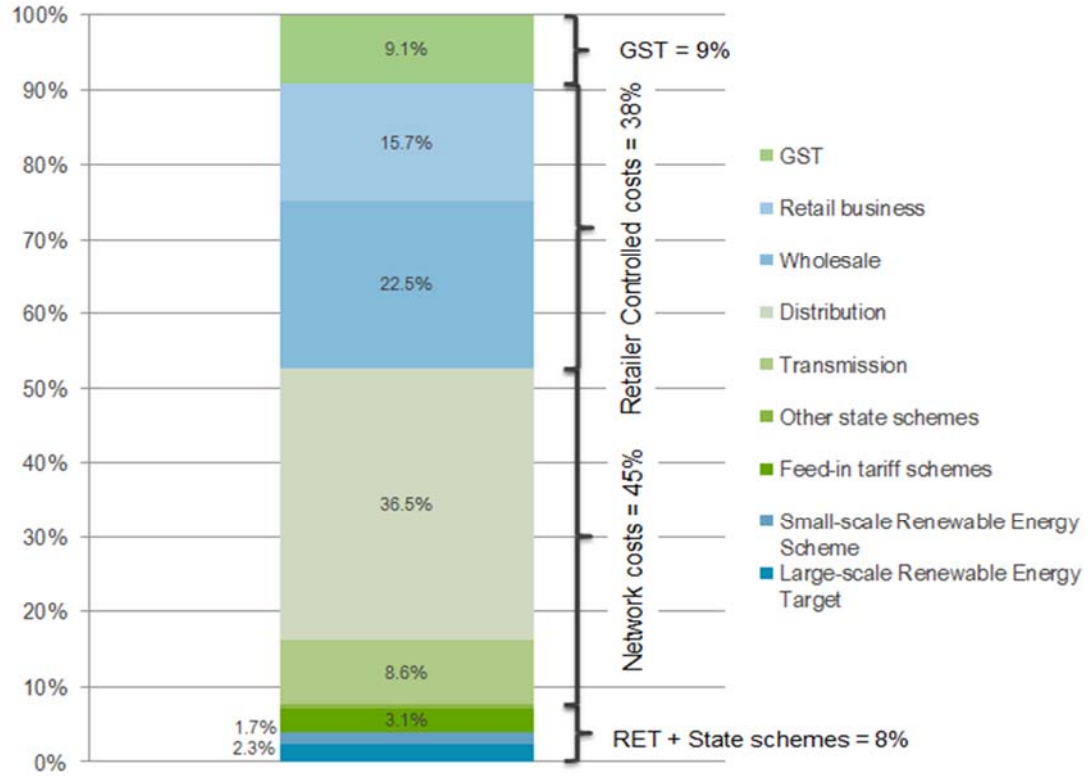
[106] Nance, A. (2017) Energy Access and Affordability Policy Research, Forthcoming.
[107] Consumer Action Law Centre (2015) Heat or Eat: Households should not be forced to decide whether they heat or eat.http://consumeraction.org.au/wp-content/uploads/2015/08/Heat-or-Eat-Consumer-Action-Law-Centre.pdf
[108] PIAC 2012: Public Interest Advocacy Centre, More Power to You – electricity and people with disability, 2012
[109] PWC 2011: Protecting human health and safety during severe and extreme heat events, A national framework, Price Waterhouse Coopers, Nov 2011, page 40

Finally, it is important to understand the 'building blocks' that comprise an electricity bill, to identify where costs are coming from and where future reductions can be made (see also figure 5 below)

- Network costs – the transmission of electricity from large generators and distribution to and between customers - represent around 45 per cent of the average bill;
- Wholesale costs – is around 22.5 per cent of the cost;
- Retailer controlled costs –the costs of billing, administration of customer accounts and risk management – represent around 16 per cent of costs; and
- Australia's renewable energy target, 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.

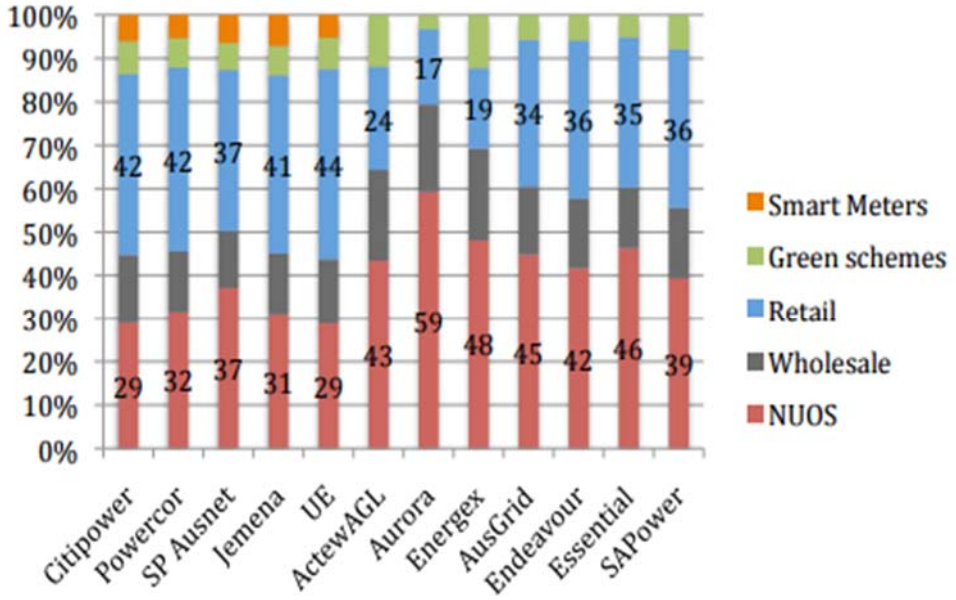
Figure 5 Breakdown of average national residential electricity price, 2015-16



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

As can be seen in figure 6 below, the bill-tack differs between states, and the contribution of 'environmental policies' (National RET, state based feed-in-tariffs and state based energy efficiency schemes), also varies with environmental policies in the ACT and QLD being slightly higher than the national average.

Figure 6 Estimated bill-stack for regulated/standing offers, average annual bill based on the offers taking effect post July 2016 (6,000kWh per annum, single rate, excluding GST)



Source: St Vincent De Paul (2016) National Energy Market: A Hazy Retail Maze.[110]

2.1.3 The changing energy market

The electricity sector is already in transition to clean energy. It is inevitable and desirable, there is no going backwards. As the Preliminary Report notes, many of the technological, economic and consumer trends transforming our energy systems are irreversible,[111] driven by technology change, consumer choice, and national and state climate change policy.

In addition, the majority of coal-fired electricity generators will be well past their design life by 2030.[112] Choices about refurbishment, replacement or closure of these generators will be critical to energy affordability, reliability, social cohesion and emissions reductions in the period to 2030 and beyond.

At the core of the transition is a shift away from a largely centralised system made up of predominately baseload fossil fuels like coal and gas to a decentralised, dispatchable and variable system with renewables and storage, which it is argued will be a more efficient and cheaper system.

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[110] https://www.vinnies.org.au/icms_docs/256854_National_Energy_Market_-_A_hazy_retail_maze.pdf

[111] Finkel, A (2016) Independent Review into the Future Security of the National Electricity Market: Preliminary Report, pg. 10.https://www.environment.gov.au/system/files/resources/97a4f50c-24ac-4fe5-b3e5-5f93066543a4/files/independent-review-national-elec-market-prelim.pdf

[112] Climate Council 2014: 65% of Australia's coal fired power stations will be over 40 years old by 2030.

Renewable energy technology such as wind and large scale solar photovoltaic (PV) is now cheaper to build and operate than new coal-fired and gas power stations.[113] Climate and energy analyst Reputex released modelling on 8th of March 2017 stating

> *Renewables with energy storage have surpassed gas [and coal] as the cheapest source of new flexible power in Australia, with analysis indicating these sources may alleviate system pressure by providing load-following and peaking generation services.*[114]

Decentralised and distributed renewable energy is growing rapidly in Australia providing consumer choice for some and driving emissions reductions. Australia has the highest rooftop solar per capita, and most of the solar penetration to date has been in middle and some lower socio economic suburbs,[115] with many taking up solar to control their energy bills and save money.

The arrival of electric vehicles, grid-interactive water heaters, smart appliances and storage solutions is expanding the definition of "distributed energy resource" beyond just rooftop solar and providing exciting opportunities and solutions.

For example, the arrival of storage solutions such as pumped hydro and batteries is seen by some as a core solution to overcome concerns of variability of renewable energy and can provide grid resilience, reliability and services, helping to reduce costs to networks. And for consumers, these can provide lower cost energy, demand management, and ability to sell into the grid or to peers.

On the 14th of March 2017, the South Australian Government announced investment in large scale storage which they argue will help drive down costs of electricity to consumers and provide grid security and reliability.[116]

Peer-to-peer trading also provides some exciting opportunities, with two pilot projects already underway in Australia,[117] one in WA allowing a unit block to generate and trade energy with their neighbours.[118]

The next step is for networks to recognise, value and provide payment for the services that household distributed energy provides, such as frequency control, avoided grid maintenance and upgrades, making distributed energy even more cost effective.

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[113] 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/

114http://www.reputex.com/research-insights/a-cost-curve-for-emissions-reductions-energy-storage-in-the-australian-power-sector/

115 http://reneweconomy.com.au/rooftop-solar-uptake-still-highest-in-low-income-australia-63263/

116 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

117http://reneweconomy.com.au/greensync-launches-world-first-exchange-trade-stored-household-solar-power-49889/ and https://powerledger.io/progress/

118 https://powerledger.io/progress/

United States energy innovation 'think tank' the Rocky Mountain Institute cites distributed energy resources for low income households as one of eight key electricity innovations to watch in 2017.

> *In 2017, with the decrease in the costs of DERs coupled with smartphone-enabled engagement pathways (including pay-by-phone, electronic billing, and pre-pay), utilities, regulators, and others are revisiting whether they can serve these customers better with DERs than with subsidies.*[119]

However, to date, the opportunities and benefits of distributed energy has not been inclusive and equitable for households experiencing poverty or disadvantage, who either are unable to access new technology (eg renters), unable to afford new technology (i.e. can't afford upfront costs), and in addition are required to pay for renewable energy subsidies though increases in energy bills.

For example, the data shows that, while the uptake of solar has been in lower to middle income areas,[120] solar has not been an option for households living in poverty or in rental housing. So, while subsidising rooftop solar (through Small Scale RET and state based feed-in-tariffs) has been beneficial, resulting in significant numbers of installations, cheaper energy bills for solar households, jobs growth and emissions reduction, recouping the subsidy through energy bills puts additional pressure on already struggling families, leading to further disadvantage and inequity. Going forward, careful consideration should be given to existing and new policies that incentivise uptake of distributive energy to ideally avoid mechanisms that are regressive, such as through recouping revenue via electricity bills. At a bare minimum an offset mechanism should be provided to vulnerable households.

