

# Clean Affordable Energy for All - Policy Paper

*This policy paper is taken from the Plan to Repower Australia (Homegrown Power Plan V2), which will be released in April 2018. It is embargoed – please do not share.*

## 1 Introduction

### It's about people stupid!

Just imagine if your kid went to school and the teacher spent all day making sure the computers worked, or you went to the doctors and they spent your whole check-up ensuring that you had the right medical insurance form and didn't actually ask about your health. Like health and education, electricity is an essential service that is critical to almost every aspect of our lives – from working, to communicating, to cooking, to being able to enjoy ourselves. That means, just like health and education, energy and particularly electricity is fundamentally about and for people: it should be universally accessible, and the way we generate it must not endanger lives.

If you read the newspaper or watch TV, in one of the never-ending stories about energy it will become abundantly clear that everyone talking about energy has forgotten the basic fact that energy is about people. We hear a lot about technologies – coal, wind, solar and we hear a lot about money, markets and different organisations. These are important, but so too are the people those technologies, markets and organisations serve and we hear very little from them. When we do, they are used as political footballs, rather than engaged with as fully rounded human beings who are energy consumers, workers, citizens, community members and increasingly owners of electricity generation. This must change. In this section we outline the policies that help put people back at the centre of the transition to clean energy and celebrate the many examples of where they are leading the way.

### It's empowering – literally!

Gone are the old days of passive electricity consumers unable to do anything but accept the decisions of governments and companies about their energy future. The old days saw some of the most polluting electricity in the world and a 70% hike in electricity prices over five years due to network gold plating.<sup>1</sup> A new energy future is afoot – an exciting, people-powered energy future!

People + clean energy + the digital revolution = an empowered, democratic energy system that doesn't pollute the air we breathe.

In the late 1990s Germany passed the Energiewende – a law that has changed the world. It was made possible by many people, one of whom is a guy named Herman Scheer. Herman Scheer talks about how an energy system based on renewable

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<sup>1</sup> Productivity Commission (2013) Op cit

energy is fundamentally different from fossil fuels and nuclear energy. Where fossil fuels and nuclear power are based on a market of fuel, where the fuel is finite and extracted from the ground creating huge ecological and social impacts, with renewable power the fuel is free and abundant – it's the sun, the wind and the waves. Where historically our electricity system has depended on markets for fuel – coal, oil, gas and uranium, the future electricity system is based on markets for technologies – wind turbines, solar panels, mirrors and more – that harness the abundant renewable resources.

This means that renewables are at first principles more accessible, as Hermann Scheer puts it:

*'Renewable energy are common goods. It is impossible to privatise sun and wind. The deployment of those energy resources will lead to more equality in the global economy.'*

The technologies that harness these resources can be highly sophisticated and proprietary, such as solar photovoltaic cells, or they can be simple and made in a backyard like a solar cooker. Even the proprietary technologies are much more modular and scalable than coal-fired power stations, which means owning the means of electricity production becomes a possibility for everyone.

Renewable energy literally has the potential to empower billions of people (see Box 1). This is why worldwide we're seeing exciting initiatives to democratise energy such as Trade Unions for Energy Democracy<sup>2</sup> and REScoop.<sup>3</sup>

### **Box 1 – Renewable energy is good for humanity**

Energy poverty is a major issue across Africa and Asia. Over one billion people don't have access to electricity and 2.8 billion don't have access to clean cooking facilities (e.g., they rely on kerosene, coal or solid biomass instead of electricity or natural gas). Without electricity, it's impossible to run a side business or for children to study at night, while the lack of clean cooking is involved in 3.5 million preventable deaths every year.

Renewable energy is playing a vital role in bringing energy to communities who are often far from the grid or simply can't afford centralised energy. Companies such as *mkopa* in Kenya are using mobile-enabled bank accounts to sell small home solar systems that replace dangerous kerosene lamps and allow families to charge mobile phones at a lower cost than existing kerosene. Other companies are using clean cookstoves to improve the health of communities and reduce the consumption of firewood, which is a major burden for women and an important driver of deforestation.

While in India, the "Saffron Revolution" for solar is well underway. In 2014, President Modi committed that by 2019 every household in India would be able to power at least a light with solar power.<sup>4</sup> From practically a standing start in 2014, solar uptake is steadily

<sup>2</sup> Trade Unions for Energy Democracy – <http://unionsforenergydemocracy.org/>

<sup>3</sup> <https://www.rescoop.eu/>

<sup>4</sup> Vorrath, S. (2014), **21**

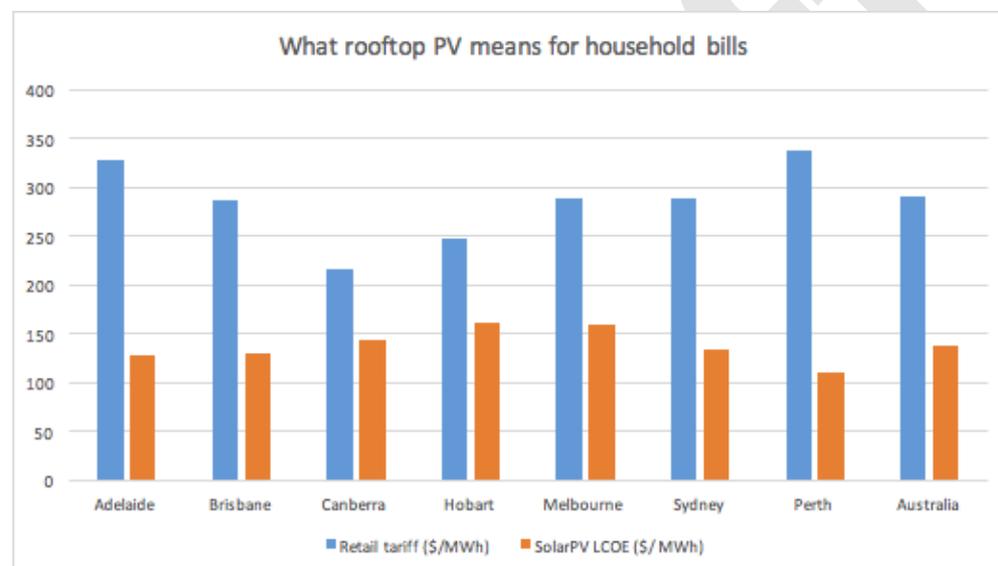
Australian coal prospects dim as Modi turns spotlight on solar, accessible at

increasing across India at the micro, rooftop and large-scale level, to the point that India ranked #4 in the world for solar PV investment in 2016.<sup>5</sup>

On Small Islands Developing States, communities are replacing expensive, dirty diesel generators with safe, clean and affordable renewable energy. This global energy revolution is only just taking off – but if we get it right we'll have a more equitable world with burgeoning growing economies that have avoided the trap of fossil fuel energy systems and are taking advantage of safe, abundant renewable energy.

Here in Australia, a combination of energy efficiency, solar PV, demand management and soon battery storage are the best ways for households to take control of their energy future, lower their electricity bill (see Figure ` ) and in the process contribute to stopping dangerous climate change. Furthermore, improving household energy efficiency also makes homes more comfortable and healthier to live in.

Figure 1: Retail tariffs and rooftop solar compared<sup>6</sup>



We all know the bad news – a cluster of has led to really high electricity prices for us all, which is severely affecting Australia's most vulnerable people (see Section 3 below for more on this). The good news is that people installing solar and developers building big wind farms are lowering electricity prices for us all.

## People are leading!

More so than in any other country, everyday Australians are leading the transition to clean, renewable energy. Australia has the highest per capita installation of rooftop

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<http://reneweconomy.com.au/australian-coal-prospects-dim-as-modi-turns-spotlight-on-solar-83706/>

<sup>5</sup> Ren 21 (2017) *Renewables 2017 Global Status Report*, p25 [http://www.ren21.net/wp-content/uploads/2017/06/17-8399\\_GSR\\_2017\\_Full\\_Report\\_0621\\_Opt.pdf](http://www.ren21.net/wp-content/uploads/2017/06/17-8399_GSR_2017_Full_Report_0621_Opt.pdf)

<sup>6</sup> Comparison of retail electricity prices in Australian capital cities with the Levelised Cost of Energy (LCOE) for rooftop solar PV (excluding Feed-in-Tariffs and including a 5% discount rate). Source: Drew, G. et al (2015) op cit, p. 46

solar PV,<sup>7</sup> with just under 1.7 million solar roofs.<sup>8</sup> Or put another way, one in five Australian homes have solar on their roof. That means there are at least 4.5 million Australians living in solar-powered buildings.

How did we get here? Through the hard work of passionate people. People campaigned for the state and federal policies that made solar economic when it was still quite expensive. And people in their communities went further and ran bulk-buy programs to make it even cheaper and easier to install solar – creating an early market for this fledgling industry. The results of this people powered push for solar are significant. Australia's rooftop revolution has:

- created 11,150 jobs<sup>9</sup>
- established a solar industry and driven down the cost of installing solar for all of us
- lowered wholesale electricity prices, saving all consumers billions (for example, a report by Energy Synapse for Solar Citizens found that “in the year from 1 May 2016 to 30 April 2017, the wholesale electricity price in NSW would be a whopping 33–50% higher if households and businesses with rooftop solar PV systems, up to 100 kW, were not generating clean sun power. This has saved energy consumers between \$2.2 and \$3.3 billion!”<sup>10</sup>)
- helped prevent blackouts,<sup>11</sup> when gas and coal generators couldn't stand the heat.<sup>12</sup>

Solar PV is just the beginning of clean energy at the household level – a whole host of new technologies, products and services from apps to storage to smart appliances and demand management options, mean that people are now starting to have more choice. It's no longer just a choice of which company to buy some electrons from. Energy consumers are starting to demand new services introducing actual competition with differentiated products into the retail energy game for the first time. All this means woe-betide any consumer-facing energy company that doesn't put people at the centre, not at the end of their thinking.

However, even more excitingly, people powered clean energy isn't stopping with rooftop solar and consumer choices. There are now more than 90 community energy groups that have sprung up across the nation,<sup>13</sup> developing innovative local clean

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<sup>7</sup> ESAA (2014) Renewable Energy In Australia How Do We Really Compare? Fact Sheet.

<sup>8</sup> Australian PV Institute (2017), 'Australian PV market since April 2001', July 2017

<sup>9</sup> Australian Bureau of Statistics, 'Employment in Renewable Energy Activities, Australia, 2015-16'

<sup>10</sup> Petrkovic, M., 2017, *Impact of small solar PV on the NSW wholesale electricity market*, Report by Energy Synapse for Solar Citizens.

<sup>11</sup> Parkinson, G., 2017, 'Record solar, wind “save” NSW consumers as coal, gas went missing', *RenewEconomy*, Accessible at <http://reneweconomy.com.au/record-solar-wind-save-nsw-consumers-as-coal-gas-went-missing-79390/>

<sup>12</sup> Parkinson, G., 2017, 'Melting in the sun: How fossil fuel generators failed in summer heat-wave', *RenewEconomy*, Accessible at <http://reneweconomy.com.au/melting-sun-fossil-fuel-generators-failed-summer-heat-wave-91043/>

<sup>13</sup> Community Power Agency, 2017, *Community Energy Map & Database*, Accessible at <http://cpagency.org.au/resources/map/>

energy projects. There are thousands of Australians willing and able to get local renewable energy projects going in their communities, particularly in regional and rural areas.

Communities are also standing up for big renewables too. From the five year campaign in Port Augusta – a former coal community – to win Australia's first concentrating solar thermal plant, to local support for wind farms, people across Australia are actively championing a renewable future that benefits their own community, the country and the world.

Given how many Australians have embraced solar, it should come as no surprise that renewable energy is extremely popular. Poll after poll shows 60-90% support for renewables. Indeed 63% of Australians would be more likely to vote for a party with a policy to ensure solar is installed on every home that is suitable and on buildings like hospitals and schools. Policy makers and politicians ignore this popularity at their peril and have in the past frequently found themselves in deep water after underestimating how popular a renewable policy might become.

However, while the majority of Australians love renewables, to date not everyone has been able to join the solar feast.

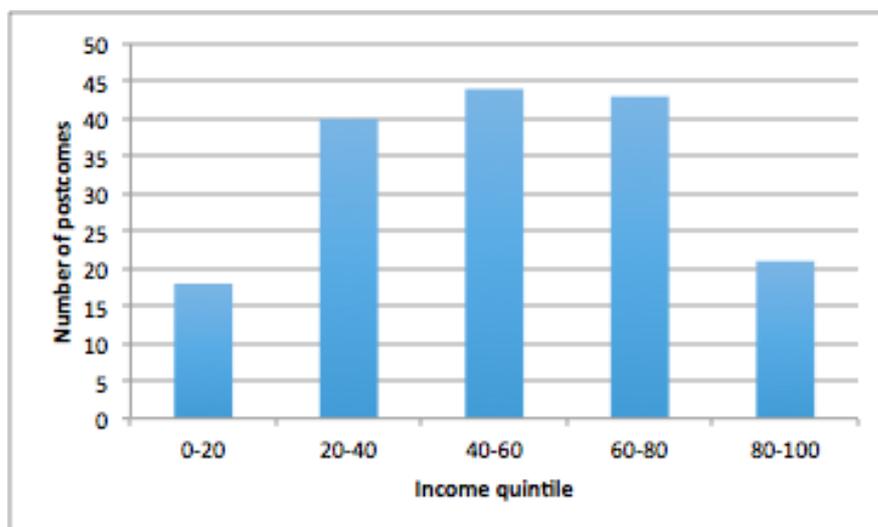
Some people are locked out!

**All Australians, no matter what they earn or where they live, deserve access to affordable clean energy.**

Australian households are still paying off the electricity network companies' latest five-year spending spree, on top of more recent electricity price rises driven by fossil-fueled gentailers gaming the system. Some have been able to take steps to manage this increase and reduce its impact on the household coffers (see Figure 1 above).

The chart below (Figure 2) shows that it is primarily lower and middle income suburbs that have embraced solar. Solar PV is clearly not just for the wealthy, despite what some political commentators would have us believe. However, what the chart also shows is that lowest income suburbs have been the most excluded from solar access.