There is also concern that, with the arrival of battery storage, households and business will increasingly choose to leave the grid, preferring to be self-sufficient and to avoid network costs. The flipside of this is that those who can't leave the grid will be left to foot the bill for maintaining the grid and paying off past and future investments through higher network charges. While it's more likely 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, this scenario is not inevitable, rather it must be purposefully and carefully planned for and managed as we transition. It is also why it is vital that any proposals to "fix" the energy and climate challenges of today, are carefully evaluated for the potential costs that could be borne by future consumers, particularly low income households who may find themselves stuck paying for stranded expensive investments that seemed a good idea/quick fix at the time they were proposed.

It's important to also note that, when discussing new technology development and opportunities for consumers, there is often an assumption that all Australians have fast,

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[119] http://blog.rmi.org/blog_2017_01_31_eight_areas_of_electricity_innovation_to_watch_in_2017
[120] http://reneweconomy.com.au/rooftop-solar-uptake-still-highest-in-low-income-australia-63263/

reliable and affordable access to the internet, which for some of these technology is a pre-condition. As highlighted in a report prepared by SACOSS for the Australian Communications Consumer Action Network (ACCAN), many Australians relying on income support struggle to afford to connect to the internet and use it to the same extent as the wider Australian community.[121]

A report by the Consumer Action Law Centre, *Power Transformed: unlocking effective competition and trust in the transforming energy market,* outlines additional potential detriments for consumers in the new energy market that will need to be overcome (see table 2). The report notes that if these issues are addressed more effective competition can be unlocked through the confident participation of consumers.[122]

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[121] Ogle, G. & Musolino, V.2016, Connectivity Costs: Telecommunications Affordability for Low Income Australians, Australian Communications Consumer Action Network, Sydney

[122] Consumer Action Law centre (2016) *Power Transformed: unlocking effective competition and trust in the transforming energy market,*

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

Detriment	Example
1. Lack of access to basic consumer protections	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
2. Buck-passing and blame shifting	When disputes arise in new products and services which may require a network of relationships to deliver, the potential for buck-passing and blame shifting between parties is high
3. Mis-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
4. Poor decision-making	Consumers may find it difficult to make decisions in their own interests when the number of choices, and complexity of those choices, increases
5. Long lock-in contracts	Long lock-in contracts (e.g. 15 years for a solar lease) reduce consumer choice and flexibility
6. 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
7. Inability to access the new market	Some consumers may face systemic barriers to participation in the new, personalised electricity market; this may include those with low incomes, poor literacy skills, language barriers and renters
8. Difficulty comparing products and services	Bundled products and services which are increasingly marketed to individuals based on their personal usage profiles may become difficult to compare where inclusions, exclusions and terminology differ
9. 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
10. Exclusion through complexity	People who could benefit from switching to new products and services may not engage if information and price signals are too complex, or the reason for participating is not clear
11. Hardship in off-grid scenarios	Off-grid households may experience reduced supply or loss of supply if they fall into hardship, or during a dispute with their technology provider
12. Reduced choice in off-grid communities	Consumers in off-grid communities may have reduced ability to choose their preferred electricity provider and may face higher costs where retail competition is reduced

Now, more than ever, the transition of the electricity sector and distribution of energy market costs has the potential for wide ranging and serious social equity impacts. This goes beyond the need for a focus on "price" as an objective of the NEM but also for the energy market to have regard for the distributional impacts and potential social and economic consequences for vulnerable members of the community. Given the essential nature of energy, it is important that outcomes for vulnerable consumers are explicitly considered when 'solutions' to our energy security and climate challenges are put forward. As will be outlined further below in addition to implementation of a range of other measures, its ACOSS's view that the objectives of the NEM should be expanded to include a social objective.

2.1.4 Cost of securing energy – more than price

As noted throughout this submission, price of electricity is only part of the story. What hurts vulnerable households is the total cost of securing their energy needs and ability to pay. This is influenced by:

- The technologies used to produce electricity;
- The market designs used;
- Upward pressure across the supply chain, including network and retail charges;
- How much, when and how energy is consumed;
- The level of choice and control individuals consumers have over their energy costs and ability to respond to price signals;
- Eligibility for concessions;
- Housing circumstance, including number of people in a dwelling, health requirements of people in dwelling, house design and level of energy efficiency; and
- How and at what pace society responds to the risks of climate change.

Therefore governments, regulators and decision makers *must* also consider factors outside the electricity system if we are to make the modern electricity sector inclusive and affordable to low income and disadvantaged households and improve their health, well-being and ability to participate in the economy.

2.2 Why Decarbonise Electricity: Climate Change and Vulnerability

People affected by poverty and disadvantage will be the first and hardest hit by the impacts of a changing climate; they are also those with the least capacity to cope, adapt and recover.[123] If unmitigated, this will lead to significant social justice issues and increase pressure for financial and services support.

It is for this reason that ACOSS welcomed the Australian Government's ratification of the new global climate change agreement – the Paris Agreement – which aims to limit global warming to well below 2˚ C, and pursue a limit of 1.5 ˚ C. To do its fair share of the global task, modelling finds Australia, as a relatively wealthy developed country, will need to reduce its greenhouse gas emissions to net zero before 2050.[124]

Without appropriate policies and measures in place, the impacts of climate change and the transition to zero emissions economies could have a regressive impact on people experiencing poverty and other forms of disadvantage if not managed well. This was recognised in the Paris Agreement, which explicitly requires all parties to consider people in vulnerable situations when defining actions to both mitigate and adapt to climate change. In Australia there has been insufficient focus and profile on this issue.

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[123] Mallon, K, Hamilton, E, Black, M, Beem, B & Abs, J 2013, Adapting the community sector for climate extremes: Extreme weather, climate change & the community sector – Risks and adaptations, National Climate Change Adaptation Research Facility, Gold Coast, 286 pp. (www.nccarf.edu.au/publications/extreme-weather-climate-change-community-sector)

[124] http://www.climateinstitute.org.au/verve/_resources/TCI_Beyond_the_Limits_FINAL23082016.pdf and http://www.climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/submissions/2015/WWF%20Australia.pdf

ACOSS is greatly concerned that the world is not on track to avoid more dangerous climate change. A 2016 United Nations Environment Programme (UNEP) report argues that the world is currently tracking well above the Paris Agreement goals, towards a temperature rise of between 2.9 and 3.4 ° C[125]. A more recent journal article in *Science Advances* argues that previous climate models have underestimated the acceleration and we are more likely on track for a 4.78° C to 7.36°C.[126] Neither scenario is good, especially for vulnerable Australians who will bear the brunt. The UNEP report argues that the world will need to cut emissions a further 25 per cent by 2030, or further still if other predictions prove more likely.

As climate change accelerates, Australians will face increases in heatwave related deaths, chronic respiratory conditions, allergies and asthma, aggravated chronic disease, and stress-related mental health conditions; as well as the spread of infectious disease and extreme weather related injury and displacement.[127]

Heatwaves kill more Australians than any other natural disaster. Key risk factors for heat-related health impacts are often twice as prevalent for people on low incomes, compared to those with medium to high incomes.[128] In heatwaves, the highest mortality rates exist for people on low incomes, people over 80 years of age and people with health issues.[129] Low income housing in Adelaide, Sydney, Melbourne and Brisbane is are typically found in city areas with the highest land surface temperatures, so those most vulnerable to heat-related health impacts often live in areas where exposure to heat is greatest (CSIRO 2013).[130]

Indirect impacts will also be felt through increased prices for food and other essentials as those sectors and households deal with climate change impacts. For example, food prices during the 2005- 2007 drought increased at twice the rate of the Consumer Price Index (CPI) with fresh fruit and vegetables the worst hit, increasing 43 per cent and 33 per cent respectively.[131] The CSIRO estimates that, because of climate change related heat increases, energy requirements to cool a typical slab-on-ground, brick veneer home will increase by 75-115 per cent in Melbourne, and 95-359 per cent in Brisbane by 2070,[132] further putting pressure on low income and disadvantaged households.

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[125] UNEP (2016) Emissions Gap report 2016 http://www.unep.org/

[126] Friedrich, T., Timmermann, A., Tigchelaar, M. et al (2016) Nonlinear climate sensitivity and its implications for future greenhouse warming, Vol.2, non. 11, e10501923 http://advances.sciencemag.org/content/2/11/e1501923.full

[127] http://www.climatecouncil.org.au/uploads/1bb6887d6f8cacd5d844fc30b0857931.pdf

[128] PWC 2011: Protecting human health and safety during severe and extreme heat events, A national framework, Price Waterhouse Coopers, Nov 2011, page 40

[129] PWC 2011: Protecting human health and safety during severe and extreme heat events, A national framework, Price Waterhouse Coopers, Nov 2011, page 40

[130] CSIRO 2013: Pathways to climate adapted and healthy low income housing, Final Report: CSIRO, National Climate Change Adaptation Research Facility, 2013.

[131] Climate Council (2016) Feeding a Hungry Nation: Climate Change, Food and Farming in Australia. https://www.climatecouncil.org.au/uploads/7579c324216d1e76e8a50095aac45d66.pdf

[132] CSIRO 2013: Pathways to climate adapted and healthy low income housing, Final Report: CSIRO, National Climate Change Adaptation Research Facility, 2013

Those who are most vulnerable to climate change impacts, and similarly to those most vulnerable to electricity prices, are vulnerable because they have limited means by which to become more resilient and adapt. They include:

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

The heightened vulnerability of these groups arises from a number of factors including that they:

- Tend to live in areas more likely to be adversely affected by climate change (e.g. areas exposed to heatwaves, floods, storms or bushfires) and have far less ability to move or make other necessary adjustments to their living circumstances;
- Tend to have the least efficient, highest energy consuming appliances;
- Spend a greater proportion of total weekly household income on energy and water and are therefore more vulnerable to price increases for these utilities;
- Are less likely to have the financial capacity to implement energy efficiency and adaptation measures, or to purchase renewable energy technologies such as solar; and
- Are more likely to live in public housing or the private rental market and therefore lack the power or adequate incentives to introduce energy efficiency measures or renewable energy sources.

If climate change impacts are not mitigated this will lead to significant social justice issues and to increased pressure on governments for financial and service support, as evidenced by the ever growing cost of climate change related, post-disaster recovery and reconstruction.[133]

As noted above, Australia, as a developed and relatively wealthy country, will be required to do its fair share to limit global warming. ACOSS advocates that all sectors need to play a role in achieving Australia's contribution to the Paris Agreement goals.

However, ACOSS notes that, based on currently available technology, the electricity sector is in a much better position than agriculture, industrial processes and airline/shipping to do the heavy lifting to achieve Australians emission reduction commitments.

[133] http://www.igcc.org.au/resources/Pictures/Adaptation_FINAL.pdf

Analyses of electricity decarbonisation by CSIRO[134], Climate Change Authority[135] and The Climate Institute[136] find that the emissions intensity of Australia's electricity supply needs to approach 0.1tCO2e/MWh by 2040 for emissions reduction targets consistent with 2°C rise in average global temperatures. It is important to point outthat these analyses have not modelled what is required to pursue a global goal of limiting warming to 1.5˚C, and how that affects the rate at which we need to decarbonise.

If we are to minimise significant impacts on people experiencing poverty and disadvantage, It is imperative that Australia and the world act to limit global warming to 1.5˚C; and that Australia decarbonises the electricity sector before 2040.

The next section focuses on some of the measurers required to ensure the decarbonisation is inclusive and equitable and does not further disadvantaged vulnerable households.

3 Identifying Key Solutions

3.1 Solutions to the energy trilemma: making Energy Market work for low income and disadvantaged households

Historically, expenditure on energy has been driven by a fairly simple combination of total consumption and average prices. Looking forward though, changes to the structures of electricity tariffs and the uptake of technologies such as solar, storage, efficient appliances and energy management systems are expected to drive a re-distribution of electricity costs. It is not yet clear whether this will benefit vulnerable households, introduce new households to the cohort of vulnerable customers or simply worsen the situation of those already considered vulnerable.

ACOSS offers the following solution to put in place frameworks and measures that can contribute to transition of the electricity sector being more inclusive and equitable, while also providing safety nets for vulnerable households.

3.1.1 Expanding the NEO objectives and AEMA guidelines

The Preliminary Report is seeking advice on whether the NEM objectives (NEO) and COAG Energy Ministers intergovernmental agreement known as the Australian Energy Market

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[134] Hatfield-Dodds, S., Adams, P.D., Brinsmead, T.S., Bryan, B.A., Chiew, F.H.S., Finnigan, J.J., Graham, P.W. Grundy, M., Harwood, T.D., McCallum, R. McKellar, L.E., Newth, D. Nolan, M., Schandl, H. and Wonhas, A., (2015), Australian National Outlook 2015 - Supplementary data on electricity supply and emissions. CSIRO, Canberra

[135] http://climatechangeauthority.gov.au/sites/prod.climatechangeauthority.gov.au/files/files/SR%20Electricity%20research%20report/Electricity%20research%20report%20-%20for%20publication.pdf

[136] http://www.climateinstitute.org.au/verve/_resources/TCI_A-Switch-In-Time_Final.pdf

Agreement (AEMA), should be amended to include an environmental or emissions reduction objective.

The NEO's current objectives are:

> *to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to – price, quality, safety, reliability, and security of supply of electricity; and the reliability, safety and security of the national electricity system.*[137]

It's fair to say that the electricity market is currently failing on the NEM objectives around price, reliability and security.

More importantly these narrow objectives are no longer fit for purpose.

The electricity market is undergoing a dramatic transition, creating both opportunities and risks, benefits and losses. Now, more than ever, the distribution of energy market costs has the potential for wide ranging and serious social equity impacts. Yet the current framing of the objective does not provide guidance on how to consider social or distributional impacts of energy policy or regulatory decisions, especially for low income and disadvantaged households - this clearly goes beyond just 'price'. Given the essential nature of energy supply, it is important that outcomes for vulnerable customers are explicitly considered by decision-makers.

It is ACOSS' view that the objectives of the NEM and the AEMA should be expanded to include a social objective.

On the question of an environment or emissions reduction objective, ACOSS notes the Total Environment Centre (TEC) argues in their submission to this Preliminary Report:

> *The disconnect between climate policy and energy market regulation in Australia over the past decade has been partly responsible for economically inefficient investment, leading to higher wholesale prices and retail bills, and has also hindered the decarbonisation of the NEM.*[138]

The Australian Energy Association calculations finding a lack of national climate and energy policy certainty has contributed to the equivalent to a carbon price of $50 a tonne,[139] support TECs assertion.

The Preliminary Report itself argues:

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[137] http://www.aemc.gov.au/Australias-Energy-Market/Markets-Overview/National-electricity-market#NEO

[138] Total Environment Centre (2017) Submission to the Independent Review into the Future Security of the National Electricity Market: Preliminary Report.

[139] Australian Energy Council (2017) Submission to Independent Review into the Future Security of the National Electricity Market: Preliminary Report.

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 in generation and network assets.[140]

As pointed out above with respect to equity, the current framing of the objective also does not provide guidance on how to facilitate and support energy policy.

Therefore alongside supporting the inclusion of a social objective in the NEM and AEMA, ACOSS would also support the inclusion of an objective that explicitly supports decarbonisation of the energy sector.

ACOSS would like to acknowledge that one of our sister organisations the South Australian Council of Social Service (SACOSS) has expressed, in their submission to the Preliminary Report, concern about including a "lower emissions" objective in the NEO, arguing: "it would only create far greater and unnecessary costs for consumers as networks use emissions reduction combined with consumer engagement to further increase their overall revenue requirement." ACOSS certainly has sympathy with this argument, given the gold plating of the network that was allowed to occur in the 2000s to meet "security and reliability" objectives, but at a significant cost to consumers, particularly low income and disadvantaged households. As highlighted earlier, there is a real risk that if consumers start leaving the grid, that low income and disadvantaged households will once again carry the burden of higher network charges to pay for investments made by networks. SACOSS is primarily concerned with ensuring that any future investments to move us closer to a much needed clean energy future, are carefully considered for their impacts on low income and disadvantaged households, and constitute the investment options that demonstrate the least cost to consumer to reach this shared goal.

However, for the reasons outlined above, ACOSS believes an objective that refers to the need for the NEM to support decarbonisation of the electricity sector would facilitate changes to the operation of the electricity system that would better support efficient investment decisions by consumers and in generation and network assets (especially in the absence of effective national policy). And the inclusion of a social equity objective should minimise the risk identified above.

ACOSS certainly agrees with SACOSS that outside the NEM there should be national policy delivering bold emissions targets combined with an emissions trading scheme and complementary measures, to provide least cost options to achieve a clean energy future.

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[140] https://www.environment.gov.au/system/files/resources/97a4f50c-24ac-4fe5-b3e5-5f93066543a4/files/independent-review-national-elec-market-prelim.pdf, pg 23.

To be clear, including an objective to require the NEM to support decarbonisation of the electricity network is not intended for the NEM to set the policies for meeting Australia's national or international decarbonisation targets, as 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.

ACOSS also notes that the Australian Capital Territory Council of Social Service (ACTCOSS), in their submission to the Preliminary Review, has suggested an overall mission statement for the NEM that encompasses security, affordability, equity, decarbonisation and return on investments; and ACOSS suggests something equivalent could also be considered:

> *The mission of the NEM is to support system security, the integration of energy and emissions reduction policy and affordable electricity while providing the best environmental outcomes, social equity and inclusion and a reasonable return on investment.*[141]

Finally, ACOSS supports calls by other community and consumer organisations for energy bodies to be more explicit about social, economic and environmental considerations in their decision-making. This will assist consumer representative participation in policy and regulatory processes by highlighting the key issues and thinking behind any changes.

Recommendation 1: That COAG Energy Ministers request expansion of the current NEO and AEMA to include a social equity objective and an objective to support decarbonisation.

Recommendation 2: That COAG Energy Ministers require that NEM governing bodies explicitly outline their social, economic and environmental considerations in its decision-making.

3.1.2 National climate and energy policy framework

As outlined above, if we are to reduce emissions in line with well below 2˚C and pursue limiting warming to 1.5 ˚C, the electricity sector will need to decarbonise before 2040. As noted earlier, the majority of coal-fired electricity generators will be well past their design life by 2030[142]. Choices about refurbishment, replacement or closure of these generators will be critical to both energy affordability and emissions reductions in the period to 2030 and beyond. However the Preliminary Report does not discuss the need for planned coal closure as part of the energy transition. While this will mean a lot of capacity going offline and a significant amount of new rebuild will be required, managed well, costs can be minimised and benefits maximised.

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[141] ACTCOSS (2017) Submission to the Submission to Independent Review into the Future Security of the National Electricity Market Preliminary Report.

[142] Climate Council 2014: 65% of Australia's coal fired power stations will be over 40 years old by 2030.

Unfortunately there is currently a climate and energy policy void. Inaction is increasing risk and volatility for stakeholders and driving up costs and electricity price – As noted in a media release by a diverse group of representative organisations, including ACOSS:[143]

> *The status quo of policy uncertainty, lack of coordination and unreformed markets is increasing costs, undermining investment and worsening reliability risks. This impacts all Australians, including vulnerable low income households, workers, regional communities and trade-exposed industries.*
>
> *The finger pointing will not solve our energy challenges. More than a decade of this has made most energy investments impossibly risky. This has pushed prices higher while hindering transformational change of our energy system. The result is enduring dysfunction in the electricity sector.*

As noted earlier, the Australian Energy Council has estimated the lack of national climate and energy policy certainty to be the single biggest driver of higher electricity prices, equivalent to a carbon price of $50 a tonne.[144] Unless we have NEM reform and national coordinated scalable and ambitious climate policy, electricity prices are likely to continue to rise.

This section considers some of the recent modelling of policy options undertaken in 2016 by CSIRO[145], Jacobs (for multiple clients)[146] and Frontier Economics[147], and consider how different policy scenarios might impact on low income and disadvantaged households. The analysis has been conducted by energy consultant Andrew Nance as part of a joint project with ACOSS, the Climate Institute and Brotherhood of St Laurence looking at *Empowering Low income Households through Electricity Decarbonisation*. The research paper is forthcoming.

These modelling reports referenced directly above, contrast a range of possible climate and energy policies against a range of emissions reduction targets between now and 2030 and on to 2050.

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[143] Statement was made by: Australian Aluminium Council; Australian Conservation Foundation; Australian Council of Social Service; Australian Council of Trade Unions; Australian Energy Council; The Australian Industry Group; Australian Steel Institute; Business Council of Australia; Cement Industry Federation; Chemistry Australia; Clean Energy Council; Energy Efficiency Council; Energy Networks Australia; Energy Users Association of Australia; Investor Group on Climate Change; St Vincent de Paul Society National Council; The Climate Institute; WWF Australia, issued on 13th of February 2017. http://www.wwf.org.au/news/news/2017/no-room-for-partisan-politics-in-energy#gs.hvrxuXg

[144] Australian Energy Council, Submission to Independent Review into the Future Security of the National Electricity Market Preliminary Report.