Figure 2: Queensland postcodes with over 30% solar penetration, by income<sup>14</sup>



It is clear that some parts of our community still face barriers that block them from directly benefiting from the renewable energy revolution and these people are typically those who are most struggling to afford energy at all. Many of Australia's lowest income and most vulnerable households have been unable to access or afford energy efficiency upgrades or household solar, leaving them exposed to soaring and often unaffordable bills. As the Australian Council of Social Services puts it, for the estimated 13.3% of Australians living in poverty,<sup>15</sup> "energy affordability is a growing, and sometimes crushing, problem."<sup>16</sup>

Barriers to clean energy access exist not only for low-income households but also renters, apartment dwellers, homeowners without solar access or those who have inappropriate roofs. Also, while Australia has helped pioneer off-grid solar PV systems, many remote communities and particularly Aboriginal communities don't have access to clean energy providers.

In the US, it is estimated that 49% of households and 48% of businesses are unable to host their own solar PV systems.<sup>17</sup> In Australia, it's estimated that *at least* 30% of households are locked out of solar.<sup>18</sup>

<sup>14</sup> ESAA (2015) 'ESAA Solar Report – December 2015', Energy Supply Association of Australia, p. 4

<sup>15</sup> <http://www.acoss.org.au/poverty/>

<sup>16</sup> ACOSS (2014) 'Preventing shocks and addressing poverty', discussion paper, Australian Council of Social Services

<sup>17</sup> Feldman et al (2015) 'Shared Solar: Current Landscape, Market Potential, and the Impact of Federal Securities Regulation', NREL.

<sup>18</sup> According to the Australian Bureau of Statistics 29.6% of Australian households have a tenure status of "Rented" and 13.6% of dwellings have a structure of "Flat, unit or apartment" (ABS, 2011 Census QuickStats). Assuming some overlap, we can conservatively surmise that more than 30% of households are currently 'locked-out' of Australia's rooftop solar market. Note that this does not include the household statistics for those with unsuitable roofs or low-income households.

## The padlocks holding us back

Locked out energy users face fundamental market barriers that make solar, energy efficiency, storage and other clean energy solutions inaccessible and/or unaffordable. These barriers broadly fall into four categories – access to information, cost barriers, structural barriers and regulatory barriers.

### **Low community awareness and complexity**

Most Australians concerned about rising energy prices are unaware of how efficiency and other clean energy improvements can help keep bills affordable. Even where people have a basic idea of what might be needed, people don't know where to turn to get reliable and trusted advice that suits their individual needs. This isn't helped by the fact that Australia's energy retailers are trusted less than the big banks,<sup>19</sup> unfortunately with good reason.

Moreover, as our energy market continues to evolve and the range of energy products and services continues to expand, this complexity will only increase. For many people, this complexity undermines their ability to make the 'rational' decisions assumed in a competitive market.<sup>20</sup>

This is even truer for disadvantaged households, even though they are most in need of the bill saving and health benefits of efficiency. Consistent findings from projects funded under the federal government's Low Income Energy Efficiency Program highlighted the need for information and retrofit services to be delivered in the context of existing trusted services and relationships (such as community peers, financial counselling or home care services).<sup>21</sup>

Another implication is that many households are prioritising investment in rooftop solar without making basic efficiency improvements at the same time. This means we are missing opportunities to maximise bill-saving and health benefits at the household scale, as well as capture demand management and emission reduction benefits across the wider energy system.

### **Unaffordable up-front costs**

Unaffordable up-front costs are a significant barrier preventing many households from accessing efficiency and renewable energy upgrades to their homes. In fact, those households most in need of bill saving and health benefits are those most unlikely to be able to afford efficiency and solar. While past and current government programs such as Vic's Energy Upgrades Program have made a range of efficiency measures available at no cost, higher value measures (such as efficient fixed appliances), which require a co-contribution payment, have generally remained inaccessible to low income households and those experiencing energy hardship.

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<sup>19</sup> The Guardian, 2015. Accessible at <https://www.theguardian.com/money/2015/jan/26/energy-giants-more-disliked-banks-guardian-icm-poll>

<sup>20</sup> CALC 2016, Power Transformed

<sup>21</sup> FPF and other LIEEP reports

Furthermore, available finance products (like solar loans and leases) are typically not appropriate either as the interest rates are too high or some low-income households are not eligible due to credit-rating issues.

### **Lack of incentive**

More than 6.5 million Australians who rent their homes are largely locked out of the clean energy transition because most landlords see little financial incentive to invest in property upgrades while the bill saving and health benefits are reaped by tenants. This is known as the 'split incentive' problem and it leaves renters bearing an unfair share of the financial and health costs of inefficient housing.

It's no secret that Australia is in the midst of a housing crisis with much of the younger generation locked out of home ownership (and thus currently locked out of solar ownership). This growing intergenerational inequality needs to be addressed urgently, within both the energy and housing sectors. Further, given that low-income households are more likely to be renters, they therefore face the dual challenges of financial constraints and unmotivated landlords, further entrenching disadvantage.

Additionally, for many homeowners, their incentive to invest in improvements is undermined by the relatively high investment in time and effort needed to overcome the information and complexity barriers mentioned above.

### **Energy market rules and tariffs**

Energy market rules and tariffs are preventing expansion of options for household scale solar beyond rooftop solar (e.g., for those without solar-ready roofs or tenants) and dis-incentivising existing solar homes to remain connected to the grid.

Addressing these barriers will require both government support and greater innovation by community enterprises.<sup>22</sup>

### **Some people are more affected by the transition than others**

Let's not kid ourselves, transitions are hard, they involve moving away from something that's been established for decades or more, towards a new thing that doesn't yet exist in its entirety. This process, particularly when it involves the transformation of an essential service, impacts a lot of people and some more than others. As well as locked-out energy users, the people most affected by the transition to clean energy are those who live and work in communities where coal and gas companies have operated for many years.

These workers and the communities that support them have proudly supplied states and cities with electricity for decades, and they face significant hardship if the transition to clean energy is managed poorly. In many cases, these communities have already faced painful privatisation transitions, experience higher than average

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<sup>22</sup> Adapted from Community Power Agency's Renewables for All Policy Briefing Paper see: <http://cpagency.org.au/wp-content/uploads/2016/01/Renewables-For-All-Policy-Briefing-A-Priority-Energy-Policy-Agenda-for-Australia.pdf>

unemployment<sup>23</sup> and have shouldered the burden of toxic air pollution for many years.<sup>24</sup> Sudden and unplanned closure of major industries in these places will have impacts that ripple beyond the retrenched workers themselves; to spouses, children and people working in downstream local businesses.

While some people still argue that the impact on workers and communities in places like the Latrobe Valley means we shouldn't transition away from coal and other fossil fuels, this is tantamount to putting one's head in the sand or sticking fingers in your ears and going lalalala at the top of your voice. It denies that the world is changing – that the economics of energy have changed. It ignores the people in these communities already crying out for attention and intervention and perhaps most importantly it fails to recognise that climate change – an unintended but nevertheless hugely significant side-effect of burning fossil fuels – is also affecting the lives and livelihoods of billions of people.

If we don't change the way our electricity system works and quickly, people living in low-lying areas around the world, including in Australia, will have to relocate. Tourism operators who enable people to experience the wonders of the Great Barrier Reef will be out of a job because it will be dead – and that's just the tip of the iceberg.

Instead, we need to ensure that anyone potentially negatively impacted by the transition to clean energy is supported properly. What we're really talking about here is energy justice – where nobody is left behind in a truly just transition to a more equitable, fair, affordable and clean energy system that works for all Australians everywhere.

### Let's talk about energy justice

A just transition ensures environmental sustainability as well as decent work, social inclusion and poverty eradication (Smith 2017) in the process of industrial or economic change. Specifically, taking an energy justice approach means we must ensure a number of things in the process of delivering a more sustainable electricity system:

1. The responsibilities and any costs of the transition are equitably shared across society. Key principles underpinning this concept include:
  - a. Polluters pay – that is the organisations that have created the problem (in this case climate change) have a responsibility to pay their fair share for fixing the problem.
  - b. Those least responsible should not shoulder a disproportionate amount of any burden. For example, there is a very real fear that Australia's most vulnerable households and communities, who are least responsible for causing climate change, are going to be those

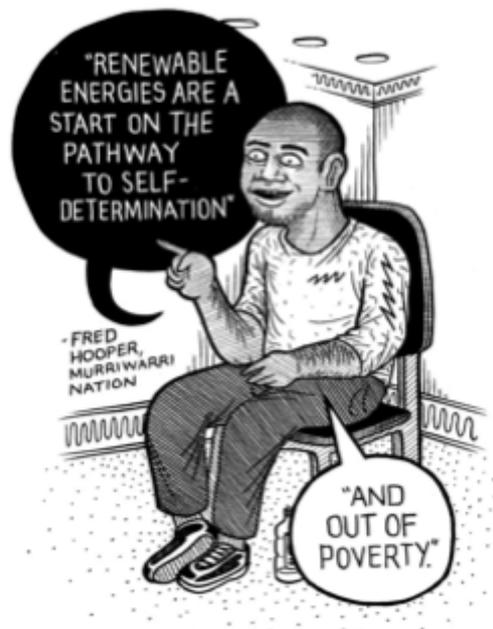
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<sup>23</sup> Investor Group on Climate Change, (2017) 'Coal, Carbon and The Community,' p.25 <<https://igcc.org.au/wp-content/uploads/2016/04/Coal-Carbon-and-Community.pdf> >

<sup>24</sup> Environment Justice Australia, (2017) *Toxic and Terminal, How the regulation of coal-fired power stations fails Australian communities.* <[envirojustice.org.au/powerstations](http://envirojustice.org.au/powerstations) >

left paying for our gold-plated electricity grid, because they are the least able to access clean energy solutions such as solar, storage and energy efficiency. We cannot let this happen!

2. A fair distribution of the benefits. This means that no-one should be locked out of the potential benefits of clean energy. It also means that those most affected such as climate impacted communities and those who through no fault of their own are most affected by the transition away from fossil-fuels should receive the most support.
3. Where possible, the transition is used to rectify broader injustice, poverty and inequality – not further entrench it. For too long, some Australian communities, particularly Aboriginal communities have been given two choices: support extractive and environmentally and socially destructive industries such as mining, or live in poverty. This does not have to be the case with renewables, they offer a real path to economic development. As Fred Hooper from the Murriwa Nation put it, “renewable energies are a start on the pathway to self-determination... and out of poverty”.<sup>25</sup> This means that in a just energy transition it is not enough to equitably share the cost and benefits, we need to go beyond and proactively support solutions that are socially and environmentally regenerative.



For too long, the social or energy justice dimension of the transition to 100% renewable energy has been de-prioritised or ignored. While we are well progressed on the technological and economic dimensions of this transition (i.e. we have the technology and the money), the support for the social dimension (aka people) is lagging far behind. The good news is that people are finally starting to notice.

Between the end of 2016 and 2018 the ACTU,<sup>26</sup> ACOSS, The Climate Institute, Brotherhood of St Laurence,<sup>27</sup> the Victorian<sup>28</sup> and QLD governments,<sup>29</sup> Solar

<sup>25</sup> Hooper, F. (2017), Speech to the Community Energy Congress, Melbourne.

<sup>26</sup> ACTU (2016) *ACTU Policy Discussion Paper – A Just Transition for coal-fired electricity sector workers and communities*, Accessible at [www.actu.org.au/our-work/policy-issues/actu-](http://www.actu.org.au/our-work/policy-issues/actu-)

Citizens,<sup>30</sup> Community Power Agency,<sup>31</sup> the One Million Homes Alliance<sup>32</sup> in Vic, the Sydney Alliance<sup>33</sup> and many other organisations across Australia, all developed policies and plans and elevated their call to support people to be put front and centre of the transition to clean power. Even the Finkel Review recognised the need to support low income households access solar and energy efficiency. Specifically Recommendation 6.6 reads:

*“...identify opportunities to accelerate the roll out of programs that improve access by low income households to distributed energy resources and improvements in energy efficiency. Identify options for subsidised funding mechanisms for the supply of energy efficient appliances, rooftop solar photovoltaic and battery storage systems for low income consumers.”<sup>34</sup>*

## Fairer & faster

If we are serious about putting people at the centre of the energy debate, we will not only make the transition to 100% renewable energy fairer, we will also make it faster. By unlocking solar for renters and apartment dwellers this could lead to an additional 2-8GWs of solar capacity. At the low end of the spectrum, 2GW represents a 32% increase in market size on the current domestic/small-commercial solar market.<sup>35</sup>

Moreover, because people are not just energy consumers, but innovators, champions and citizens, supporting communities, households, farmers, business owners and more, leverages the organisational resources – time, money, land/roof space – of thousands if not millions of new actors in deploying renewables and other clean energy solutions. Together we can turbocharge clean energy, sharing the benefits with communities and people across the country.

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[policy-discussion-paper-a-just-transition-for-coal-fired-electricity-sector-workers-and-communities](#)

<sup>27</sup> ACOSS, BSL, TCI, (2017) *Empowering Disadvantaged Households to Access Affordable Clean Energy*, accessible at [www.acoss.org.au/media\\_release/new-report-provides-blueprint-for-putting-people-experiencing-disadvantage-at-the-centre-of-energy-transformation/](http://www.acoss.org.au/media_release/new-report-provides-blueprint-for-putting-people-experiencing-disadvantage-at-the-centre-of-energy-transformation/)

<sup>28</sup> Victorian Government (2017), ‘Home Energy Assist Program’, *Victorian Energy Saver*, [www.victorianenergysaver.vic.gov.au/energy-users-like-you/low-income/home-energy-assist-program](http://www.victorianenergysaver.vic.gov.au/energy-users-like-you/low-income/home-energy-assist-program)

<sup>29</sup> Vorrath, S. (2017) Queensland opens rooftop solar market to low-income and rental households, *One Step off the Grid*, <https://onestepoffthegrid.com.au/queensland-labor-ups-ante-solar-opening-market-low-income-rental-households/>

<sup>30</sup> [http://www.solarcitizens.org.au/media\\_sapoweraccess](http://www.solarcitizens.org.au/media_sapoweraccess)

<sup>31</sup> Community Power Agency, (2015) *Renewables for All*, Accessible at <http://cpagency.org.au/renewables-for-all-resources/>

<sup>32</sup> One Million Homes Alliance, <https://environmentvictoria.org.au/our-campaigns/sustainable-living/one-million-homes-alliance/>

<sup>33</sup> Sydney Alliance (2017), *Meet our Action Teams – Voices for Power*, [www.sydneyalliance.org.au/our\\_action\\_teams](http://www.sydneyalliance.org.au/our_action_teams)

<sup>34</sup> Finkel, A. et al, 2017, Independent Review into the Future Security of the National Electricity Market, p25

<sup>35</sup> Nockolds, T., Rutivitz, J. & Ison, N., 2017, *Social Access Solar Gardens proposal*. Note conservative estimate.