[145] CSIRO and Energy Networks Australia 2016, *Electricity Network Transformation Roadmap: Key Concepts Report*. http://www.energynetworks.com.au/sites/default/files/key_concepts_report_2016_final.pdf

[146] Jacobs, 2016b. Modelling illustrative electricity sector emissions reduction policies. A report to the Climate Change Authority 25 August 2016 Melbourne; and Jacobs, 2016c. Australia's Climate Policy Options. A report to the Energy Networks Association 22 August 2016

[147] Frontier Economics 2016. *Emissions reduction options – A report prepared for the Australian Energy Market Commission* November 2016

The policy options that were modelled can be categorised broadly as:

- Market mechanisms (a price or limit is applied to carbon; the policy is technology neutral);
- Technology support programs (subsidised investments in renewable or 'low emissions' technologies), or;
- Coal regulation (high-carbon generation is forced out of the market).

As noted by Nance, while comparisons between each of the modelling reports is difficult (because they have different purposes, use different assumptions and constraints, and make different levels of data publicly available) there are some conclusions that can be drawn. The following dot points are replicated from Nance's paper:[148]

- The majority of electricity consumed in the NEM is delivered via transmission and distribution networks from the fleet of large scale generation technologies that power the entire NEM, still predominately coal and gas. Much of this existing coal generation fleet will need to be refurbished or replaced by 2030[149]. The choices made about what will replace them will largely determine the sector's greenhouse footprint and prices paid by consumers.
- All options deliver a shift away from coal as the dominant energy source for electricity generation in Australia to various combinations of gas and renewable energy sources – particularly wind and solar. Assumptions about the future price of gas and the technology costs of renewables are therefore key variables in the forecasting of future prices. Given the uncertainty of these costs, all modelled price impacts should be treated with caution.
- All options considered come at an economic cost but the likely impact on wholesale prices varies considerably depending on the mechanism used, the extent and rate of emissions reductions targeted as well as the input assumptions noted above.
- Market mechanisms[150] were consistently found to have lower overall economic costs.
- Options that combined multiple mechanisms can achieve emissions reductions at a lower combined cost[151].
- Options that include the widest range of technology options have lower overall economic costs.
- Options that involve costs to government in lieu of costs to consumers can have lower direct impact on prices depending on how the cost of the scheme is recovered.[152]

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[148] Nance, A. (2017) Energy Access and Affordability Policy Research, Forthcoming.
[149] Climate Council, *Australia's Electricity Sector: aging, inefficient and unprepared*, 2014, p. 70. Available at: http://www.climatecouncil.org.au/ (accessed 03 Feb 2016).
http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Coal_fired_power_stations Interim Report, November 2016
[150] This was true for all three modellers
[151] Examples include the policy combinations modelled by Jacobs for the CCA
[152] An example is Feed-in tariffs with Contracts for Difference modelled by Jacobs for the Climate Change

- Investment expenditure is expected to rise while fuel costs fall under many scenarios. The 'cost of capital' is therefore another key variable in the forecasting of future prices. Policy uncertainty puts upward pressure on the cost of capital leading to higher costs for consumers.[153]
- All options exist alongside other drivers of change in the average price of electricity as well as the structure of prices[154]. The assumptions made about these other drivers impact on the forecasts of future retail prices from each of the modelling exercises.
- Scenarios that optimised network pricing showed lower residential retail prices than some scenarios with less ambitious climate policies.
- Price structures are already on a path of higher fixed supply charges and charges that will increasingly reflect the cost of peak demand on the network. This is likely to deliver a redistribution of grid-supply costs amongst households[155].
- Most future scenarios include an increasingly distributed energy system with solar, storage and electric vehicles. Uptake and use of these distributed energy resources is also likely to deliver a redistribution of grid-supply expenditure amongst households[156].
- Besides higher prices for electricity generation, assumptions regarding productivity and efficiency of energy use are critical to how much consumers will need to spend on grid-supplied electricity over these future years. The National Energy Productivity Plan (NEPP) is therefore a critical complementary measure to the climate policies modelled as is the consumer response to changes in price (elasticity of electricity demand).

Interestingly, the Energy Network and CSIRO modelling[157] was the only modelling that examined the impact of future clean energy scenario (Roadmap) on vulnerable households and compared this with a counterfactual (what happens if the Roadmap is not implemented and the status quo or extension of current trends prevails).

The CSIRO selected a set of sample customer profiles representing four household types and calculated electricity bills under two different assumptions:(1) it is assumed the customer was active in seeking distributed energy resources, including solar and batteries, to reduce energy bills; and (2) it is assumed the customer was passive and did not, or could not, seek to invest in distributed energy resources to reduce energy bills.

Authority

[153] The Finkel review preliminary report notes that "For businesses to take risks on the future and invest, they need to be confident that emissions reduction policies and the mechanisms to achieve them are consistent with Australia's international commitments and will not change drastically in the future. .... There is evidence that investment in the electricity sector has stalled and investors have become less responsive to investment signals. This is due to policy instability and uncertainty driven by numerous reviews into the RET and a lack of clarity about the policies to reduce emissions after 2020." Page 22.

[154] The modelling by the CSIRO in particular demonstrates this

[155] Analsyed in the ENA CSIRO Network Transformation Roadmap

[156] Analsyed in the ENA CSIRO Network Transformation Roadmap

[157] CSIRO and Energy Networks Australia 2016, *Electricity Network Transformation Roadmap: Key Concepts Report*. http://www.energynetworks.com.au/sites/default/files/key_concepts_report_2016_final.pdf

The analysis found that, under the counterfactual scenario, there is a significant difference between active and passive customer outcomes. As depicted in figure 7, the Roadmap scenario, which includes more cost-reflective pricing and incentives as well as other cost saving measures, has two clear benefits. The first is that all customers are better off, whether they are active or passive. Secondly, the gap between active and passive customers has narrowed across the households by between 30 to 66 per cent.

The Energy Networks and CSIRO modelling had significantly more distributed energy in their scenarios compared to the other modelling.

Figure 7. Residential bill outcomes for selected Australian household types in 2050 under the counterfactual and Roadmap scenarios

	Counterfactual			*The Roadmap*		
	Active $	Passive $	The Gap $	Active $	Passive $	The Gap $
Working Couple	$1,346	$1,811	**$465**	$1,123	$1,422	**$299**
Medium Family	$1,816	$2,601	**$785**	$1,428	$1,988	**$560**
Large Family	$2,794	$3,950	**$1,156**	$2,346	$2,734	**$288**
Single, Retired	$1,058	$1,730	**$672**	$883	$1,355	**$472**

The comparative analysis would suggest that national policy that included a market mechanism, combined with supporting mechanisms to reduce risk and provide certainty, a wide range of technology options and support for distributed energy, would be the most effective at reducing costs and emissions.

ACOSS remains concerned that there is still seemingly a lack of recognition, especially from coal-generation states, that a coordinated plan is required to phase out of coal-power stations.

Policies should ideally be nationally consistent across states and federal governments. As noted in a media release by a diverse group of representative organisations, including ACOSS:[158]

[158] Statement was made by: Australian Aluminium Council; Australian Conservation Foundation; Australian Council of Social Service; Australian Council of Trade Unions; Australian Energy Council; The Australian Industry

Market reform can't happen unless the Commonwealth and States agree, and policies can't last and motivate investment without broad cross-party support. Politicians from all sides of politics and all levels of government need to come together to work through the necessary solutions to our energy market challenges.

Recommendation 3: That COAG Energy Ministers develop a plan and policy framework to phase out coal-fired power stations, incentivise renewable energy uptake and supportive clean technologies, at least cost, that includes a mix of market mechanisms, regulation and other supportive measures.

To the extent that the Review considers the detail of climate policy, it should also be guided by the climate policy principles developed and adopted by the Australian Climate Roundtable.

3.1.3 Stronger Consumer Protection through Market guidance

ACOSS believes the current National Energy Customer Framework (NECF) needs further review and strengthening, specifically the retail market protection, to provide greater consistency between states and reflect best practice consumer benefits.

ACOSS notes that the NECF does not currently apply in Western Australia or the Northern Territory, only applies in a limited manner in Victoria, and that Tasmania has not applied the gas rules. In addition, the Framework is often implemented differently in each state as some have made 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 rise, so have an opportunity to seek a better offer and have comfort in knowing they would not be penalised for doing so. Another example of a state-based consumer protection (although not related to NECF) is in Victoria, where they have a *Wrongful Disconnection Compensation Scheme* – which 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.

As networks become more dynamic a consumer focus will need to become even more central. The Energy Networks Australia and CSIRO "Roadmap" report argues that a:

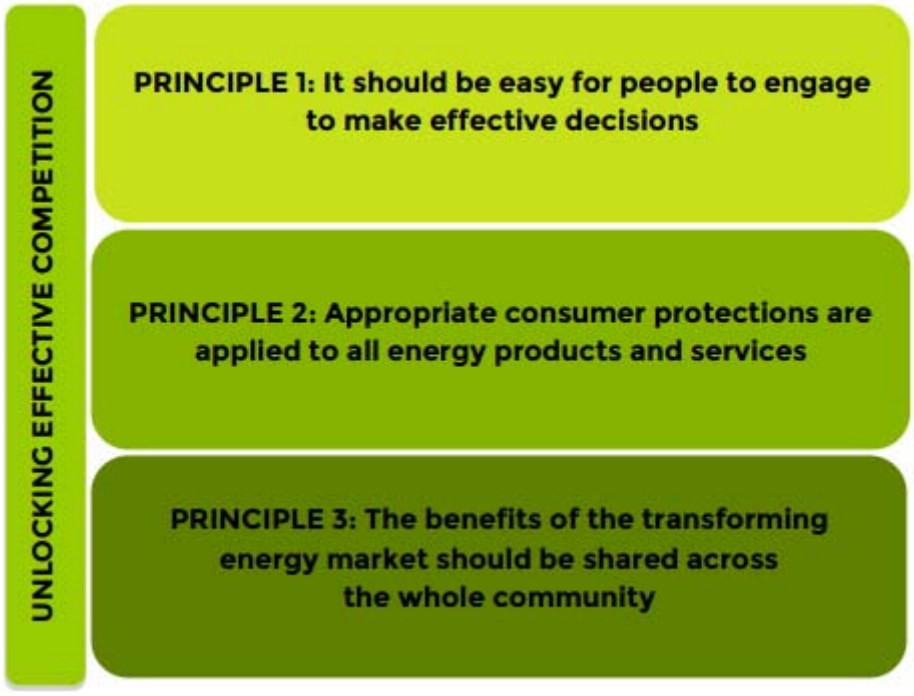
Group; Australian Steel Institute; Business Council of Australia; Cement Industry Federation; Chemistry Australia; Clean Energy Council; Energy Efficiency Council; Energy Networks Australia; Energy Users Association of Australia; Investor Group on Climate Change; St Vincent de Paul Society National Council; The Climate Institute; WWF Australia, issued on 13th of February 2017. http://www.wwf.org.au/news/news/2017/no-room-for-partisan-politics-in-energy#gs.hvrxuXg

Robust framework is needed to provide a robust customer protection framework enabling customers to make confident choices in new markets, and between new service/product bundles. This is important because the dynamic changes occurring in energy technology, capabilities, markets and business models are increasingly presenting customers with a wider set of energy choices. Enabling and sustaining these markets requires a customer protection framework that enables customers to choose services that fit their needs with confidence and keep their customer rights are safeguarded.[159]

The report *Power Transformed: unlocking effective competition and trust in the transforming energy market* 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."[160]

The report argues that, while energy businesses and governance institutions are best placed to develop initiatives and interventions, principles – as outlined in figure 8 - are required to guide these developments in order to ensure that enabling better consumer outcomes and trust are embedded in the development of products, services and regulations.