## How do we do it?

So how do we deliver a truly just transition to 100% renewable energy that is faster as climate change demands and fairer for all?

The following recommendations spell out how citizens and communities can be supported to lead the way in delivering 100% renewable energy for 100% of our population and to claim their fair share of the billions spent on electricity each year. Specifically, we have pulled together a suite of policies that target and support different segments of the Australian population to participate in and be supported through the energy transition. German politician Herman Scheer suggests this is critical, stating “the most important political task is to provide a policy and legal framework for renewable energy which enables people to participate.” The following Table summarises the different segments or groups of people, the challenges they face and the policies proposed to support them.

It is important to note that these segments are not mutually exclusive. For example, there are many Aboriginal people in remote or edge of grid communities, who rent and experience energy stress. As such, many people will be eligible for and benefit from a range of these policies working together.

<b>Who?</b>	<b>Challenges they face</b>	<b>Policy solutions</b>
Indigenous communities	Dependent on expensive, polluting diesel generators and overpriced grid connections. Inappropriate ‘community consultation’ for past clean energy programs, that don’t lead to the community empowerment outcomes desired by Aboriginal communities.	A collaboratively designed, well-funded national Indigenous Communities Clean Power Program.

<p>Low-income and energy stressed households</p>	<p>Since electricity prices are increasing, Australia's lowest income people struggle to pay their bills. Low-income households cannot afford or access the benefits of solar PV and energy efficiency. This ultimately leads to a growing number of disconnections. Current approaches to address these issues are completely inadequate.</p>	<p>The Federal ALP should set a goal of ending energy stress by 2030. Top programs to do this should include:</p> <ul style="list-style-type: none"> <li>- Establishing Power Access, a public interest retailer that provides clean energy services for Australia's most energy stressed households</li> <li>- Set up a decade long low-income clean energy grant and retrofit program, that builds on the Low Income Energy Efficiency Grants program findings.</li> <li>- Support and extend programs that work such as CEFC finance for social housing providers.</li> <li>- Unlock rates repayment programs for clean energy</li> </ul>
<p>Locked out energy users, particularly renters</p>	<p>Buying a house has become super expensive in many parts of Australia, particularly young people can't afford to buy in the property market. This is leading to a growing number of renters. However, rented houses tend to be the coldest in winter, hottest in summer and most energy-intensive to run. Meanwhile renters have no rights or recourse to install solar or undertake energy efficiency upgrades and landlords have no incentive and little motivation to do so.</p>	<p>The Federal Government should work with states to ensure robust, mandatory efficiency standards for rental properties are introduced.</p> <p>Successful state-based clean energy programs for public and social housing should be scaled-up nationally.</p> <p>Set up programs to ensure every renter can access solar. The attached briefer outlines four possible models from unlocking solar gardens, to incentivising landlords to do the right thing.</p>

<p>Everyone</p>	<p>Everyone means everyone but in particular:</p> <ul style="list-style-type: none"> <li>- People who live in apartments who are also locked out</li> <li>- Farmers and food manufacturers who are currently doing it tough and have abundant land and renewable resources they could harvest</li> <li>- Small businesses, particularly those who rent</li> <li>- Edge of grid communities who suffer from some of the least reliable power</li> <li>-The passionate early adopters and community energy entrepreneurs who take a risk and test different technologies and models making it easier and cheaper for the rest of us.</li> </ul>	<p>Expand the Community Power Hubs program to 50 Hubs, with capacity building funding available. These Hubs would not only support community energy, they would be a trusted source of information, provide coordination and energy advice from everyone from farmers to small-business to low-income households. They would also be a delivery agency for many of the other programs outlined here.</p> <p>Financial support for everyone to access storage: through a means-tested 50% tax rebate from the federal government.</p> <p>An updated consumer protection regime for new energy products and services</p>
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As has already been highlighted, millions of Australians are getting on with the job of repowering their homes, their businesses and their communities with clean energy, however the going is tough and some people can't because the rules of the game are stacked against them. This is why it's time for governments at all levels to step up, fill the gaps, remove the barriers and level the playing field. Government programs and public ownership and agencies have a big role to play here, however, so too do households, communities organisations and business. This is why the policy suite below is deliberately designed to leverage a range of actors and the different expertise they have to offer. As Naomi Klein says "to change everything we need everyone."<sup>36</sup>

If we are to counter the rise of inequality, one of the things we need to do is turn the big challenge of climate change and energy transition into an even bigger opportunity by putting people and communities at the heart of repowering Australia with 100% renewable energy.

<sup>36</sup> Klein, N. (2014), *This Changes Everything*, Penguin Books

## 2 Expand Indigenous communities' access to clean power

### ***Put clean energy within reach of every Indigenous community***

People on the frontlines of climate change and the fight against companies burning fuels like coal deserve to be first in line to benefit from a renewable future. A collaboratively-designed, well-funded national Indigenous Communities Clean Power Program could ensure that by 2025 all remote Aboriginal and Torres Strait Island communities have access to clean, affordable, local renewable electricity.

The program should take a systemic approach that provides infrastructure together with training, mentoring and job-creation, and a focus on locally-relevant and owned solutions as part of a long-term contribution to Aboriginal and Torres Strait Island community development and independence.

### The story so far

In 2001 there were over 1,100 remote Indigenous communities across Australia. Remote communities are by nature off-grid, and mostly use diesel to generate electricity. But with diesel fuel prices forecast to continue rising,<sup>37</sup> many off-grid projects are looking to renewables as an alternative power supply.<sup>38</sup>

Many Indigenous communities are calling for support to switch from expensive, polluting diesel generators or overpriced grid connections to renewable energy and storage. Past programs along these lines have had some success and were abandoned without any compelling reasons. Among other benefits, they delivered fuel cost savings for remote indigenous communities, as well as savings to public budgets that can be reinvested in Indigenous communities.

The compelling case for renewable energy in rural and remote communities has been recognised by four main government programs to date:

- The Renewable Remote Power Generation Program (RRPGP). This was an example of how a little upfront financing assistance enables remote communities, both Indigenous and non-Indigenous, to make a rapid shift to renewables. However, in yet another case of a good solar initiative being dumped for overachievement, the program was shut down after seven years when the rising cost of diesel sparked an even more rapid rush to install solar and the program ran out of funds two years ahead of schedule. Many opportunities for Aboriginal and Torres Strait Island communities to replace diesel fuel with renewables were abandoned at that point.
- The Bushlight Program. This well-regarded program was run by the Centre for Appropriate Technology from 2002 to 2012, funded by the same program

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<sup>37</sup> CO2CRC (2015) 'Australian Power Generation Technology Report', Electric Power Research Institute, p. 130

<sup>38</sup> Clean Energy Council (2015) 'Off-grid Renewables'

(RRPGP). Bushlight installed 148 remote renewable energy systems in 130 remote Indigenous communities, before being defunded in 2013.

- The \$40 million Remote Indigenous Energy Program was part of the Clean Energy Future Package aimed at providing energy efficiency education and renewable energy systems to remote Indigenous communities that were off-grid and dependent on diesel for power supply. It was intended to maintain the 148 renewable systems in 130 remote Indigenous communities that Bushlight had installed since 2002.
- More recently, the federal government, through ARENA, has provided financing to a number of remote and regional programs that support renewable energy solutions under the Regional Australia's Renewables (RAR) Program. ARENA has also awarded grant funding to a number of state and territory governments to facilitate increased uptake of renewables in remote communities including QLD and NT, through Ergon Energy and NT Power and Water Corporation (NTPWC) respectively. Through this Ergon Energy is expected to achieve up to 100% solar penetration, with their 1 MW expansion of Doomadgee Solar Farm that displaces an expected 528,000 litres of diesel per year.<sup>39</sup> Solar SetUp in the NT is a \$55 million program partially funded by ARENA and NTPWC's non-profit subsidiary Indigenous Essential Services, building on previous feasibility studies into solar/diesel hybrids at Daly River. It aims to deliver 10 MW of solar across 35 communities.

In addition, Ergon and NTPWC, with WA Water, are partners on a three-year research program to develop a culturally appropriate and community-driven framework for energy and water services based on experiences in three remote Aboriginal and Torres Strait Island communities.

State and territory governments also provide a range of existing grants and incentives to support renewable installations in remote communities. In QLD for example, the Renewable Energy Diesel Replacement Scheme (REDRS) provides a rebate of up to 50% of the cost of installing renewable energy that reduces or augments diesel use for electricity generation in off-grid areas. Eligible renewable energy technologies include solar, hydro, wind, biomass, and any other technology using a renewable energy source. The REDRS applies to domestic and commercial installations. A nominal cap of \$150,000 rebate applies to domestic installations. Similar programs exist in WA, NT and SA.

Most recently, Aboriginal leaders have come together to form the First Nations Renewable Energy Alliance, to ensure that the deployment of renewables is proactive and appropriate to Aboriginal communities needs. Not just their energy needs, but economic development, cultural and self-determination needs and desires.

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<sup>39</sup> ARENA (2014) 'Media Release: Solar solution for remote community'

## Where to now

As renewable costs fall and as diesel costs become more apparent, Aboriginal leaders are building momentum to reignite rural and remote Indigenous Australia's shift to renewable energy. **This time around, we should take on board the lessons learned from past projects from around Australia by establishing a long-term program with secure funding, set up on a more participatory and community-driven basis, and with more of a focus on local training and employment.**

There are many reasons to rethink and expand support for Indigenous renewables, including the need to take advantage of new opportunities as well as the urgency of overcoming old challenges:

- There is a continued focus from funding bodies and utilities on technological – rather than social – fixes, which is still ingrained in much of the planning and rhetoric around remote Aboriginal and Torres Strait Islander communities and misses a significant opportunity. There is plenty of evidence on how to engage and work with indigenous communities, but it is usually ignored.
- There is a history of colonisation that lives on today through much of the 'community consultation' being conducted with Indigenous communities, including
  - historically, diesel power supply systems leading not only to high costs for communities and polluting power, but amplified by losing additional land to utility companies' leases
  - a move to force closures of remote Aboriginal and homeland outstations and eviction of people from their land and homes, with the economics of running them used as an excuse.<sup>40</sup>
- There is a rise in new social innovations in energy (and water) with many social enterprises and 'sharing economy' projects able to scale up thanks to new information and communication technologies.
- Renewables, particularly wind and solar, are coming down the cost curve, and battery storage following fast.
- Prices of diesel (a dirty and polluting fuel) are likely to rise over the medium term<sup>41</sup>
- There is increasing international attention on Australia's poor treatment of its first peoples.
- There is strong growth of the community energy sector in Australia, with a strong network of communities sharing and learning together and with some successful examples in Aboriginal communities (see Box 2 for an example).

A much more systemic and empowering approach to the energy supply of remote Aboriginal and Torres Strait Islander Communities is urgently needed. An approach

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<sup>40</sup>Hodgetts, D. (2014) 'Crikey Clarifier: how can the government 'close down' WA communities?', Crikey

<sup>41</sup> CO2CRC (2015), 'Australian Power Generation Technology Report', p. 130

along the lines of Empowered Communities<sup>42</sup> that puts the needs and the voices of communities at the heart of the process.

### **Box 2: Case study – remote Aboriginal community solar in NSW<sup>43</sup>**

In late 2014, three Aboriginal communities in remote northern NSW invited The Valley Centre to work with them on a community resilience building project. These communities have a vision for energy independence, local community development, sustainability and self-reliance.

With rising energy costs and an unpredictable power supply, greatly compounded by extreme temperatures in summer, it was immediately apparent that energy affordability was the most critical issue. Electricity bills commonly range from \$2,000 to \$5,000 for each household and in some cases can be much higher. As Uncle Ike explains: “The price of our food is double what you get in the cities... And we are paying more for power than we are for any other cost. So how are you supposed to eat, how are you supposed to live?”

Over the last 12 months thanks to a NSW government grant, these communities, in partnership with the Valley Centre and community energy group Pingala, have investigated the potential for local clean energy solutions.

The project is now moving towards implementation. AllGrid Energy is designing a grid-connected behind-the-meter solar power and battery backup system for each of the 60 houses across the three communities. New, more energy-efficient appliances and resources to empower the community to lower their individual consumption are also part of the plan. To deliver this, Pingala has developed a new business model based on local community ownership combined with funding from ethical and community investors.

By implementing this project, new jobs and training opportunities will be created in the maintenance of assets, finance management and governance, and up-skilling of local electricians to be off-grid certified. This model will allow these communities and others that follow in their footsteps to realise their vision and take control of their energy future. In the words of Uncle Ike again “Anything you can own, gives you pride... and if you can, own your own power!”

The time is therefore ripe for new models that are community-driven, involving local groups developing low-carbon energy services so that solutions are appropriate to local situations, with the community having ownership over outcomes.<sup>44</sup>

A community-scale approach can be far more transformative, enabling citizen participation, building on local knowledge and networks and developing locally appropriate solutions.<sup>45</sup> For Aboriginal and Torres Strait Islander communities, a more participatory model of switching over to renewable electricity can provide

<sup>42</sup> See <http://empoweredcommunities.org.au/>

<sup>43</sup> Case Study written by April Crawford-Smith of Pingala and The Valley Centre.

<sup>44</sup> Hathway, K. (2010) ‘Community power empowers’, Research report for local communities charity ‘Urban Forum’, Urban!Forum, London, p. 44

<sup>45</sup> Walker, G., Hunter, S., Devine-Wright, P., Evans, B. and Fay, H. (2007) ‘Harnessing community energies: explaining and evaluating community-based localism in renewable energy policy in the UK’. *Global Environmental Politics* Vol 7, p. 64–82

additional benefits to low-carbon energy, including training, local Indigenous jobs, improved energy literacy, reduced energy poverty, community wellbeing, a more diversified economy, building cultural connections between infrastructure and land and self-determined positive collective visions of the future. This program is also likely to generate valuable knowledge and insights to be shared with other remote communities, from tourist resorts to other small end-of-grid or off-grid towns (this knowledge could be shared through the Community Powerhouses Network – below).

## How it could work

The Remote Indigenous Community Clean Energy Program should be designed in collaboration with leaders of Aboriginal communities who will be involved. For example, it could be mediated through the First Nations Renewable Energy Alliance. Input should also be sought from organisations like the Centre for Appropriate Technology who have been doing this for many years. However, one way the Remote Indigenous Community Clean Energy Program could work is as follows.

The program could be structured into two phases – scoping and piloting followed by scale-up.

### Phase 1: Scoping and piloting

- **Task 1:** Scope best-practice examples and models: identifying case studies of Indigenous community-led clean energy systems and models that work well, are supported by communities and are optimal in both social and economic and technical outcomes.
- **Task 2:** A three-year pilot project: working with a small number of remote Aboriginal and Torres Strait Islander communities (say 10) to trial a full community-scale installation of renewables (likely solar). Deliberative processes undertaken in partnership with the communities will be key to the success of these pilots. The process could include a series of facilitated community futures workshops on the needs and preferences of each of the communities in relation to energy use (and energy-related water) and provision in a culturally sensitive way, that leads to long-term outcomes.
- **Task 3:** The establishment of an ongoing functioning of a steering group that oversees the initial pilot program scale-up, communicates successes and failures, tracks progress and provides strategic guidance to participants. It is essential that the Remote Indigenous Community Clean Energy Program is not driven by boardroom or ministerial agendas, but by collective problem-solving. A steering committee or board with representatives from a cross-section of Aboriginal community representatives (majority), together with state and territory governments, federal government, energy and water utilities and environmental and social not-for-profits could fulfill this function.

### Phase 2: Scale-up

The scale-up phase would support all remote Aboriginal and Torres Strait Islander communities to become clean energy independent as soon as possible. This should include

- taking the successful models *and* processes from the pilot and adapting and applying them with all other remote Aboriginal and Torres Strait Islander communities
- funding for training and capacity building, transferable and relevant skills, education and outreach to build a network of energy leaders (or champions/rangers depending on the model) in remote Aboriginal and Torres Strait Islander communities. This is essential to ensure long-term uptake, maintenance, education and energy literacy and employment outcomes in the participating communities.

### How to fund it:

We estimate that the Remote Indigenous Community Clean Energy Program would cost in the order of \$30 million for the scoping and pilot phase over three years and a further \$150 million in the scale-up phase over five to seven years.<sup>46</sup>

The states and territories with the most remote Indigenous Communities – WA, NT and QLD all have Community Service Obligations. This is where a government requires a business division or government owned corporation (like Ergon or NT Power and Water) to undertake non-commercial activities for social purpose. In the NT the cost of the energy Community Service Obligation for one year was \$73.13 million.<sup>47</sup> In QLD the cost is closer to \$500 million per year (noting that this is across all edge of grid and remote communities *not* just Indigenous communities).

Some of the Community Service Obligation topped up by ARENA funding and/or CEFC low-interest loans could be used to cover the cost of the Remote Indigenous Community Clean Energy Program. Implementation funding could also be supplemented by alternative sources such as private, social impact and community finance.

## 3 Supporting low-income households

*Access to electricity, like access to healthcare, is a basic human right in a modern society such as in Australia. Affordable electricity should be seen as part of our common wealth, a benefit to which we all contribute and in which all can share.*

### Vulnerable households being left out in the cold

With the electricity system in disarray and electricity prices rising to astronomical levels (see Box 1), Australia's lowest income and most vulnerable people are struggling to pay their electricity bills. As the Australian Council Of Social Services (ACOSS) puts it:

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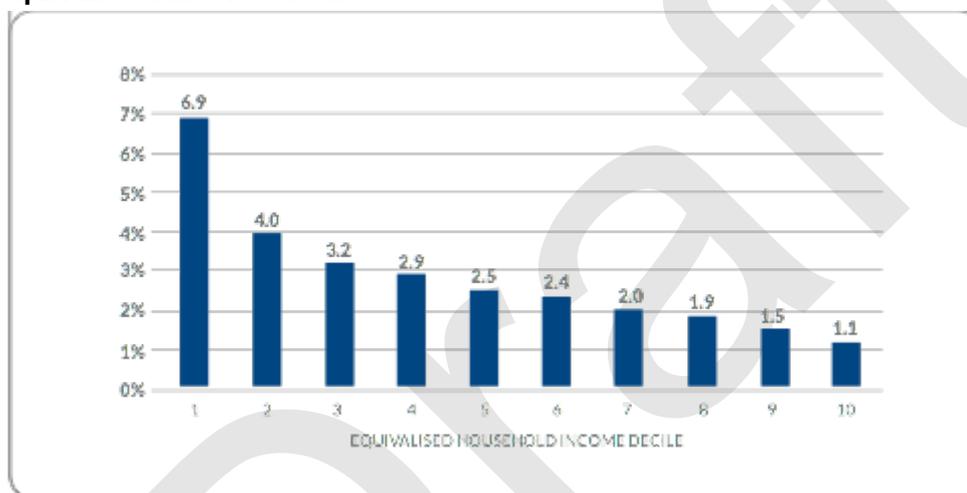
<sup>46</sup> Costing based on M. Jackson and N. Ison analysis

<sup>47</sup> Northern Territory Department of Treasury (2015)

Currently there are about one million people, including over 731,000 children, living below the poverty line in Australia. The number of people who struggle with energy stress is likely to be much higher than the poverty figures.<sup>48</sup>

Disconnections on account of a failure to pay bills are a growing problem. In NSW, disconnections for electricity increased over 50% in the five years from 2010-2011 to 2015-2016. Gas disconnections in 2015-2016 reached a seven-year high in SA and neared their highest level in over a decade in Vic.<sup>49</sup> Given that electricity is an essential service, this is perverse. As the recent Thwaites report put it “residential and small business consumers must purchase energy and are therefore participants in the retail energy market even if they are not interested in the product and regardless of continued price rises.”<sup>50</sup>

**Figure 3: Proportion of annual expenditure on energy (electricity and gas) by equivalised income decile<sup>51</sup>**



Low-income households tend to use less energy in absolute terms than high-income households, but it accounts for a higher proportion of their household income (see Figure 7) – typically 4-7%. Furthermore, a higher proportion of low-income households’ energy consumption is impossible to avoid. This is particularly true of the unemployed, people with disabilities, families with young children, and people who need special medical equipment that runs on electricity. Unsurprisingly the highest burden is in Tas, the state with the lowest incomes and the coldest climate.<sup>52</sup>

According to ACOSS, groups most impacted and likely to seek crisis or emergency assistance for payment of bills include “those subsisting on unemployment or student

<sup>48</sup> ACOSS, Brotherhood of St Laurence & The Climate Institute, 2017, *Empowering disadvantaged households to access affordable, clean energy*, accessible at [http://www.acoss.org.au/wp-content/uploads/2017/07/ACOSS\\_BSL\\_TCI\\_Empowering-households.pdf](http://www.acoss.org.au/wp-content/uploads/2017/07/ACOSS_BSL_TCI_Empowering-households.pdf)

<sup>49</sup> *Ibid* p. 152-153

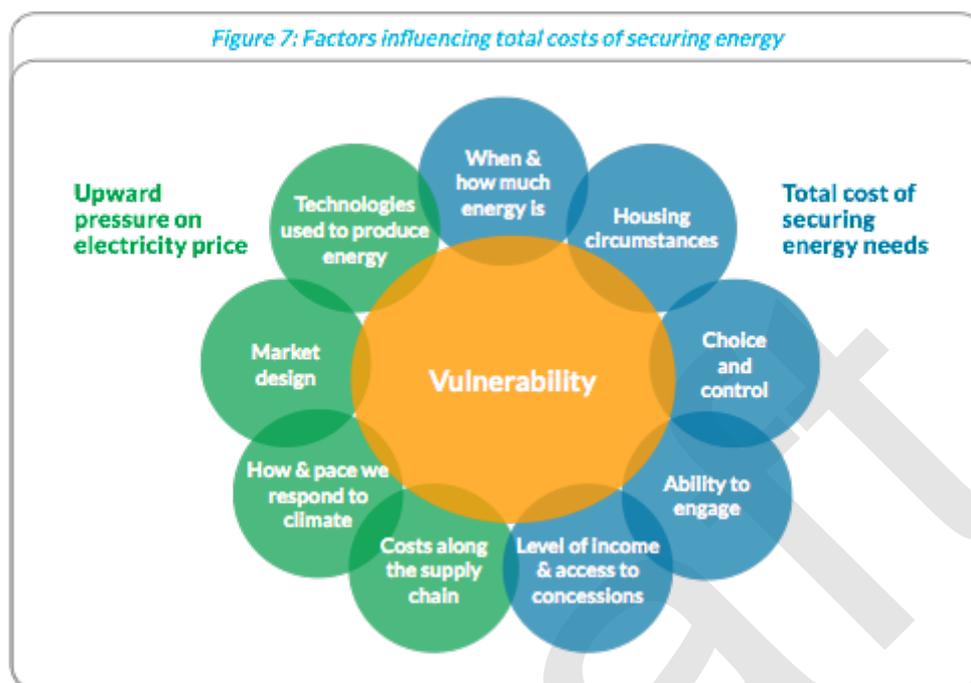
<sup>50</sup> Thwaites, J., Faulkner, P., Mulder, T., 2017, *Independent review into the electricity and gas markets in Victoria*, accessible at [https://engage.vic.gov.au/application/files/7415/0267/4425/Retail\\_Energy\\_Review\\_-\\_Final\\_Report.pdf](https://engage.vic.gov.au/application/files/7415/0267/4425/Retail_Energy_Review_-_Final_Report.pdf)

<sup>51</sup> *Op cit* 119

<sup>52</sup> Australian Energy Regulator (2017), ‘State of the Energy Market May 2017’, p. 147

allowances, pensioners, renters, single-parent families, people living in poverty while in paid work, and Aboriginal and Torres Strait Islander people.”<sup>53</sup>

**Figure 4: Factors influencing total costs of securing energy**<sup>54</sup>



The situation is complex, with many factors combining to increase energy stress (see Figure 4). The households most impacted by rising electricity costs include many groups who are more likely to be home during the day and would thus benefit most from rooftop solar electricity. However, due to the fact that many low-income households rent, have credit rating issues, and/or live in apartments, they are too often locked out of the clean energy revolution. It is unlikely that innovative social finance alone can overcome these barriers.

Whether we like it or not our energy system is changing. We need to ensure that low-income customers can access affordable electricity, no matter what the energy future. But we can also go one better, by ensuring they have a chance to participate (if they choose) in the renewable transition, and that they are in a better position after the transition than they are today.

Governments must intervene where markets fail

### **Markets are failing**

The fact that both wholesale and retail electricity markets are broken is now widely accepted.

53 ACOSS report

54 ACOSS Report

The Thwaites review found three main factors associated with retail market failure: cost of competition; the structure of the market (or, the concentration of market power in a handful of gentailers); and bad practices such as energy retailers deliberately making discounts and offers unintelligible. Most of these issues are complex and won't be solved overnight, and they are in addition to structural market barriers such as split incentives, barriers to entry and more that prevent many low-income households from accessing modern clean energy solutions such as solar PV and energy efficiency.

### **The current approach is inadequate**

The current approach to addressing energy hardship and affordability is through energy concessions at a state and federal level, as well as energy hardship programs offered by retailers as required under the National Energy Customer Framework. Unfortunately, energy concessions are confused, fragmented and inconsistent across different jurisdictions.

There are at least 25 different energy concession programs across Australia. At a federal level this includes the 'Energy Supplement' and the 'Utilities Allowance'. At a state level, amounts paid to low-income households range from \$494 per year for electricity in Tas,<sup>55</sup> to \$218 per year for gas and electricity combined in SA.<sup>56</sup> Households with medical-related energy costs and illnesses that are exacerbated by heat or cold are also eligible for additional support in most jurisdictions. Different groups of people are eligible in different states, with some of the energy concession schemes not targeted to those who most need them or designed for what is needed. For example, consumer advocates have long argued that a lump sum payment is an ineffective approach to concessions. The Victorian approach of paying a proportion of an eligible household's energy bill would go much further to addressing issues of energy hardship and stress.<sup>57</sup>

There are also practical issues with the current concessions approach. For example, concessions are only available after the fact, which means that low-income households cannot ever receive pay-on-time discounts. Further, if a household shops around for the best deal and changes their retailer, it can take upwards of six months to regain their concessions. As such, many current concession programs are effectively preventing customers from getting a good deal and thus really only paying the extra retailer costs. This does not help customers most in need and costs the state government upwards of \$170 million per year<sup>58</sup> – a lose-lose situation that must change.

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<sup>55</sup> [http://www.concessions.tas.gov.au/concessions/electricity\\_and\\_heating](http://www.concessions.tas.gov.au/concessions/electricity_and_heating)

<sup>56</sup> <https://www.sa.gov.au/topics/care-and-support/financial-support/concessions/energy-bill-concessions>

<sup>57</sup> Victorian Department of Health and Human Services, 2017, *Annual Energy Concession*, accessible at <https://services.dhhs.vic.gov.au/annual-electricity-concession>

<sup>58</sup> ABC News, 2017, 'Further power bill relief planned under SA proposal to bulk-buy from energy retailers', accessible at <http://www.abc.net.au/news/2017-07-27/further-power-bill-relief-planned/8747842>

## Tools in the toolbox

An in-depth analysis<sup>59</sup> of the 44 initiatives under the Commonwealth Low-Income Energy Efficiency Program (2013-2016)<sup>60</sup> revealed a need for a unified effort to support the variety of low-income households. Specifically, Australian governments should set a goal of ending energy stress by 2030 – that is, ensuring that no household spends more than the current national average on energy.

Just as we need an innovative approach to stimulating the transition to 100% renewables, we also need an innovative approach to achieving the goal of ending energy stress and supporting low-income energy consumers. There is no silver bullet approach, instead we need a toolkit approach with different policies targeted to different needs. Some of the ideas needed are no brainers and have been proposed for years, others are new.