Figure 8. Consumer principles to guide electricity market reform



[159] CSIRO and Energy Networks Australia 2016, *Electricity Network Transformation Roadmap: Key Concepts Report*. http://www.energynetworks.com.au/sites/default/files/key_concepts_report_2016_final.pdf

[160] Consumer Action Law Centre (2016) http://consumeraction.org.au/wp-content/uploads/2016/07/Power-Transformed-Consumer-Action-Law-Centre-July-2016.pdf

The Report also goes on to recommend 'no-regrets initiatives' that could be adopted in the short to medium-term to give effect to the principles, including:[161]

- 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 vulnerable demographics access new products and services.
- Targeting concessions to address need rather than tying them to specific supply arrangements.

The Energy Networks Australia and CSIRO "Roadmap" report also argued for "a clear set of road rules addressing the market entry and participation decisions from providers. This is required to minimise regulatory arbitrage that has the potential to harm customers' interests. The ability for customers to access innovative new services and be well served by new businesses trialling and evolving new business models, is underpinned by clear rules that ensure that customers are benefiting from genuine innovation, not artificial innovation based only on market participants exploiting regulatory loopholes, or failing to contribute to agreed customer safety nets."[162]

The report *Networks and Batteries: small consumer groups' position paper* argues that "the overriding objective of reform related to innovative technologies and distributed energy resources (DER) should be to expand the reach of competitive markets for contestable services and to restrict the reach of monopoly regulated businesses." [163]

Data transparency should be enhanced and there should be a wide-ranging energy and 'data literacy' program to inform the general community in turn assisting the overall assist the overall governance of the grid through increased scrutiny and accountability.

In summary ACOSS makes the following recommendations to strengthen consumer protection frameworks:

Recommendation 4: that COAG Energy Ministers request a review of the current National Energy Customer Framework (NECF) to provide greater consistency between states and reflect best practice consumer benefits.

Recommendation 5: that COAG Energy Ministers support the establishment of a consumer protection framework that includes the following principles:

- It should be easy for people to engage and make effective decisions.

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[161] http://consumeraction.org.au/wp-content/uploads/2016/07/Power-Transformed-Consumer-Action-Law-Centre-July-2016.pdf

[162] CSIRO and Energy Networks Australia 2016, *Electricity Network Transformation Roadmap: Key Concepts Report*. http://www.energynetworks.com.au/sites/default/files/key_concepts_report_2016_final.pdf

[163] Total Environment Centre, *Networks and Batteries: small consumer groups' position paper*, available online https://d3n8a8pro7vhmx.cloudfront.net/boomerangalliance/pages/434/attacments/original/1476423462/N_B_position_paper_30_Sept_2016_.pdf?1476 23462

- 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.

Recommendation 6: that COAG Energy Ministers support the establishment of a range of no-regrets initiatives to help give effect to the principles, including:

- 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 vulnerable demographics access new products and services.
- Targeting concessions to address need rather than tying them to specific supply arrangements.

Recommendation 7: that COAG Energy Ministers support the establishment of a clear set of 'road rules' addressing the market entry and participation decisions from providers that includes restrictions to monopolistic networks in new more highly contestable markets.

3.1.4 Network pricing reform

Substantial reforms to the NEM are underway following recommendations to the state and federal governments in November 2012 by the AEMC's Power of Choice review, which aim to give consumers options in the way they use electricity to better manage bills.[164]

The *Distribution Network Pricing Arrangements Rule Change* requires the structure of electricity tariffs for residential and small business customers to commence a transition to better reflect the efficient costs of providing services to each consumer, often referred to as '*cost reflective pricing*'.

However, as far as ACOSS is aware, trials of cost reflective pricing have not been done with low income and disadvantaged consumers, so we have no evidence on whether cost reflective pricing is appropriate for vulnerable households, or those on low incomes.

- The available research that could provide some lessons suggests certain household types (including families with children) find it difficult to adjust energy use, but, where energy use can be adjusted, may respond better to non-price signals such as 'peak alerts':

> *The findings suggest that current consumer demand management and engagement activities need to go beyond individually motivating family households to save money, protect the environment, or make better choices in the electricity market. Electricity usage was not a priority for family households in relation to their day-to-day activities; instead health and wellbeing, convenience, entertainment and development/ life skill opportunities and coping with family pressures were key concerns. While family households depended on routines and had little capacity to*

[164] More information is available from www.aemc.gov.au/Major-Pages/Power-of-choice

reorganise the family peak period (TOU peak period) or other activity periods, they were adaptable and inventive, and regularly shifted routines in response to normal disruptions. Peak alerts, framed as a natural event or an 'exceptional circumstance' that benefits a common good and assists reliable and affordable access to electricity, is a potentially agreeable and productive strategy for engaging families to reduce energy use at times of peak demand.[165]

In addition, what we do know about consumer behaviour is that many consumers have little awareness and understanding of the various tariffs currently available and how to choose the most advantageous tariff for their particular situation.

The relative benefits of price and non-price signals need to be explored much more rigorously by government. In particular actual pilot programs targeting low income and disadvantaged households to trial different approaches to assisting people with understanding and responses to price signals; and to explore whether cost reflective tariffs are suitable for this cohort,, would be beneficial.

One example of how to educate and engage low income and vulnerable consumers is the *Switched On Communities* program in South East Queensland, where community organisations have proposed and implemented approaches to target specific customer groups to support them to compare offers in competition market. This includes a project by the Queenslander with a Disability Network, who are engaging people with intellectual disability through interactive games and workshop activities.

At the heart of this, government needs to clarify what they are aiming to achieve with cost reflective tariffs: a 'fairer' allocation of costs, behaviour change or both?

Recommendation 8: that COAG Energy Ministers commission trials of cost reflective pricing for low incomes and disadvantaged households, to:

- Measure outcomes and impacts of cost reflective pricing on low income and disadvantaged households;
- Trial different approaches; and
- Assess whether cost reflective pricing is suitable for low income and disadvantaged households.

3.1.5 Removing energy efficiency barriers

In response to sharp rises in energy prices in recent years, many Australian households have reduced their energy consumption by investing in energy efficiency[166], saving significantly on energy bills. As outlined in a report prepared by ACOSS in 2013, *Energy Efficiency and People on Low Income*,[167] raising a home from a 2-star to 5-star energy rating

[165] http://mams.rmit.edu.au/5wj0prabkxjv1.pdf)
[166] AEMO 2012: Australian Energy Market Operator, National Electricity Forecasting Report, 2012
[167] ACOSS (2013) Energy Efficiency and People on Low Incomes.

can result in a 54 per cent reduction in energy required for space heating and cooling in Victorian homes. This equates to a 32 per cent total energy saving, or up to $600 in annual household savings a year.[168] However, research shows that people on low incomes are more likely to live in energy inefficient houses as evidence by lower incidence of insulation and higher rates of ownership of inefficient appliances that are cheap to buy but expensive to run.[169] There are persistent barriers that prevent people on low incomes from investing in energy efficiency as a way of reducing costs. These barriers include:

- Lack of access to capital for high value energy efficiency upgrades: the capital barrier has even emerged in the uptake of white certificate schemes to encourage energy efficiency uptake in low income areas. The Brotherhood of St Laurence's equity analysis[170] of the Victorian Government's Victorian Energy Saver Initiative (VESI) has shown that relatively disadvantaged areas were less likely to access higher capital items offered under the scheme, such as hot water services, space heating and insulation. These items generate markedly higher energy savings for households, however the report findings suggested that people on low incomes were less likely to access the higher capital items because of the co-payments required by the scheme.
- The inability of tenants to improve the energy efficiency of rental properties, and lack of requirements or incentives for landlords to invest in energy efficiency: according to the ACOSS report on Energy Efficiency and Low Income Households, this market barrier is likely to be impacting some of the most vulnerable energy consumers in Australia. Citing ABS 2008 data[171], the report finds 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), and people on low incomes are twice as likely to be renting as those in the highest income quintile. Further ABS data[172] finds that single parents are disproportionately impacted, as single parents are more likely to be renting than couples. Newly arrived migrants are also over-represented in rental properties. Most (74 per cent) low income renters are renting from a private landlord (DSE 2009) and private renters are significantly more likely to enter energy hardship programs than owner occupiers.[173]
- Information barriers: such as literacy and language, confusion about product and programs and where to find reliable information, and poor knowledge of the most effective ways to save energy.

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http://www.acoss.org.au/images/uploads/ACOSS_ENERGY_EFFICIENCY_PAPER_FINAL.pdf

[168] OME 2013: One Million Homes Roundtable Summary Report: May 2013

[169] ACOSS (2013) Energy Efficiency and People on Low Incomes.
http://www.acoss.org.au/images/uploads/ACOSS_ENERGY_EFFICIENCY_PAPER_FINAL.pdf

[170] Sullivan and Johnson 2012: The Power to Save, an equity assessment of the Victorian Energy Saver Incentive in metropolitan Melbourne, Brotherhood of St Laurence 2012

[171] ABS 2008: Australian Bureau of Statistics, Australian Social Trends, 2008, ABS 4102.0

[172] ABS 2007: Australian Bureau of Statistics, Australian Social Trends, 2007, ABS4102.0

[173] IPART 2010: Independent Pricing and Regulatory Tribunal of New South Wales (IPART) (2010). Residential energy and water use in Sydney, the Blue Mountains and Illawarra: results from the 2010 household survey. Sydney, IPART.

Energy efficiency improvements are an important part of the puzzle and should be implemented alongside other measures to put downward pressure on prices and provide safety nets.