These policies broadly fall into five areas:<sup>61</sup>

1. Electricity pricing reform – specifically measures such as the fair and equitable tariff setting process and the policies that start to internalise the cost of carbon pollution.
2. Ensuring consumers are informed and enabled – specifically the Regional Energy Hubs as part of the Smart Energy Communities program proposal (also known as Community Power Hubs) and retail market reforms, including a simple standing offer
3. Enacting robust consumer protections (see the Empower Everyone section below)
4. Ensuring all households have the capacity to pay for electricity. This importantly involves overhauling Australia's inadequate energy concession scheme programs to address the issues outlined above. However, updating concessions only goes so far – these programs are designed to meet the immediate needs of energy stressed households, but they do little to increase the chance that households will have the capacity to pay for electricity in the medium-to-long term. That's why we're also proposing Power Access, a public interest retailer for low-income households whose role is to reduce household bills in the short and longer term
5. Unlocking access to clean energy. This is the focus of the policies in this document. To do this effectively requires four things:
  - a. Carrots: funding – below we outline a proposed new funding program to make energy efficiency, solar and storage solutions affordable for those who need it most
  - b. Sticks: minimum energy performance standards – see below
  - c. Making it easy: one-stop shops – see the Smart Energy Communities Program

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<sup>59</sup> Russel-Bennet et al (2017) Power Shift Project One Report. Retrieved from: <https://research.qut.edu.au/servicesocialmarketing/wp-content/uploads/sites/28/2017/06/Project-One-Final-Report.pdf>

<sup>60</sup> LIEEP took place across all states and territories in Australia (except ACT), it comprised 44 initiatives designed by 20 consortia and involved 32,466 people.

<sup>61</sup> Based on ACOSS report & Energy Project report <http://www.acoss.org.au/wp-content/uploads/2017/03/EnergyAccessandAffordabilityPolicyResearchFINAL20March2017.pdf>

d. Promotion/effective targeting (see Box 3).

In addition, according to researchers reviewing the LIEEP program, the situation for many low-income households is so dire and untenable that immediate short-term efforts are urgently needed. Urgently establishing Power Access – a public interest retailer that also provides clean energy services – for Australia’s most energy stressed would provide a service that covers all of these areas of policy reform.

**Box 3: Obama’s Clean Energy Savings for All Initiative**

*“Solar panels are no longer for wealthy folks who live where the sun shines every day, they have to become reality for Americans and communities all across the country”.*<sup>62</sup>

President Obama

During his second term in office, President Obama drove an ambitious program to ensure that every American family can choose to go solar and cut their energy bills. The Clean Energy Savings for All Initiative was underpinned by the catalytic goal to bring one gigawatt (GW) of solar to low- and moderate-income families by 2020. This goal is a 10-fold increase and an expansion of the initial target President Obama set in his Climate Action Plan to install 100 MW of renewable energy on federally-assisted affordable housing by 2020.<sup>63</sup>

The Clean Energy Savings for All Initiative spanned a range of actions from innovative finance mechanism, to technical assistance for states and communities, training workforces and supporting job development in low and moderate income sectors and working with the private and philanthropic sectors. Two great examples are:

- The Community Solar Challenge. Run by the Department of Energy it awarded teams in dozens of communities up to \$100,000 in cash prizes and technical assistance to develop innovative models to increase solar deployment and cut communities’ energy bills, in particular in low-income communities.<sup>64</sup>
- The scaling-up of the Property Assessed Clean Energy (PACE) Financing program. The innovative PACE approach allows American homeowners, including low and moderate income households and veterans, to finance solar and energy efficiency improvements at no upfront cost and to pay back the cost over time through their property tax bill (like Australia’s council rates).

## Solar, storage & energy efficiency incentives scheme

A good financial incentives scheme for low-income solar, storage and energy efficiency options includes a mix of grants, zero-interest loans and an easy repayment mechanism.

<sup>62</sup> <https://www.youtube.com/watch?v=uYhgzg6XTOjY&feature=youtu.be>

<sup>63</sup> <https://obamawhitehouse.archives.gov/the-press-office/2016/07/19/fact-sheet-obama-administration-announces-clean-energy-savings-all>

<sup>64</sup> <https://energy.gov/eere/solarpoweringamerica/national-community-solar-partnership>

## **Grants**

State and federal governments should set up and expand existing grant programs for low-income clean energy solutions. In the short term, this should include rebates and full-capital grants for some of the big ticket items, specifically solar PV, solar and heat-pump hot water services, fridges, and the items listed in the Cash for Gas Guzzlers scheme (see Section X). In the medium term, as a whole Power to the People package is established in a more unified and interconnected way, a more tailored approach should be taken. Energy-stressed households would be offered an energy audit, then up to \$3,000 per household should be provided in grants for the clean energy interventions that would do most to lower each individual households' bills – noting that the measures needed will differ from household to household. Easy interventions like draft proofing should be done at the same time as the audit. The rest should be done as a package, incorporate additional loan finance and be facilitated by a non-profit one-stop shop (see the Smart Energy Communities program).

## **Zero interest loans**

A range of clean energy interventions just make sense, however they are inaccessible to cash-strapped households. State, federal and local governments should provide zero-interest, at least five-year loans to low income households to install solar, purchase energy efficient appliances and other energy efficiency measures. These should be means-tested. The programs could also be run through banks or existing government agencies, where governments then just pay the interest. Federally, this program could be run through a new micro-finance division of the Clean Energy Finance Corporation (CEFC). At a state level, revolving loan-funds should be established – these could partner with the CEFC.

In addition, existing programs that work should be extended. For example, the CEFC has made long-term financing available to St George's Community Housing (SGCH), a leading community housing provider in NSW. The financing is available to incorporate energy-efficient initiatives into a number of new Sydney social and affordable housing projects during construction. In addition, CEFC finance will support a long-term plan to make ongoing sustainability improvements to SGCH's existing housing for the benefit of tenants.<sup>65</sup> This project should be extended and adopted by all social housing providers in states and territories across the country.

## **Rates-based repayment programs**

One of the challenges about providing finance (as opposed to grants) for low-income households is how to make the repayment process easy and low-risk. One of the things about upgrading houses with solar, storage and energy efficiency measures, is most of these upgrades (with the exception of some appliances) stay with the house. The best form of repayment is one that stays with the house, even if the occupant moves. What is an existing payment that all households pay? Council rates.

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<sup>65</sup> CEFC (2016) Financing energy efficient community housing Retrieved from: <https://www.cefc.com.au/media/203027/cefc-market-report-financing-energy-efficient-community-housing.pdf>

Local governments have a special role to support low-income households. As the closest tier of government to the community, they can facilitate and implement respectively tailored programs to disadvantaged community members. This starts to make the model of rates-based finance a clear winner for making clean energy accessible and affordable. Around the world, this is starting to happen in a big way.

One great example is the New Zealand Voluntary Targeted Rates (VRT) program. This was developed to reach low-income households with New Zealand's national insulation program through rates-based finance. This program is tailored towards owner-occupiers, specifically households that are asset-rich and finance-poor (such as the elderly), in order to overcome the barrier of high upfront costs for insulation. The mechanism allows the ratepayer to choose to pay off the energy efficiency upgrade on their rates over a nine or ten year period.

Here in Australia, the Darebin Solar Savers project or (EUAs for residential buildings) is a partnership between Darebin Council and Energy Matters, Moreland Energy Foundation. This partnership implemented Australia's first residential rates-financing program for solar. The Darebin Solar Savers project installed solar on 300 low-income pensioners' roofs in Darebin (a suburb of northern Melbourne). The participating households were better off from day one. They paid zero upfront for the solar and pay back the cost through their council rates over 10 years, with the additional rate payments coming to less than the savings on their electricity bills. This program has now been expanded to 22 councils across Vic.

To unlock rates-repayment programs for clean energy requires three main things:

- Some states require legislative change, to allow a special or opt-in rate to apply to individual residential properties.
- Programs and support mechanisms need to be put in place to make it less onerous for councils to implement rates-financing.
- Changes to legislation to ensure the debt associated with the program doesn't sit on a council's balance sheet.<sup>66</sup>

## Establish PowerAccess, a public-interest retailer for those who need it most

We propose the establishment of PowerAccess – a not-for-profit Energy Service Company (ESCO) and retailer specifically for low-income households. The remit of PowerAccess would be to supply electricity and other energy services such as energy efficiency upgrades, solar PV and more to low-income households across Australia.

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<sup>66</sup> EAGA (2016) Solar PV for low income households Directions paper building the business case for action. Retrieved from: <https://eaga.com.au/wp-content/uploads/Low-income-solar-directions-paper-FINAL-revised.pdf>

The overarching goal of PowerAccess would be to ensure that its customers spend less than the average state percentage of household disposable income on electricity, while supplying as much of that electricity with renewable energy as possible – a win-win approach. PowerAccess would be free to undertake a wide range of innovative measures to achieve these outcomes for its customers. A similar model to PowerAccess exists in Scotland, called ‘Our Power’ – see Box X for more details.

#### **Box X – Case study – Our Power**

In 2015, 35 social housing providers banded together to set up a not-for-profit energy company Our Power, which serves more than 200,000 residents. The initiative is backed by a £2.5 million loan from the Scottish Government and £1 million from Social Investment Scotland.

*“Our Power aims to reduce heat and fuel costs by passing benefits from the energy sector to our communities. We do this by not paying dividends to shareholders, by finding the most efficient ways to operate, by generating our own power and by reinvesting any profits to benefit our customers and their communities.”<sup>67</sup>*

Our Power expects to save its members up to 10% on their household utility bills compared to standard commercial tariffs. Over five years, this would equate to £11 million in savings for households in some of the most disadvantaged communities in Scotland.<sup>68</sup> The potential of this model has since received further validation from the Scottish government, which in 2017 committed to establishing a national publicly-owned, not-for-profit energy company by 2021.<sup>69</sup>

#### **Why PowerAccess is needed**

Establishing PowerAccess would deliver several benefits at once. First and most importantly, low-income customers would likely be better off as they would be serviced by an organisation with the objective of reducing their customers’ electricity bills – quite a different remit to that of profit-oriented retailers. Moreover, as an organisation PowerAccess would have lower costs and overheads than commercial retailers, as it wouldn’t have to worry about customer churn, and its minimal marketing costs are unlikely to be any greater than the costs already incurred by governments when they communicate with the recipients of existing energy assistance benefits. Also a not-for-profit retailer would not have to syphon off profits, any surplus can instead be reinvested back to support more low-income households.

In addition, establishing PowerAccess should have positive flow-on benefits for other retail customers. Because hardship programs and disconnections are significant expenses for commercial retailers, PowerAccess could reduce these cost burdens and enable them to focus on lowering bills for everyone else.

<sup>67</sup> <https://our-power.co.uk/about>

<sup>68</sup> <http://www.bbc.com/news/uk-scotland-scotland-business-33528729>

<sup>69</sup> <http://www.independent.co.uk/news/business/news/scotland-energy-company-publicly-owned-not-for-profit-nicola-sturgeon-announcement-a7994606.html>

Finally, PowerAccess is one of the best ways to ensure the transition to clean energy is done fairly and equitably. By helping low-income households to cut pollution, they are also helped to lower their energy bills and are provided with the certainty they need to face the coming energy transition with confidence.

### **How would PowerAccess work?**

There are a number of questions that need to be answered in thinking through how PowerAccess would work in practice.

The first is **who does PowerAccess service and how do they get signed up?** The primary customers for PowerAccess would be Australians eligible for energy concessions. In conjunction with this initiative, a review should be conducted to ensure that those experiencing hardship and energy stress are adequately covered by the current concessions scheme eligibility criteria.

Customers would then join PowerAccess through a number of pathways. The most obvious would be for customers who are disconnected to be automatically referred to PowerAccess. PowerAccess could also be the standing provider for public housing tenants (though they would have the option to change). Finally, the government would notify concession customers that they have a choice: either retain their existing energy concessions or become a customer of PowerAccess.

Once a household is regularly recording low power bills, in line with the target proportion of household income, PowerAccess staff would work with the household to move them to the market offer most suited to their needs.

### **The second key question is who would run PowerAccess and how much would it cost?**

Exactly how PowerAccess would be established and what it would cost would need to be scoped in more detail. For example, the federal or state-level government could establish a new publicly-owned entity, or it could tender for a non-profit provider. PowerAccess could also potentially be combined with, or developed by, an energy services agency for federal government buildings proposed in the Homegrown Power Plan to increase the purchasing power of both.

The main condition is that the organisation be not-for-profit and have the goal of lowering household power bills without affecting standard of living. That is, lowering power bills by rationing energy, such as avoiding use of heating or air conditioning, would not be considered a success for this provider. Once the desired structure of the organisation is developed, it would become a matter of recruiting staff and setting up the necessary operating procedures. A trial with a small cohort of customers should be considered.

As to costs, PowerAccess could in part be paid for by states pooling funding from their current energy hardship budgets, since customers would leave their existing concession program to become a customer of PowerAccess. Furthermore, the focus

on energy efficiency, solar and other energy services should over time lower power bills and thus the cost of PowerAccess significantly. If the establishment of PowerAccess is also combined with the introduction of minimum energy performance standards for rental (and other) properties, the cost savings would be even larger.

The final key question is **what would the day-to-day operations of PowerAccess include?** At its core, PowerAccess would undertake the basics of any retailer, such as purchasing electricity, managing risk, issuing bills, and setting prices and tariffs (ideally including block tariffs). There would also be a hotline to dispense detailed advice. There would be an energy service arm, which would first identify the customers most in need of energy efficiency and other services. It would also work with the Regional Energy Hubs established under the Smart Energy Communities Program and social welfare organisations to deliver practical energy efficiency, solar and a wide range of innovative measures to achieve its remit and better outcomes for its customers.

### 3.4 Empowering renters

More than 30% of Australian households rent,<sup>70</sup> and with some of the weakest tenants rights laws in the world, that means more than 6.5 million people<sup>71</sup> live in relative uncertainty about the very roof over their heads.

While fixing Australia's housing crisis is a little beyond the scope of the Homegrown Power Plan, there is no doubt that fixing the appalling energy performance of our rental properties and increasing access to clean energy solutions such as energy efficient appliances, solar and storage for renters, would be a step in the right direction.

#### Public *and* private

There are two main categories of renters in Australia: those who live in public or social housing and those who rent from private landlords. While neither category of renters has been much of a focus of the energy transition to date, the programs that have existed have primarily been targeted at public and social housing. The reason being these landlords – be they state government agencies, not-for-profits or private companies – manage hundreds if not thousands of properties. Getting a few large landlords to up their game has been seen as easier than getting hundreds of thousands of private landlords to get serious about clean energy.