ACOSS makes the following recommendations to improve energy efficiency options for low income and disadvantaged households:

Recommendation 9: that COAG Energy Ministers commission research to determine the broader economic and societal benefits from energy efficiency programs e.g. lower risk of hospitalization for heat stress/cold; increased household expenditure on other necessities, to establish the cost benefits involved in the introduction of energy efficiency programs and reallocate funding accordingly.

Recommendation 10: That the Federal Government review taxation policy with a view to designing and implementing landlord tax incentives for energy efficiency measures.

Recommendation 11: That COAG State Energy Ministers adopt and implement energy efficiency standards for rental properties, and introduce mandatory disclosure of energy and water efficiency of all properties at point of sale (like those implemented by the ACT Government[174] and being considered by the Victorian Government[175]).

Recommendation 12: That COAG State Energy Ministers *provide* additional funding[176] for targeted retrofits for the worst performing and highest risk social housing stock in each state. Additional funding should be provided for upgrades of the poorest quality social housing that requires large amounts of energy for heating and/or cooling. Partnerships can help government to target upgrades where they are most urgently needed.

Recommendation 13: That Good Shepherd Microfinance be requested to establish, in conjunction with private banks, a micro-finance or other suitable financial support program to help with up-front costs of energy efficiency upgrades.

Recommendation 14: That the Federal Government establish a face to face assistance program to provide targeted energy efficiency advice and assistance for low income households and people who are unable to access written or online information.

3.1.6 Retailers and retail competition

There is recent evidence that the retail component of an energy bill is higher in deregulated retail markets, compared with regulated markets.[177] This could indicate that operating in a

[174] http://www.environment.act.gov.au/energy/smarter-use-of-energy/energy-efficiency-standards,-ratings-and-disclosure

[175] http://fairersaferhousing.vic.gov.au/renting/documents

[176] ACOSS is aware and supportive of the Clean Energy Finance Corporation's (CEFC) community housing energy efficiency fund and the projects they have supported to date, but would like to see more systematic Government support.

[177] http://www.aemc.gov.au/getattachment/cf1125ed-00f0-49fd-809b-55599d8f1d6f/Public-Interest-Advocacy-Centre.aspx; and https://grattan.edu.au/wp-content/uploads/2017/03/Price-shock-is-the-retail-market-failing-

competitive market is very expensive, or that the competitive market is ineffective. For example, in Victoria, where the AEMC competition reviews regularly find that retail competition in Victoria is effective, there are indicators that suggest this isn't the case.[178] As noted by the Consumer Action Law Centre in their Submission to the Preliminary Report: "These include persistently high retailer margins, retailer offerings and tariffs that do not reflect the cost of service delivery (including pay-on-time discounts that act as significant penalties for those with payment difficulties), and low levels of consumer trust in retailers."[179] Further, a 2013 report into the Victorian electricity market found the average ability of customers to understand pricing offers had fallen steadily since 2004, as had the ease of comparing new offers to the customer's existing terms and conditions.[180]

Energy market reforms must be informed by, and accommodate, actual consumer behaviour if we are to achieve outcomes in the long term interests of consumers. This is particularly the case for the large number of consumers facing additional barriers to effective market participation, especially low income and disadvantaged households. Understanding this cohort better is critical especially as the market transitions and evolves and there is a risk of certain households being left behind and worse off.

As noted by the Consumer Action Law Centre in their Submission to the Preliminary Report: "Further research could include identifying what sort of contracts customers have, what prices they have paid over a period of time (including whether they are accessing the benefits of any conditional discounts), and whether they are achieving a beneficial outcome from switching. Assessments of consumer understanding, trust and satisfaction should be based on objective measures or tests rather than self-reporting through surveys."[181]

The scope of competition reviews must also be continually revised and expanded to incorporate markets for new products and services. As noted above, the novel nature of many new energy products, and increasing complexity of the technology required to deliver them, will only heighten the issues of consumers in finding and assessing appropriate options for their specific circumstances.

In addition, according to the Consumer Action Law Centre in their Submission to the Preliminary Report: "Evidence shows that disengaged consumers are paying much higher retail prices, despite disengagement often being no fault of their own. The common design of

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consumers.pdf

[178] https://www.theguardian.com/commentisfree/2017/feb/10/there-is-a-failure-of-competition-in-energy-retail-and-its-hurting-households

[179] Consumer Action Law Centre (2017) Submission to the Independent Review into the Future Security of the National Electricity Market: Preliminary report.

[180] Wallis (2013) Victorians' Experience of the Electricity Market, in Essential Services Commission (2013) Victorian Residential Electricity Retail Market Research Discussion Paper www.esc.vic.gov.au/getattachment/a662edf7-8852-4618-a4e9-28dfffc9d4f0/Victorian-residential-electricity-retail-market-re.pdf

[181] Consumer Action Law Centre (2017) Submission to the Independent Review into the Future Security of the National Electricity Market: Preliminary report.

retail contracts with limited 'benefit period' discounts allowing retailers to price discriminate against the disengaged. 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. These discounts (up to 30 per cent of consumption charges) are really masquerading as hefty and unfair late payment penalties."[182]

The Consumer Action Law Centre also notes in their Submission to the Preliminary Report that "Independent comparator tools and additional resources must be available to assist consumers in comparing and assessing complex offers. This requires additional modifications to the Energy Made Easy and Victorian Energy Compare comparator websites to take account of solar and battery products, meter charges, and other technology and tariff options. These tools could be supported by a targeted advice line for vulnerable consumers to aid informed energy choices, similar to the Commonwealth Government's previous Home Energy Saver Scheme, the existing MoneySmart program run by the Australian Securities and Investments Commission or the National Debt Helpline." [183]

ACOSS makes the following recommendations:

Recommendation 15: That COAG Energy Ministers agree to establish a free national independent dispute resolution body on energy products and services, in order to reduce the incidence of disengaged consumers paying much higher retail prices than warranted.

Recommendation 16: That COAG Energy Ministers request market regulator review of retailer marketing practices, including 'pay on time discounts' and 'limited benefit periods' there impacts on low income and disadvantaged households and make recommendations to regulate retailer marketing practices.

Recommendation 17: That COAG Energy Ministers request market regulators to establish a base level of protection that apply to all electricity consumers, regardless of the products or services used to obtain supply.

Recommendation 18: That COAG Energy Ministers provide funds to develop and promote an independent comparative tool of electricity products and prices.

Recommendation 19: That COAG Energy Ministers request market regulator to review and consider the introduction of new models for energy retailing including public interest retailers with the explicit aim of lowering energy prices for low income consumers.

Recommendation 20: That COAG Energy Ministers provide funds for relevant organisations to provide enhanced support for low income and disadvantaged consumers to understand the complex array of choices and obtain a product or service that is fit-for-purpose.

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[182] *Ibid.*
[183] *Ibid.*

3.1.7 Smart Meters

The ability of advanced metering to provide more frequent billing and near real time consumption and cost information can help reduce energy bills and/or minimise bill shock.

Furthermore, recent and forthcoming smart-meter enabled network services provide for significant benefits for all consumers through more effective network monitoring and management, the same with customer side services that can provide demand management especially in conjunction with a battery.

However, despite the rollout of smart meters being complete in Victoria, according to the Consumer Action Law Centre most of the expected consumer benefits of smart meters are yet to be realised.[184]

A report by the Victoria Council of Social Service (VCOSS), *Making Energy Visible*,[185] identified a number of technical and costs barriers and a raft of recommendations.

ACOSS supports the recommendations previously made by VCOSS and Consumer Action Law Centre, and makes the following recommendations to support an expanded roll out of smart-meters:

Recommendation 21

That COAG Energy Ministers take on board the following recommendations for the roll out of smart meters in each State:

- Increase awareness of in-home displays to improve energy literacy - provide people with more information on in-home displays, including how to purchase, install, connect and use them, in energy literacy promotional materials produced by the Victorian government and energy companies.
- Reduce cost of in-home displays for households facing disadvantage.
    - Encourage or require energy companies to provide, install and assist households to use in-home displays for free if they are in an energy hardship program; and
    - Invest in a Victorian government style energy efficiency program for households experiencing disadvantage, which includes an additional subsidy to offset the purchase cost of in-home display units.
- Provide better data to compare energy costs.
- Make it easier for households to connect an in-house display unit, by:
    - Ensuring all smart meters have a functioning wireless connection system.
    - Requiring energy distributors to have a simple, automatic way to connect an in-home display unit to a smart meter, with an alternative available by

[184] Consumer Action Law Centre (2017) Submission to the Independent Review into the Future Security of the National Electricity Market: Preliminary report.
[185] http://vcoss.org.au/document/making-energy-visible/

telephone for those needing assistance.
    - Requiring energy price information to be sent by retailers through smart meters to in-home displays.

- Regulate the costs of pre-connecting in-home display units to reduce or eliminate the cost of pre-connecting in-home displays.
- Protect the privacy of smart meters - avoid providing detailed data of previous occupants but enable the provision of historical comparison.
- Enable in-home displays to read data from non-standard smart meters.
- Improve the function of in-home display units, i,e, enable concession rates to be factored into costs displays.

Energy Ministers

Recommendation 22: That COAG Energy Ministers commission the development, by a trusted, independent source, of a comprehensive consumer education strategy.

3.1.8 Regressive Renewable Energy Incentives

As noted earlier a number of renewable energy incentives such as the National Renewable Energy Target (RET) mechanism, state based feed-in-tariffs, the recent Victorian Fair Price for Solar tariff, and energy efficiency schemes, are recouped through electricity bills. These schemes add an average of 8 per cent (as shown in figure 5 above) onto electricity bills, noting the amount varies depending on the state, and is higher for example in ACT and Queensland. While renewable energy can help drive down wholesale prices,[186] for low income and disadvantaged households already struggling to afford their electricity bills, recouping costs from bills is regressive and an additional burden.

ACOSS supports incentives to shift from incumbent polluting fossil fuels to cleaner renewable energy. However, we do not support regressive measures as a way to recoup costs and prefer less regressive incentives, such as an income -proportionate strategy or Government budgets. At a minimum, if regressive measures are used, compensation should be provided for eligible households.

ACOSS makes the following recommendation:

Recommendation 23: That COAG Energy Ministers review energy incentives and their impact on low income and disadvantaged households with the aim to consider less regressive incentives, such as an income-proportionate strategy or Government budgets, or at a minimum provide compensation to eligible households.

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[186] http://www.aemc.gov.au/getattachment/be91ba47-45df-48ee-9dde-e67d68d2e4d4/2016-Electricity-Price-Trends-Report.aspx

3.1.9 Concessions

Despite the national nature of the retail energy market, the approach taken to the provision of energy concessions to people and households experiencing energy hardship is inconsistent. This results in serious inequities in the adequacy and targeting of assistance.