Examples of programs for public and social housing providers have included:

- **Affordable Retrofits program:** The Vic government provides assistance to low-income households and concession card holders to keep energy bills in check. The program is implemented through community organisations which

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<sup>70</sup> ABS

<sup>71</sup> Assumes 2.6 people per household, as per ABS

offer subsidised energy efficiency and renewable energy upgrades to a limited number of households. It includes free in-home energy assessment, free guidance to choose the best energy plan to suit their needs, generous government subsidy towards the cost of a home retrofit.<sup>72</sup>

- **Solar for rental properties:** This initiative is part of Queensland's Affordable Energy Plan which features \$300 million starting in January 2018. The government conducts a \$4 million trial to assist landlords and tenants to share the value of installing solar systems. The trial is offered to 1,000 houses in order to incentivise landlords to install solar for their rental tenants who will be able to benefit from the power the solar system generates.<sup>73</sup>
- **CEFC finance for social housing providers:** As noted above, CEFC and the largest NSW social housing provider – St George Community Housing (SGCH) – have reached agreement about a 10-year loan of up to \$60 million to develop high-performing, energy-efficient homes.<sup>74</sup> This should be expanded to a national program including all social housing providers in the country.

These programs should be continued and expanded to all public and social housing tenants and properties across Australia. The low-income programs will also likely help many renters. The big gaps that now remain and that need to be addressed urgently are mandatory efficiency standards for rental properties and increasing access to clean energy solutions for private renters.

## Mandatory efficiency standards for rental properties

***Landlords must be required to provide basic levels of energy efficiency for rental properties, which will immediately reduce energy burdens for low- and middle-income Australians.***

You don't need to be an energy wonk to know that renters in Australia often get a bad deal from their landlords. But if you care at all about climate or social justice, you should be particularly outraged that renters often bear an additional burden of high energy bills from inefficient homes they have no ability to improve.

About half of low-income households live in rental properties, and low-income households are twice as likely to be renting as those in the highest income quintile.<sup>75</sup> For Aboriginal Australians, a study in Vic found that 86% of households are renting, and 67% rent homes built more than 20 years ago.<sup>76</sup> Unfortunately, effective

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<sup>72</sup> Victoria State Government (2017) Affordable Retrofits Program. Available: <https://www.energy.vic.gov.au/affordable-retrofits-program> (accessed: 27/11/2017).

<sup>73</sup> Queensland State Government (2017) Solar for rental properties. Available: <https://www.dews.qld.gov.au/electricity/solar/solar-future/rental-properties> (accessed: 27/11/2017).

<sup>74</sup> CEFC (2015) New finance gives NSW community housing a clean energy boost. Available: [https://www.cefc.com.au/media/107497/cefc-factsheet\\_sgcommunityhousing\\_lr.pdf](https://www.cefc.com.au/media/107497/cefc-factsheet_sgcommunityhousing_lr.pdf)

<sup>75</sup> Australian Council of Social Service, The Brotherhood of St. Laurence, and The Climate Institute (2017), "Empowering disadvantaged households to access affordable, clean energy", July 2017, p. 47

<sup>76</sup> Bedggood, R. et al (2017), 'The Living Conditions of Aboriginal People in Victoria,'

efficiency standards are only in place in Australia for *new* buildings, leaving a huge gap in the rules for older rental properties.

As a consequence, rental homes often lack basic efficiency measures that are nearly universal for owner-occupied properties. For example, in Vic only 58% of private and 55% of public rental housing has any insulation, compared to 95% of owner-occupied homes.<sup>77</sup> The survey of Aboriginal households found that only 19% have wall insulation.<sup>78</sup> By allowing landlords to profit from renting houses built like a leaky tent, this policy absence effectively encourages them to dump rising energy costs on families that can least afford it.

Renters want increased efficiency, but often can't get their landlords to pay for it – or even get permission to pay for improvements themselves in many cases. According to a recent survey conducted by QCROSS, 70% of QLD renters asking their lessor for permission to make energy-related improvements to their homes were unsuccessful.<sup>79</sup> For instance, one tenant responded that “I attempted to have insulation installed under the government’s free scheme. The owner told us to get quotes, then said he would have the job done by someone who was doing all his properties. It never happened.” In Vic, 82% of renters making efficiency improvements had to do so without permission from their landlords.<sup>80</sup>

This would be bad enough if it were “just” a financial burden for low-income households, but it also represents a serious and ongoing public health threat. While a leaky tent can be fine enough for a weekend of camping – if the weather’s nice – living in one through the heat of summer and the cold of winter can kill, particularly for the old and the very young. For example, heat waves in February 2009 resulted in an estimated 46% increase in ambulance call-outs in Melbourne and 374 deaths.<sup>81</sup> On the opposite end of the temperature spectrum, it is an absurd national tragedy that more people die of exposure to the cold in Australia than in Sweden.<sup>82</sup>

New standards are required to ensure that families can rent homes knowing that they'll have minimum levels of energy performance, in the same way that properties must meet certain standards for health and safety. Government action is merited for several reasons:

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<sup>77</sup> Crawford, R. and Wrigley, K. (2016), ‘Renters are being left out in the cold on energy savings: here’s a solution’, *The Conversation*, October 10 2016

<sup>78</sup> Bedggood, R. et al (2017), ‘The Living Conditions of Aboriginal People in Victoria,’

<sup>79</sup> Queensland Council of Social Service (2017), ‘Choice and Control? The experiences of renters in the energy market’, June 2017, p. 12

<sup>80</sup> Crawford, R. and Wrigley, K. (2015), ‘Bridging the gap: energy efficiency improvements for rental

Properties’, *The Architectural Science Association and The University of Melbourne*, p. 5

<sup>81</sup> Department of Human Services (2009), ‘January 2009 Heatwave in Victoria: an Assessment of Health Impacts’, Victorian Government Department of Human Services Melbourne, p. 12

<sup>82</sup> Gasparrini, A. et al. (2015), ‘Mortality risk attributable to high and low ambient temperature: a multi-country observational study’, *Lancet*, vol. 386, p. 369

- Efficiency improvements are extremely cost-effective; Environment Victoria (EV) estimates that rental efficiency standards would save the average renter \$850/year and create up to 5,400 jobs to boot.<sup>83</sup> However, renters usually miss out because the benefits of efficiency accrue to renters, while the costs are borne by landlords, so nothing ends up getting done and those savings (and jobs) get left on the table.

Table 2

**TABLE 1. ESTIMATED AVERAGE COSTS OF EFFICIENCY MEASURES AND HOUSEHOLD SAVINGS.**

Efficiency measure	Retrofit opportunity (%) <sup>a</sup>	Estimated maximum cost per house (\$) <sup>b</sup>	Investment across rental housing stock (\$m) <sup>c</sup>	Estimated annual savings per household (\$/yr)
Ceiling insulation <sup>a</sup>	75 <sup>a</sup>	1125 <sup>c</sup>	506.3	133.5
Draught-sealing	50	1037	311.1	157
Hot water <sup>d</sup>	30	818	147.2	100
Low-flow shower rose	60	86 <sup>e</sup>	31.0	102
Efficient lighting	93 <sup>f</sup>	574	320.3	100
Heating upgrade <sup>g</sup>	80 <sup>h</sup>	1388	666.2	157
Dual-flush toilets	20	450	54.0	100 <sup>i</sup>
<b>Total</b>		<b>\$5478</b>	<b>\$2036 million</b>	<b>\$849.5/year</b>

a. Average of cost of insulation deemed 'easy' or 'difficult' to install.  
b. Estimate based on 36-50% of rental homes being uninsulated with a further 20-25% requiring a top-up  
c. Planned re-inclusion of ceiling insulation under the Victorian Energy Upgrade Program would lower costs for landlords.  
d. End-of-life replacement. Gas price increases since this research was done could mean lower-emission heat pump systems now a better option (see Alternative Technology Association 2014, Are we still cooking with gas?)  
e. Free to property owners under the Victorian Energy Upgrade Program  
f. It is likely that some of this upgrade potential has been taken up in owner-occupied homes since research was done.<sup>84</sup> However, participation in VEUP has been lower for rental homes, so original upgrade opportunity has been retained.  
g. End-of-life replacement. Gas price increases since this research was done could mean lower-emission reverse cycle systems now a better option (see ATA 2014)  
h. End-of-life replacement. Sustainability Victoria 2016, Energy Efficiency Upgrade Potential of Existing Victorian Homes  
i. From Yarra Valley Water at www.yvw.com.au/help-advice/saving-water/home, 35,000 litres saved per year at \$2.87/kl (average of two lowest block tariffs)

Source: "Bringing Rental Homes Up to Scratch," p. 13

- If landlords don't pay the cost of efficiency upgrades, we all end up paying the bill through increased healthcare costs and concession payments. In New Zealand, a home insulation program produced \$1.2 billion in benefits, largely from reduced hospitalisation costs and mortality rates. EV estimates that improving efficiency for low-income households could deliver \$2.5 billion in savings from energy concessions in Vic alone.<sup>84</sup>
- Improving housing efficiency will reduce peak demand on the power system during summer heatwaves, as well as gas consumption during the winter. That means less stress on the electricity system and lower prices for everybody.

Unsurprisingly, action on rental efficiency standards has practically universal support from renters; over 90% of Vic tenants were in favor of mandatory standards

<sup>83</sup> Environment Victoria (2017), 'Bringing rental homes up to scratch: Efficiency standards to cut energy bills, reduce pollution and create jobs', p. 18 and 20

<sup>84</sup> Environment Victoria (2017), 'Bringing rental homes up to scratch: Efficiency standards to cut energy bills, reduce pollution and create jobs', p. 21

according to a recent University of Melbourne poll.<sup>85</sup> It also enjoys across-the-board support from both the environment and social sector. ACOSS<sup>86</sup> and EV<sup>87</sup> have both specifically recommended rental efficiency standards in recent reports. Similarly, the One Million Homes Alliance – which includes the Brotherhood of St. Laurence, VCOSS, the Tenants Union of Victoria, and more – supports an agenda for efficiency retrofits for one million Victorian concession card homes, including through standards.<sup>88</sup>

Encouragingly, even many landlords support policy changes to improve efficiency. The same University of Melbourne poll noted above also found that 70% of landlords in Vic supported minimum efficiency standards for rental properties.<sup>89</sup> While some less-conscientious landlords might protest taking on responsibility for increasing the efficiency of their properties, it is absolutely fair and just that they do so. As shown in Table 2 above, EV estimates a maximum cost of \$5,500 per home to meet basic rental efficiency standards, which could be reduced with incentives or concessional financing, and in any case would typically be spread over several years.

Consider that landlords in Vic make a median profit of \$20,000 annually in rental income of each property, and over half of them are in the top quintile of wealth.<sup>90</sup> Is it most fair for costs to be borne by a) low-income renters, b) all Australian taxpayers and ratepayers, or c) the landlords that profit from renting leaky tents disguised as homes? It's not a trick question.

### ***How rental efficiency standards should work***

Efficiency standards for rental properties can be implemented at the state level, making them an appealing option for state governments that want to protect their constituents from rising energy costs and show leadership on climate and energy issues. However, while these standards are a very “common sense” policy, they must be implemented carefully to ensure there are no unintended consequences. There are four core components of effective rental efficiency standards, drawn largely from EV's “Bringing Rental Standards Up To Scratch” report:<sup>91</sup>

- **Features-based standards:** To keep compliance straightforward, standards should be implemented as a list of required features that specifies exactly what steps (insulation, draught-sealing, etc) are required at each stage. This

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<sup>85</sup> Crawford, R. and Wrigley, K. (2016), ‘Renters are being left out in the cold on energy savings: here’s a solution’, The Conversation, October 10 2016

<sup>86</sup> Australian Council of Social Service, The Brotherhood of St. Laurence, and The Climate Institute (2017), ‘Empowering disadvantaged households to access affordable, clean energy’, July 2017

<sup>87</sup> Environment Victoria (2017), ‘Bringing rental homes up to scratch: Efficiency standards to cut energy bills, reduce pollution and create jobs’

<sup>88</sup> Environment Victoria (2017), ‘One Million Homes Alliance’

<sup>89</sup> Crawford, R. and Wrigley, K. (2016), ‘Renters are being left out in the cold on energy savings: here’s a solution’, The Conversation, October 10 2016

<sup>90</sup> Environment Victoria (2017), ‘Bringing rental homes up to scratch: Efficiency standards to cut energy bills, reduce pollution and create jobs’, p. 27

<sup>91</sup> Ibid

is in contrast to potential alternative approaches based on total household energy use or average energy bills.

- **Increasing stringency:** Standards should be set at an initially low level, with a focus on forcing the worst-performing buildings to meet basic efficiency levels. More responsible landlords won't have to do as much – a fair reward for their efficiency-consciousness in the past. Once this baseline has been achieved, standards should be gradually tightened over several years to ensure continued progress across the board.
- **Phase-In period:** In order to allow landlords to make improvements most cost-effectively, they should be allowed to achieve compliance over a period of five years. This could be implemented through a rolling compliance requirement for standards to be met at the start of new lease, backed up with an absolute date for compliance in case of multi-year leases or other situations.
- **Protections for renters:** Finally, it is crucial that these standards aren't used by shady landlords as an excuse for unjustified rent increases or worse. That means additional protections for renters must be included as part of the efficiency standards package, including limits on rent increases, rights for tenants to challenge non-compliance, and requirements for landlords to set aside a bond for repairs and maintenance.

The governments of NSW and Vic are both considering minimum standards for residential properties;<sup>92</sup> these initiatives should be turned into action, and would be an opportunity to provide a strong example for other states.

## Accessing solar

### ***Ensure every renter can access solar***

Hopefully by now we've done a good job at explaining why solar is good for households. Currently, private renters are the cohort least likely to be able to access the benefits of solar, particularly if these renters are low-income and live in an apartment. To date, in Australia no policies that we know of have been set to really try and address this issue. Thankfully, some smart minds have come up with some clever ways to solve this problem.

We reckon there are four approaches to helping private tenants to access the benefits of solar (and in two cases energy efficiency):

1. Create solar gardens.
2. Enable landlords and tenants to split the benefit.
3. Incentivise landlords to do the right thing.
4. Unlock rates based financing for renters.