For example, some concessions and payments are made available to holders of Commonwealth Pensioner Concession Cards but, in most states, not to holders of Commonwealth Health Care Cards (despite the fact that holders of the latter receive significantly lower incomes than holders of the former). In addition, the quantum of concessions varies across jurisdictions and does not adequately target need. For example, South Australia provides the lowest rate of concession despite having the second highest energy costs as a percentage of disposable income and the highest proportion of customers disconnected due to inability to pay.[187]

In addition, the AEMC's Power of Choice Review highlights that flat concession rates (which apply in most states) do not match a household's energy use, particularly as household sizes vary.[188] ACOSS makes the following recommendation:

Recommendation 24: The COAG Energy Council reviews both federal and state energy concessions schemes, taking into account:

- Inconsistencies in eligibility;
- The need to better meet the needs of all low income households, with a preference for a percentage of costs based concession;
- The need to improve emergency relief payments to simplify application processes and provide greater clarity for customers; and
- The importance of promotion of available support by all sectors.

3.1.10 Ability to Pay

As of February 2017, unemployment is at 5.7 per cent and is higher for youth at 12.3 per cent, leaving a portion of the population requiring financial support from programs like Newstart and Youth Allowance. As outlined earlier the Newstart Allowance is at least $100 per week *below* the poverty line and Youth Allowance is at least $150 per week *below* the poverty line. People and households in these situations struggle to pay for housing, food, transport and electricity.

Recommendation 25: In order to address the extreme pressure of energy affordability for people on very low incomes, the Federal Government, supported by COAG, improves the adequacy of income payments such as Newstart and Youth Allowance.

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[187] http://www.acoss.org.au/images/uploads/Concessions_paper_2014_FINAL.pdf
[188] AEMC (2012) Power of Choice. http://www.aemc.gov.au/getattachment/2b566f4a-3c27-4b9d-9ddb-1652a691d469/Final-report.aspx

3.1.11 Energy Supplement

In the 2016 Budget, the Coalition announced it would cease payment of the Energy Supplement (ES) to new income support recipients from September 2016. The ES is paid at 100 different rates depending on the base payment, ranging between about $8 and $14 per fortnight.[189] For a single Newstart recipient with no children, the ES is $4.40 per week ($228.80 per year).

Removal of the ES is expected to save $1.3 billion through to 2019/20.[190] Savings are earmarked for the National Disability Insurance Scheme (NDIS) Savings Fund. The Government has justified removal of the ES for new recipients on the basis of the carbon price no longer being in place.[191]

The ES represents the first real increase to Newstart since 1994, when it rose by $2.95 per week (above indexation).[192] If the ES is removed, not only will it abolish the first real increase to Newstart in over 20 years, it will reduce the payment for new recipients to lower than what it would have been without a carbon price, which is explained below.

The ES was introduced in 2012 to compensate for the price on carbon and has been paid fortnightly since March 2013. Allowances, including Newstart, are indexed to CPI each March and September. To ensure that payment recipients didn't get compensated twice through the ES and regular CPI indexation, indexation was adjusted to factor in the expected CPI increase because of the carbon price.[193] Regular CPI indexation was therefore lower than what it would otherwise have been in March 2013. The upshot is that payments indexed to CPI only (including allowances) will be lower if the ES is removed than what they would have been if no carbon price had been implemented.[194]

It has been well established that the Government should increase Newstart but this proposal will cut the payment. Australia has the second lowest unemployment benefit in relation to average wages in the OECD[195] and it now sits at 39 per cent of the minimum wage (before tax). This cut also comes off the back of the loss of the Income Support Bonus, which equated to $4 per week for a single Newstart recipient (the last payment will be made in

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[189] Including Age, Disability Support Pensions, Carer Payment, Newstart and Youth Allowance, and Parenting Payments, *Department of Social Services*, Community Affairs Legislation Committee, 6 May 2016 http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22committees%2Festimate%2Fdefed424-187d-4867-b69b-1db271dd8152%2F0005%22

[190] *ibid*

[191] *Balancing the budget* Australian Government, 2016 2016 http://budget.gov.au/2016-17/content/glossies/budget_repair/html/

[192] *Australia's Future Tax System*, Commonwealth of Australia p. 519

[193] *Review of the Clean Energy Future Household Assistance Package* Treasury & FaHCSIA 2013 https://www.dss.gov.au/sites/default/files/documents/05_2013/hap-review_may-2013.pdf p.2

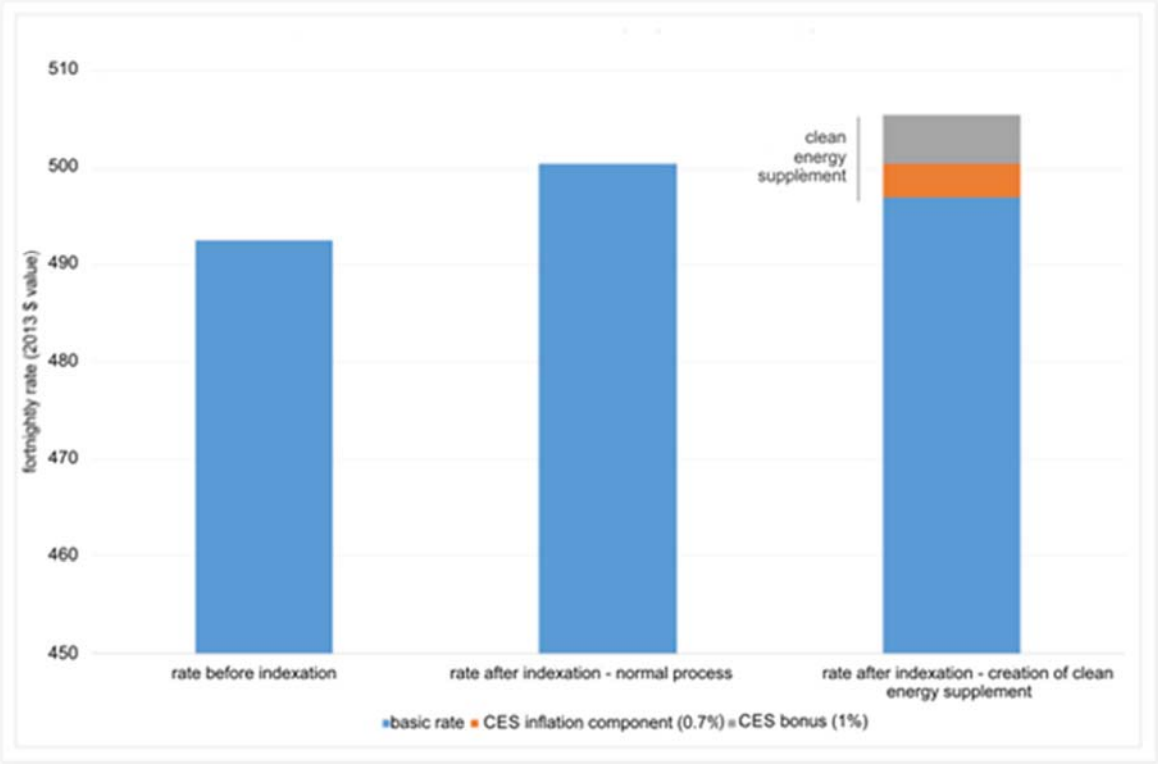
[194] *Welfare savings to fund the National Disability Insurance Scheme* Michael Klapdor, APH Budget 2016/17 http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/BudgetReview201617/NDIS

[195] OECD (2014) Net Replacement Rate Initial (Previous earnings 67%) https://stats.oecd.org/Index.aspx?DataSetCode=SOCX_AGG

September 2016). Combining the loss of the Income Support Bonus and the ES, a single unemployed person will be over $8 per week worse off.

Recommendation 26: That the Federal Government maintain the Energy Supplement for current and future pensioners, allowance and family payment recipients.

Figure 9. Impact of the removal of the Energy Supplement on Newstart



Graph from David Plunkett: http://ravebydave.blogspot.com.au/2016/05/malice-or-misunderstanding.html

3.2 Just Transition

As noted earlier, a key shortcoming of the Preliminary Report is the absence of any discussion on the need for orderly coal replacement and just transition for workers and communities.

Additional measures will also be needed to ensure the transition from fossil fuels to renewable energy is also 'just' for employees and communities impacted by the transition.

In Australia coal-fired power stations are often closely located in areas with significant coal resources and concentrated in a few regions.[196] For example:

- In Victoria, four major brown coal power stations are located in the Latrobe Valley;

[196] ACTU (2016) Sharing the challenges and opportunities of a clean energy economy: A just transition for coal-fired electricity sector workers and communities. http://www.actu.org.au/media/1032953/actu-policy-discussion-paper-a-just-transition-for-coal-fired-electricity-sector-workers-and-communities.pdf

- In NSW, five black coal power stations are located in the Newcastle, Hunter Valley and Lithgow areas;
- In QLD, seven black coal power stations are located to the west of Brisbane and in or around the Gladstone and Rockhampton area; and
- In WA, four black coal power stations are located near Collie.

As the ACTU note in their new report *Sharing the challenges and opportunities of a clean energy economy*, given that there is such a high level of concentration of coal-fired power station operations and employment, the impact of unplanned and disorderly closure is likely to profoundly affect regional communities.[197]

Bodies like the International Labor Organisation (ILO)[198], the Organisation for Economic development (OECD)[199] and the Paris Agreement itself, all recognise and call for a just transition of energy sectors. Specifically the Paris Agreement requires parties to "[take] into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities."[200]

The ACTU notes that "Australia's previous responses to large firm closures and industry restructures have been largely unsuccessful in their efforts to support workers transition into secure employment following their retrenchment".[201]

In the majority of successful regional transitions that have occurred internationally, specific plans and incentives were developed to support economic diversification of transitioning regions. [202], [203]

ACOSS supports a multi-pronged policy framework that can manage coal-closure, employee transition and new economic investment in regions with coal-fired power stations and associated mines, is crucial to securing these regions' future.

Recommendation 27: That COAG Energy Ministers establish a new independent body to manage coal closure, oversee worker support, and coordinate plans for regional economic diversity.