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<sup>92</sup> Australian Council of Social Service, The Brotherhood of St. Laurence, and The Climate Institute (2017), 'Empowering disadvantaged households to access affordable, clean energy', July 2017, p. 50

Given that there are pros and cons to all approaches, we think policy makers should put in place programs that support at least two – as what suits one landlord or tenant will be different to others. This feeds into the idea that in energy there is no silver bullet – we need an ecosystem of solutions.

### **Option 1: Solar gardens**

#### *How does it work?*

Solar gardens work by installing a central solar array, generally near a population centre. Consumers can purchase a share of the array, with the electricity generated credited on their bill, this way private renters can sidestep their landlords and still access the benefits of solar without having to install it on their roof. As the fastest growing segment in the US solar industry, Solar Gardens contributed 200 MW of new photovoltaic capacity in 2016, a four-fold increase over the previous year.

#### *Policy support to drive solar gardens*

While there are no known legal impediments to solar gardens they aren't currently operating in Australia – mainly because they are more complex than just installing solar on a rooftop. We urgently need a series of funded trials to ensure that solar gardens are legally feasible, economically viable and desirable to renters. Participants in solar gardens should be eligible to receive a fair price, using the Victorian Essential Services Commission's methodology for a fair FiT or better. Regulatory changes may be needed to require networks to offer lower network charges to solar gardens where the electricity is used and consumed (in real time) within the same local distribution area, or at least to ensure that network tariffs support local use of the network. Finally, federal or state governments could consider providing a means-tested rebate available to low-income renters to close the gap, so they can afford to participate in a solar garden.

### **Option 2: Landlords & tenants split the benefit**

#### *How does it work?*

A property owner (landlord) installs a solar system and a special smart meter. A third-party organisation monitors the household energy use and solar output, then splits the financial benefit of the solar array between the tenant (lower electricity bills) and the landlord (for example a monthly payment). This requires both a property with a suitable roof to install solar and a landlord willing to enter into such an arrangement.

#### *Policy support to drive this mechanism*

There are currently a couple of enterprises offering this model, including Sun Tenants,<sup>93</sup> however neither have currently reached scale. To drive this model further, trials and programs and policies that support startups to scale are needed, including through tax incentives or low-interest finance. It is important to note that a more enterprise-based approach will work for more affluent renters, however, a close eye is needed to ensure that enterprises are not leaving tenants worse off than they were before.

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<sup>93</sup> [www.suntenants.com](http://www.suntenants.com)

### **Option 3: Incentivise landlords to install solar and do energy efficiency**

#### *How does it work?*

Provide a financial incentive to landlords to install solar and undertake energy efficiency upgrades. This would be available to tenants who have landlords interested in taking up the incentive and have a suitable roof to install solar, although energy efficiency upgrades can also be undertaken.

#### *Policy support to drive this mechanism*

There are a number of possible mechanisms to incentivise landlords to install solar:

- Federal government could make the upgrades/solar installation tax deductible or eligible for accelerated depreciation. This could be as simple as changing what is considered eligible repairs and reasonable upgrades to rental properties. This is a federal mechanism, so state government would have an advocacy role in this mechanism.
- State governments could reduced stamp duty for rental properties with solar.
- Councils could offer reduced council rates for properties with solar, including rental properties.
- Governments could develop a revolving loan fund for public and private clean energy upgrades, allowing landlords to access low or zero interest loans to be able to fund energy efficient upgrades and/or solar.

Note this suit of policies would nicely complement the mandatory energy performance standards policy – acting as the carrot to its stick. In addition, a local trusted delivery agency such as a Regional Energy Hub (see the Smart Energy Communities program below) would make policies such as these easier to implement and easier for landlords to take up.

### **Option 4: Unlock rates-based financing for private rental properties**

#### *How does it work?*

Rates financing is where finance for rooftop solar or energy efficiency is facilitated through the local government. Solar or energy efficiency measures are installed at zero upfront cost to either the tenant or the landlord. The cost of the clean energy upgrade is then repaid through a special opt-in charge or rate levied on the property and paid by the occupant through normal rate repayments. In a tenant-landlord situation, the landlord could pass the special rate through to the tenant. It's essential that tenant protections be put in place (see suggestions below) and that engagement is done to ensure the savings from solar (and energy efficiency) are greater than the rate repayment, so tenants are better off from day one.

This program would work for any tenant who has a landlord willing to sign up to the program and has a suitable roof to install solar (although energy efficiency upgrades can also be undertaken regardless).

#### *Policy support to drive this mechanism*

Currently twenty two councils in Vic have adopted this program, after the initial pilot by Darebin Council, in partnership with Moreland Energy Foundation (see Box 4). However, the Victorian program only covers low-income homeowners (pensioners).

So far the program has not been extended to renters.

There are a number of policies that would widen the solar rates-financing program to renters and extend it beyond Vic :

- State governments could amend state tenancy acts to allow landlords to pass through the opt-in rate to cover the solar and energy efficiency upgrade to tenants. Note: this must go hand in hand with additional protections for tenants. Tenants who are in the property when the upgrade occurs must be able to have veto power. Furthermore, any new tenants must be informed of the additional charge they incur as part of renting the property at the time of lease.
- In some states, such as NSW, the Local Government Act will also need to be amended to allow councils to levy a special rate on a specific property, as is possible in Vic.
- State or federal governments should provide grant funding to get the program off the ground in other locations.
- State governments could deliver agencies that have a duty of care to the tenants, to ensure they are better off from day one. This could be the Regional Energy Hubs part of the Smart Energy Communities program, in partnership with solar and energy efficiency companies.

## 5 Empowering everyone!

Most savvy politicians now know that supporting people to drive clean energy is pretty popular policy. Given that we urgently need to move from polluting energy to clean, renewable energy, not supporting everyone to access clean energy is like looking a gift horse in the mouth.

In the previous sections we've outlined the types of policies we need to support a range of segments of the Australian population to adopt clean energy solutions. We have particularly focused on those cohorts that need the most support from an energy justice perspective. However, they are far from the only sectors of society that we should help. There's also:

- people who live in apartments, who are also locked out
- farmers and food-manufacturers who are currently doing it tough and have abundant land and renewable resources they could harvest
- small businesses, particularly those who rent
- edge of grid communities who suffer from some of the least reliable power
- and then there's the passionate early adopters who take a risk and test different technologies and models making it easier and cheaper for the rest of us.

The good news is that clean energy, if it can be accessed, can provide benefits to everyone. A mixture of policies outlined in this section and the rest of the Homegrown Power Plan can be targeted to support all these groups of people and organisations. The even better news is that there are a few policies that will work to empower everyone – no matter where they live, no matter how much they earn.

We're not saying that these policies are good enough on their own – the targeted policies for low-income households and Aboriginal communities are still very much needed. Rather, these policies will ensure that the targeted ones are more effective, while also supporting everyone else.

### **What are these win-win policies?**

Firstly, there's support for everyone to access storage through household storage systems or shared community schemes. Given that storage is where solar was at 10 years ago, we need to support this industry to mature and bring down the costs for everyone.

Secondly, we need to support people and communities to lead on energy, providing the advice, expertise and dedicated funding that enables and unlocks many of the social access models of clean energy, as well as the more ambitious plans many communities have to go to 100% renewables themselves.

Thirdly, we need to ensure our consumer protection processes keep pace with the changes in how we consume energy – ensuring that new technologies, products and services are deployed in ways that benefit rather than bamboozle or rort us as energy consumers.

Then there are the policies that are in other sections of the Homegrown Power Plan. For example, the policies that are part of the Energy Productivity Roadmap should help all Australians better access energy efficiency. While the Cash for Gas Guzzlers program outlined in the Get Off Gas section should help us all go gas free. Then there's the fair-price for solar and other energy market reform processes in the Rewrite the Rules section that are about making the energy system fairer and set up for a clean energy future – those are reforms we will all directly benefit from.

### **Households storage incentive**

Battery storage is the new wave of household clean energy. While not a silver bullet by itself, household battery storage will play an important role in driving a secure and affordable transition to 100% renewable electricity. Batteries are set to follow a similar cost-curve to solar PV and are already coming down in price significantly. A short-term policy package that stimulates a skilled and stable battery storage industry is in both consumer and the public interest.

In the short term this should include financial incentives for households to deploy battery storage. At a federal level this could be through a 50% tax rebate. For existing solar households still receiving a premium feed-in tariff, they could also cash-in the remainder of their FiT to provide a rebate for a battery system as proposed by Solar Citizens. In addition, batteries should be included in the low-income clean energy program, ensuring that these households can access grants for battery storage.

It is important that this industry development program be designed to phase-out in no more than five years from the beginning, and not be cut short as solar bonus schemes were. For example the tax rebate available could decline each year, starting at 50% in year one and reduce by 10% each year, so in year four, the rebate would only be 10% of the cost of a battery system. However, given how fast battery costs are declining, this should still help. At a state level, the amount of interest on a loan could rise by 0.5% each year from 0% in year one, to 2.5% in year five.

In addition to financial incentives, it is essential that other industry development mechanisms are put in place. This should include, but not be limited to the development of

- safety and installation standards that are reasonable, but not overly onerous
- standards that encourage batteries to provide grid support services
- end-of-life stewardship and recycling programs.

## Smart Energy Communities Program

*Bringing together families, communities, small business and landholders to deliver practical smart energy projects.*

### Australians love local renewables

Australia is a genuine world leader in rooftop renewables. At a local level the uptake of household PV is one of the highest in the world. However, energy efficiency, mid-scale and community-led renewables are areas where Australia is lagging behind many other places. For example, in Scotland there are over 500 community energy projects delivering affordable electricity, energy independence, and start-up funding for new regional enterprises. In the US, community solar is one of the fastest-growing markets for solar PV. This presents untapped potential.

Energy efficiency, renewable energy and the smart grid are the new frontier, not only for energy provision but for communities and organisations concerned with local economic development, climate change action and community empowerment.

Sounds great, but what actually is community energy?

The Coalition for Community Energy defines community energy as:

*“The wide range of ways that communities can develop, deliver and benefit from sustainable energy.”<sup>94</sup>*

### Figure 5<sup>95</sup>

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<sup>94</sup> Coalition for Community Energy, 2015, *National Community Energy Strategy*, accessible at [www.c4ce.net.au/nces](http://www.c4ce.net.au/nces)

<sup>95</sup> Community Power Agency. 2017. <http://cpagency.org.au/resources/map/>

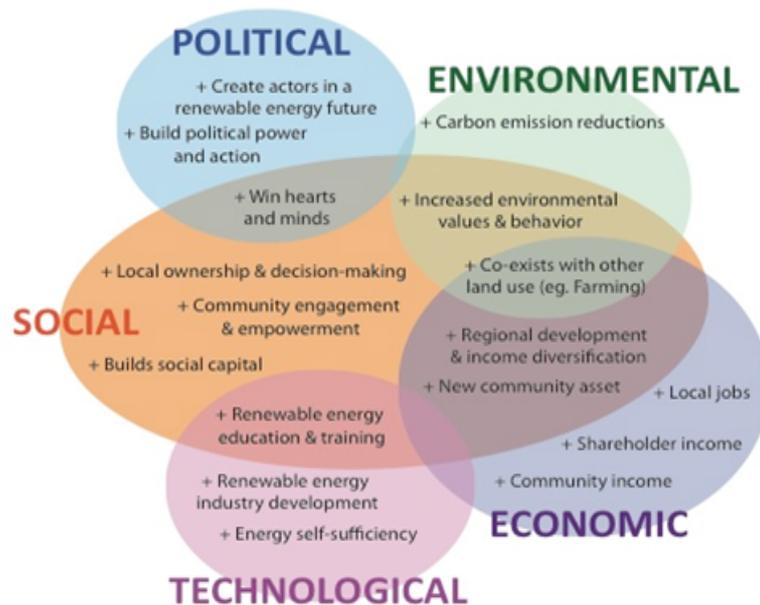


In practice, community energy projects include

- communities fundraising to put solar on a community building, for example Adelaide-based [CORENA](#)
- people investing their hard-earned cash in a solar array on the local brewery or dairy, as was the case with [Pingala](#) in inner-Sydney and [Repower Shoalhaven](#) on the south coast of NSW
- a community-owned solar or wind farm at the edge of town, such as [Hepburn Wind](#) in Vic and soon [Solar Share](#) in the ACT
- communities developing 100% renewable or Zero-Net Energy Town plans, such as [Uralla](#) in NSW, which is starting with energy efficiency for local businesses and households (see Box Y)
- the first commercial micro-grid, which is a partnership between community energy group [Totally Renewable Yackandandah](#) and the local utility Ausnet Service
- community solar and battery bulk-buys, as is currently happening in New England by [Farming the Sun](#) and by [Victor Harbor Council](#), which led to 40% of residences having solar
- community pumped-hydro projects, as is being planned by communities in [Mullumbimby](#) in NSW and in the [Strathbogie Ranges](#) in Vic and
- the original community energy enterprise – Moreland Energy Foundation (see Box X).

With over 90 community energy groups (see Figure X) and more than 70 operating projects, the list could go on. There are so many ingenious energy ideas that communities are pursuing, and they bring with them a range of environmental, social, monetary, technical and political benefits (see Figure X).

Figure 6<sup>96</sup>



**Box 4: A Regional Energy Hub in Practice – Moreland Energy Foundation**

There are many community energy enterprises implementing innovative community energy projects and programs, but Moreland Energy Foundation is the longest running and a model many communities are trying to emulate.

Moreland Energy Foundation (MEFL) was founded as an independent NFP in 2000 by Moreland Council with revenue from the forced privatisation of the council-owned Brunswick Electricity Supply Department. The Brunswick Electricity Supply Department pioneered a range of world-leading energy efficiency and clean energy programs in the 1980s and MEFL continues that legacy to this day. MEFL is Australia’s leading organisation in the implementation of clean energy programs that deliver real value to councils, communities, businesses and households, particularly low-income households.

For example, in partnership with Darebin Council and Energy Matters, MEFL implemented Australia’s first residential rates-financing program for solar. The Darebin Solar \$avers project installed solar on 300 low-income pensioners’ roofs in Darebin (a suburb of north Melbourne). The participating households are better-off from day one. They paid zero upfront for the solar and pay back the cost through their council rates over 10 years, with

<sup>96</sup> Hicks & Ison (2012) Community Energy Generation. In: Shepherd et al. The Home Energy Handbook. Powys, Centre for Alternative Energy.

the additional rate payments coming to less than the savings on their electricity bills.