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[197] *Ibid.*
[198] ILO (2015) Guidelines for a just transition towards environmentally sustainable economies and societies for all. http://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_432859.pdf
[199] OECD and ILO (2012), Sustainable development, green growth and quality employment - Realizing the potential for
mutually reinforcing policies, http://www.oecd.org/employment/emp/50318559.pdf
8. United Nations Framework Convention on Climate Change, Adoption of the Paris Agreement, 12 December 2015
[200] United Nations Framework Convention on Climate Change, Adoption of the Paris Agreement, 12 December 2015, accessed at https://unfccc.int/resource/docs/2015/cop21/eng/l09.pdf
[201] ACTU (2016) Sharing the challenges and opportunities of a clean energy economy: A just transition for coal-fired electricity sector workers and communities. http://www.actu.org.au/media/1032953/actu-policy-discussion-paper-a-just-transition-for-coal-fired-electricity-sector-workers-and-communities.pdf
[202] WWF-Greece (2016) Roadmap for the Transition of the Western Macedonia region to a Post-Lignite ERA, pg.33. http://wwf.gr/images/pdfs/Roadmap_PostLignite_EN.pdf
[203] World Bank and International Finance Corporation (2002) *It's Not Over When It's Over: Mine Closure Around the World* http://siteresources.worldbank.org/INTOGMC/Resources/notoverwhenover.pdf

Recommendation 28: That COAG Energy Ministers establish an industry-wide multi-employer pooling and redeployment scheme which provides retrenched workers with the opportunity to transfer to roles with renewable or low emission generators as well as remaining fossil fuel generators, extending the Victorian Scheme recently announced.

Recommendation 29: That COAG Energy Ministers in key affected States develop a fair and reasonable labour adjustment package consistent with community expectations that supports workers transition into new, decent and secure jobs.

- Job placement networks.
- Retraining.
- Financial and personal support.
- Travel subsidies and relocation assistance.

Recommendation 30: That COAG Energy Ministers in key affected states facilitate the establishment of regional development coalitions, to develop specific plans and measures to renew and diversify the economy of affected regions.

ACOSS notes that, as far as practicable, these principles should apply broadly to structural adjustment across the economy, and to income support and employment assistance for unemployed people, especially those disadvantaged in the labour market.

3.3 Whole of system advice, planning and rule changes

The design of the NEM has significant implications for achieving security, reliability, social equity, decarbonisation and investment certainty. And effective energy market governance will be essential for managing the redesign of the NEM and ensure a just transition for employees and affected communities. To this end ACOSS makes the following recommendations:

Recommendation 31: That COAG Energy Ministers undertake the following:

- Develop a National Electricity Blueprint, which sets out long term objectives and a pathway for transition in the energy sector. The blueprint should:
    - Address security, affordability, social good, investment certainty, needs of vulnerable households, decarbonisation, and just transition.
    - Recognise the implications for energy infrastructure of the changing technology mix and required planning for managing the transition for the electricity sector.
    - Include an energy Roadmap, which maps of optimal sites for renewable energy and storage solutions to maximise grid security and reliability.
    - Orderly closure of coal-fired power stations and just transition measures.
- Establish an energy transition authority with sufficient powers and resources to plan and implement the Blueprint and coordinate the transition in the energy sector, including a just transition for workers and communities. In light of the new body, review how the current framework of overlapping state and federal policy, market operator and regulatory bodies could be simplified and streamlined. Including how a

stronger consumer framework, that in particular better recognizes and considers low income and disadvantaged households, can be built into the NEM Governance (see for example recommendations in section 3.1.3 above).

- Ensure future planning, modelling and forecasting is stressed tested against a rapidly changing technology, frequent change in technology price, climate policy, consumer preference, impacts of low income and disadvantaged Australians and the wider social good.
- Consider establishing work groups and pilots to work quickly through opportunities, challenges and solutions.
- Ensure that forecasting is transparent, accessible, and scenario based, with more emphasis on market intelligence and real-time updates, rather than annual or semi-annual publications.
- Implement rule changes to support uptake of new technologies and modernise the electricity grid including, review bidding time frame for wholesale energy contracts to shorten the time frame, facilitate network payments to households and business with solar and battery, facilitate peer to peer trading, and other areas will be important.[204]

3.4 Knowledge Gaps

There are significant knowledge gaps on how climate and energy policy proposals impact on households with low incomes or experiencing disadvantage.

To better understand the impact of climate and energy policy on vulnerable household and identify appropriate policies to avoid negative impacts, ACOSS makes the following recommendations:

Recommendation 32: That COAG Energy Ministers fund research to better understand energy affordability and vulnerability that utilises the 2017 release of the 2013-14 Household Expenditure Survey to align research into energy affordability and vulnerability with the methodologies in and publication of the ACOSS Poverty in Australia series.

Recommendation 33: That COAG Energy Ministers commission the following research work:

- Measure the likely impact of a range of climate and energy policies on electricity prices

[204] For example, Zen Energy are proposing to build a 50-150 MW grid-scale battery storage on South Australian network to support its large scale solar farm. Zen energy argue that the storage facility would help provide a buffer against surges of peak loads in extreme heat events, like this month's heatwave and would meet the state's needs for fast frequency response, or synthetic inertia, stabilising grid frequency and voltage at times of sudden loss of power. However, according to reports in Renew Economy the project hinges on changes in the NEM. According to the article the absence of a competitive market for fast frequency response control and the averaging of settlement prices of wholesale energy contract over a 30 minute period, favours baseload fossil fuels. http://reneweconomy.com.au/zen-energy-reveals-big-battery-plans-for-south-australia-35222/

against different levels of emissions reduction ambitions (noting most COAG states have long-term 2050 emissions reduction targets and renewable energy targets).
- Analyse how the price changes would affect a range of low income and disadvantaged household types.
- Identify and analyse policy measures capable of addressing price impacts and other barriers to participate in the clean energy transition.

Recommendation 34: That COAG Energy Ministers work with their housing ministerial counterparts to align electricity and vulnerable household policy, advocacy and research initiatives with corresponding housing affordability initiatives.

Attachment B – Australian Climate Roundtable Principles

AUSTRALIAN CLIMATE ROUNDTABLE: JOINT PRINCIPLES FOR CLIMATE POLICY

Preface

This document sets out principles to guide the development of sound long term policy to address climate change. These principles reflect extensive discussions between the diverse organisations participating in the Australian Climate Roundtable, encompassing business groups, unions, institutional investors, environmental groups, research organisations and social policy organisations.

The principles address the goals of climate change policy and the ideal characteristics of policies to meet the goals.

The principles spring from the considerable common ground between the existing policy approaches of each group, and have been revised and clarified to ensure that they cover areas of essential need and joint agreement. Each organisation maintains their own existing policy priorities, with which they have judged these principles to be compatible.

The following organisations have agreed to the joint principles:

Australian Aluminium Council	Australian Industry Group	The Climate Institute
Australian Conservation Foundation	Business Council of Australia	WWF Australia
Australian Council of Social Service	Energy Supply Association of Australia	
Australian Council of Trade Unions	Investor Group on Climate Change	

Principles

Goal

Unconstrained climate change would have serious economic, environmental and social impacts on Australia. These costs underpin our assessment of the need for action.

We recognise the major parties' bipartisan goal of limiting global warming to less than 2°C above preindustrial levels. Our overarching aim is for Australia to play its fair part in international efforts to achieve this while maintaining and increasing its prosperity.

Achieving this goal will require deep global emissions reductions, with most countries including Australia eventually reducing net[205] greenhouse gas[206] emissions to zero or below.

Avoiding unconstrained climate change will provide important benefits and opportunities to Australia. However, emissions reductions on the necessary scale will also require substantial change and present significant challenges for Australia as well as other countries. Delayed, unpredictable and piecemeal action will increase the costs and challenge of achieving the goal. Policy must be well designed to achieve the goal while avoiding these risks. This document sets out principles for dealing with the key issues.

Ideal policy

Policy instruments should: be capable of achieving deep reductions in Australia's net emissions in line with our overall goal; provide confidence that targeted emissions reductions actually occur; be based on an assessment of the full range of climate risks; be well designed, stable and internationally linked;[207] operate at least cost to the domestic economy while maximising benefits; and remain efficient as circumstances change and Australia's emissions reduction goals evolve.

Cost control

Policy should allow Australia to meet its short and long term emissions reduction goals at least cost.

To achieve this, policy should:

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[205] 'Net' greenhouse gas emissions includes the impacts of activities that remove carbon dioxide from the atmosphere (such as carbon sequestration in forests or geological formations), and of international trade in credible emissions entitlements and offsets. Climate change is affected by the total quantity of greenhouse gases in the atmosphere, not their point of origin.

[206] Greenhouse gases that are a focus for climate policy include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O) and a range of synthetic fluorinated gases.

[207] International linkage of climate policies can take many forms depending on policy type, from trade in emissions offsets or entitlements, to shared regulatory standards or project methodologies, to coordinated tax settings.

- drive domestic abatement wherever it is efficient and internationally recognised across all sectors of the Australian economy;
- make use of internationally recognised abatement from overseas to ease the transition towards net zero emissions;
- overcome identified market failures and help markets work more efficiently; and
- explicitly account for climate impacts in any assessment of costs and benefits.

Trade competitiveness

Policy should prevent the unnecessary loss of competitiveness by Australia's trade exposed industries and net increases in global emissions that might otherwise occur due to the uneven international application of climate policies.

Innovation

Policy should stimulate and support research, development, demonstration and commercial deployment of new and improved low-emissions technologies and processes to minimise the long term costs, and maximise the economic opportunities, in achieving the long-term goal.

Equity

Reducing Australia's emissions and adapting to unavoidable climate impacts, some of which are already here, involves both costs and opportunities. New opportunities for decent work should be open to all in the community. The costs of climate policy should be spread fairly within the Australian community and policy should:

- protect the most vulnerable individuals;
- avoid disproportionate impacts on vulnerable people, low income households and the organisations that support them; and
- assist the successful transition of communities that are especially vulnerable to economic shocks or physical risks as a result of climate change or climate policy.

Equity should be explicitly addressed in the policy design process, including immediate impacts and those on future generations of Australians.

Stability

To attract and sustain investment over the long term, the underlying climate policy framework should be stable, offer predictable processes for important decisions and enjoy broad political support.

Energy sector

Policy should recognise the strategic importance of reducing emissions from the energy sector in achieving the overall goal. It should provide a credible basis for planning and investment by the energy sector and energy consumers, maintain energy security and avoid sovereign risk.

While the need to reduce energy sector emissions has been widely anticipated, specific policies may create economic shocks that negatively affect businesses. These shocks should be smoothed without negating the incentives created by the policy.

Adaptation

Some adverse climate impacts are already occurring and more will be unavoidable. Systematic assessment, planning and action are needed to adapt to the range of climate change scenarios we face.

Use of revenue

Any revenue resulting from climate policy should be used where cost-effective to address legitimate needs directly related to climate policy, and otherwise be returned to individuals and business in ways that maximise efficiency and do not reduce abatement incentives.

Administration

Compliance costs and regulatory burdens should be kept to a minimum.

Policy should aim to provide transparent information about its operation and impacts, consistent with commercial expectations and the public interest.

Review

Australia needs regular independent review of its emissions policies, its targets (including their consistency with agreed overall goal, and international undertakings) and the efforts of other countries. This should involve full public consultation.

http://www.australianclimateroundtable.org.au/

Australian Council of Social Service

www.acoss.org.au

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