### Why do we need community energy policy?

While community energy groups have enthusiasm, time, commitment and great ideas, they can lack the legal, technical, and financial support needed to deliver these projects. This means communities are missing out on local jobs and opportunities to reduce power bills while cutting greenhouse gas emissions. As we've already stated, some people are missing out on clean energy all together.

Perhaps the biggest barrier community renewables projects face is finding the financing to transform an idea for a project into a tangible plan, which involves going through the pre-feasibility, feasibility and planning approval stages. These stages are the most risky for any renewable energy venture, however unlike private enterprise or even government bodies, community actors do not typically have large reserves of capital to draw on. A relatively small amount of money in the form of a government grant to address this financing gap has been shown to make a significant difference to the development of a community renewable energy project.

Smart policy interventions like this can enable the community energy movement to unlock vital organisational resources including time, money, and land/roof space of thousands (if not millions) of new actors to deploy renewables.

Community energy also has the ability to assist lower income people who are struggling to pay their ever rising bills. By actively being a part of the market, community energy organisations also help to bring down energy costs by challenging inefficient costs charged by incumbent businesses. Community energy can also increase the social licences for larger scale renewables projects; increasingly communities are looking to partner with renewable developers, water utilities, councils and more to deploy renewables at scale, for the benefit of their local communities.

All sides of politics are embracing support for community energy. In NSW, the Coalition Government has funded 27 community energy feasibility studies through its Growing Community Energy Program, and we expect an announcement of a new community energy program as part of the next five years of the NSW Climate Fund. In Vic, the government has funded over 30 community energy feasibility studies and has just launched three pilot Community Energy Hubs, based on the Smart Energy Communities concept.

### Introducing the Smart Energy Communities Program

The Smart Energy Communities Program would draw from the best examples of local clean energy organisations springing up across the world. It would include 50 Regional Energy Hubs, supporting hundreds if not thousands of volunteer groups, supported by a People's Power Fund and Network.

**Box 5: Landcare in a nutshell**

*“Landcare is a grassroots movement that harnesses individuals and groups to protect, restore and sustainably manage Australia’s natural environment and its productivity.”<sup>97</sup>*

Landcare is the brainchild of Rick Farley of the National Farmers Federation and Phillip Toyne of the Australian Conservation Foundation. It was formally established in 1989 when the Australian government with bipartisan support committed \$320 million to fund the National Landcare Program for a decade. Landcare continues to this day with over 6000 Landcare and Coastcare groups across Australia.

The current iteration of the National Landcare Programme provides three funding streams:

- Regional funding stream: this is investing “over \$450million throughout Australia’s 56 natural resource management organisations over four years. This funding recognises the crucial role the 56 regional NRM organisations play in delivering NRM at a local and regional level.”<sup>98</sup>
- National funding: this funding is delivered directly by the Australian government to support local implementation of priority programs such as Clean Up Australia, whale and dolphin protection and 20 million trees.
- Network and capacity building funding: funding is provided for strategic support that increases the capacity of Landcare Networks, including through information sharing programs and initiatives such as the Landcare Conference and the National Landcare Facilitator.

Structured similarly to the National Landcare Program (see Box 5), the Smart Energy Communities Program is a 10-year program that works as follows:

<b>Organisations</b>	Establish 50 Regional Energy Hubs – not-for profit organisations in 50 regions (urban, regional and remote locations) across Australia. <sup>99</sup> Start-up funding for two years and ongoing matched operational funding. These Regional Energy Hubs would support many local volunteer community energy groups in their regions. They will also assist with advice about ways that lower and modest income households can reduce their energy costs.
<b>Programs and Funding</b>	A Smart Energy Communities Fund would provide funding for community clean energy organisations (both those with and without start-up funding) to: <ul style="list-style-type: none"><li>• develop local renewable energy plans</li></ul>

<sup>97</sup> Landcare (2016) ‘What is landcare?’

<sup>98</sup> Australian Government (2016) ‘National Landcare Programme. Regional Stream,’ Department of the Environment and Department of Agriculture.

<sup>99</sup> There should be flexibility on the exact governance arrangement, clean energy programs delivered, and actors involved. Existing relationships and institutional structures should be leveraged from Regional NRM organisations, councils, regional development authorities, community organisations, etc. However, existing groups on the ground shouldn’t be a requirement, as the purpose of this program is to seed new organisations that will hopefully exist beyond the length of the program.

	<ul style="list-style-type: none"> <li>• develop, pilot and scale-up new models of community clean energy that enable community members, renters, low-income Australians, Aboriginal communities, farmers, small businesses and more to participate in and benefit from clean energy.</li> </ul>
<b>Capacity Building Network</b>	A Smart Energy Communities Network would ensure that models, business plans and implementation strategies developed are shared across the six hubs established, as well as more broadly to regions and communities that were not successful in receiving start-up funding. The network would also be tasked with developing case studies, running trainings, and holding a bi-annual conference.

**The Smart Energy Communities Program would leverage the efforts of existing volunteers, willing contributions from the private sector and community enthusiasm for renewables to support access for all Australians to innovative and emerging energy technologies such as solar and battery storage.**

Just imagine if there were clean energy organisations across Australia at the scale of Landcare with the energy skills of MEFL.

#### Unlocking more than community energy

The Smart Energy Communities Program would, through the Regional Energy Hubs, provide legal and technical expertise and start-up funding to help kick-start DIY clean energy projects in towns and suburbs across Australia. Projects eligible for funding in communities across Australia could include

- ‘solar gardens’ for renters
- farmer bioenergy hubs
- low-income energy efficiency (including retrofits of existing social housing stock)
- solar programs using innovative finance like council rates programs
- community wind farms
- local clean energy fair days and open days and more
- community-wide plans to transition to clean energy like Kangaroo Island would like to develop (see Box 6).

As Naomi Klein puts it, when it comes to local energy “there are no hard-and-fast formulas, since the guiding principle is that every geography is different and our job... is to ‘consult the genius of the place’.”<sup>100</sup> That is why we have suggested Regional Energy Hubs located in 50 places across the country. That way, the programs delivered can be tailored to the needs and opportunities specific to that region. It is also at a scale that is manageable, not too costly – as would be the case with hubs located in every community – but not so few as to not be connected to the people and organisations on the ground. The National Network, would then act as a way to ensure information is shared across the country and reduce reinvention of the wheel.

<sup>100</sup> Klein, *Op cit x*, p446

**Box 6: Community Power – increasing reliability on Kangaroo Island**

Kangaroo Island has always struggled with adequate power supply. The island stretches 150km long, with a single connection to the mainland at one end and kilometers of network to support the tourist destinations toward the other end. As a result, reliability is worse on the island compared to the mainland. The population of less than 5,000 people needs to work hard to ensure the infrastructure on the island can welcome over 200,000 visitors each year. New developments often have limited access to electric capacity, meaning they have to fork out for expensive network upgrades or invest in their own onsite generation. Major businesses like the abalone farm rely at least in part on expensive and polluting diesel generators. All of this makes development on the iconic island expensive and unnecessarily complex.

As renewable energy has fallen in price, the Kangaroo Island community has actively sought to unlock its benefits and advocated for local projects. Since 2011, residents have been exploring community-owned power options, struggling with the constraints of the electricity market rules. As the undersea cable is now scheduled for replacement in late 2017, the island has investigated how to realise a vision of 100% renewable electricity and the possibility of becoming an exporter to the mainland.

A regional energy hub on Kangaroo Island would provide the expertise and coordination required to make this vision a reality. It would help optimise energy resources and network assets throughout the island by working with the community to deliver energy efficiency, storage, and supply/demand balancing. This in turn would free up of network capacity, enabling more activity on the network, strengthening and expanding the local economy, and creating the potential to export renewables to the mainland: a win, win, win!

However, while the Smart Energy Communities program has a focus on unlocking community energy projects, a well-designed policy can also address a range of barriers holding back a fair transition to clean energy.

**Trusted information**

Regional Energy Hubs could provide a “Home Health Check-Up” service, particularly for low-income households. They would become a ‘one stop shop’ for information and delivery service. For example, when you’re sick you go to the doctor and get a range of referrals, e.g. a prescription you can get filled at the pharmacy or a referral to a specialist. You also can get bulk-billed – they handle the financial transactions for you. Regional Energy Hubs could do the same but for energy.

- They would provide a portal to independent advice and information services for homeowners, landlords, tenants, small-businesses and more. The advice available could cover tariffs, power plans, tailored efficiency options, fuel-switching and accessing renewable energy options (rooftop solar and community power / solar gardens) and more. This advice process should build on the learnings from the Low-income Energy Efficiency Program around engagement of diverse groups and need for delivery through trusted channels. It would also overcome the complexity and confusion barrier.
- They would provide household energy retrofit services including audits, affordable finance, accredited local trades and service providers.

### **Overcoming market barriers**

In the Homegrown Power Plan, we have tried to hammer home that there are fundamental market barriers such as split-incentives in the energy system that have stumped policy makers for years. The good news is that there are models outlined in the Homegrown Power Plan that can overcome these barriers, from social access solar gardens to rates-based financing.<sup>101</sup> The bad news is that these models come with their own set of challenges, namely higher complexity and thus high transaction costs.

These socially beneficial models of clean energy involve multiple partner organisations, which add transaction costs, which in turn means these models are more expensive for end users. In addition, these models require a duty of care to vulnerable households and require significant face-to-face time to build trust. These models are unlikely to be delivered by the market alone.

The Smart Energy Communities Program is designed with this in mind. There is funding proposed for developing and deploying programs, hubs with the expertise and social purpose to coordinate the public and private partners involved, and a network to share information about what works and what doesn't. Furthermore, the hubs and/or regionally based welfare organisations could be the local delivery agencies for a range of other policies and programs including PowerAccess, helping to deploy energy efficiency and renewables solutions that will lower low-income households' power bills, while also stimulating local employment in the delivery of regional energy programs.

### **Evaluating the impact**

To ensure that public funding is being spent well, it will be essential for the impacts of the Smart Energy Communities and other people-focused energy programs to be evaluated. The Smart Energy Communities Network should be charged with developing and implementing an evaluation framework that has all Regional Energy Hubs and local energy projects reporting their impacts – benefits and costs. An online portal and map could help visualise these impacts, showing how the local transition to clean energy is flourishing across the country.

How much would it cost?

The Smart Energy Communities Program would ideally be implemented as a partnership between federal and state governments. However, in the absence of federal leadership, states could pilot their own programs, as Vic is. Over time, the Smart Energy Communities Program would leverage community, local government and private investment through a range of innovative approaches. Indeed, modeling undertaken by Marsden Jacobs and Associates found that, given time, community

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<sup>101</sup> See the Renewables for All project – [www.cpagency.org.au/renewables-for-all-resources](http://www.cpagency.org.au/renewables-for-all-resources) for case studies of these and other models of socially beneficial clean energy provision.

energy projects could leverage up to \$17 of community funding and in-kind contributions for every \$1 of government funding.<sup>102</sup>

Overall, the Smart Energy Communities Program would require a minimum investment of \$149 million in federal and state funding over the forward estimates period and a total of \$460 million dollars over 10 years.<sup>103</sup> It is critical that, as with Landcare, there is a decade-long commitment, to ensure that long-term support programs, particularly for vulnerable households, can be implemented. In this space, it has been a case of too many pilots and not enough airplanes. A long-term, well-funded Smart Energy Communities Program would make the local transition to clean energy fly, while ensuring that all Australians, no matter how much they earn or where they live, are able to take control of their power bills and access affordable, clean and renewable electricity.

**Box 7: Uralla, from the forefront of Landcare to the forefront of community clean energy.**

Inspired by the small town of Wildpoldsried in Germany that generates more than 300% of its energy needs from renewables, Uralla in the New England Region of NSW is the first town to create a blueprint to transition to 100% renewables. Uralla is the first pilot town for the Zero-Net Energy Town model. It is stepping up, creating a shared vision and now getting on with implementing a transition to 100% renewable energy. Uralla is leading the way and showing other communities how it can be done.

Uralla is no stranger to environmental leadership. In 1992, the early days of Landcare, Uralla hosted the inaugural National Treefest – now a biannual event. This was a field day attended by 6000 people and organised by Landcare groups.<sup>104</sup>

Uralla is just one of many communities that are leading the way and creating 100% renewable community plans. 'Totally Renewable Yackandandah' in North-East Vic was established in 2014 and is working towards 'energy sovereignty' for Yackandandah by 2022. In 2015, Byron Bay Shire made a commitment to becoming Australia's first zero-emissions community<sup>105</sup>, which will involve transitioning to 100% renewable electricity.

## Consumer Protections

The current consumer protection regime in the electricity sector is set up for Electricity System 1.0. As the way we engage in the electricity system changes and as we move towards Electricity System 2.0, either in a planned or chaotic way, consumer protections arrangements must keep pace. Traditionally, an Ombudsman

<sup>102</sup> McKenzie, P., 2013, 'Community Renewable Energy Fund', Report by Marsden Jacobs and Associates for the Coalition for Community Energy

<sup>103</sup> Costings N. Ison analysis.

<sup>104</sup> NSW Government (2015) 'A Brief History of Landcare Support in NSW'.

<sup>105</sup> Byron Shire Council (2015) 'Byron Shire aims to become Australia's first Zero Emissions community.'

in each state has been the main port-of-call for settling consumer disputes with electricity network or retail companies. However, existing Ombudsman's powers do not cover solar, storage or the range of new energy services. As such, we need to actively start the development of a new consumer protection regime now. This regime needs to be stable and long-lived to address the fact that financial viability (particularly for fuel switching) relies on end-of-life replacement of a range of technologies, so decisions need to be made ahead of time.<sup>106</sup>

Already, the NSW government has started the ball rolling, putting out a Discussion Paper on a new energy consumer protection framework, that works for a changing world.<sup>107</sup> Other states should quickly follow in NSW's footsteps. If any states have not put in place adequate new energy consumer protection programs by 2020, there could be a role for the federal governments to step-in.

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<sup>106</sup> Forcey, HEEUP

<sup>107</sup> <https://static.nsw.gov.au/nsw-gov-au/1510534194/Discussion-Paper-Final.pdf>