Policy Brief - Renewables for All – access for locked-out energy users

'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.' – Hermann Scheer

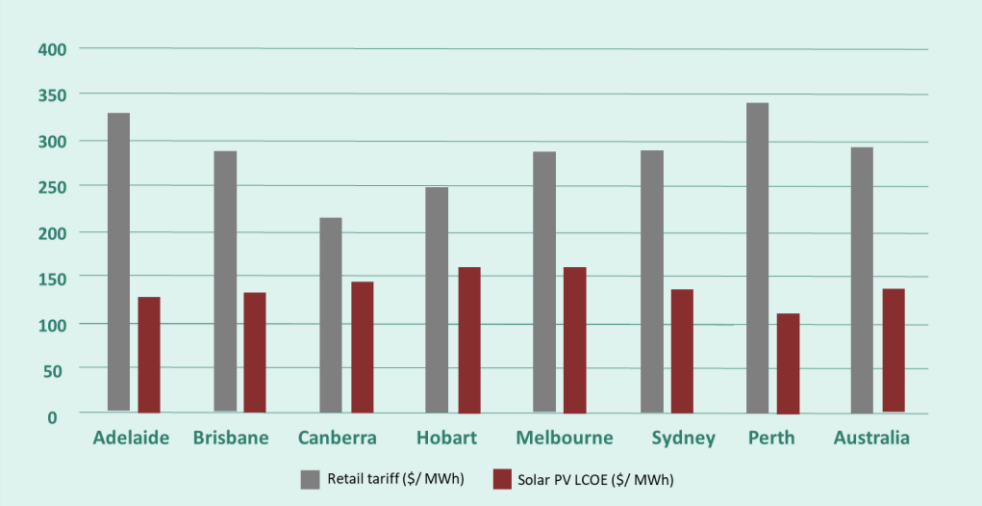
Like health and education, electricity is an essential service that is critical to almost every aspect of our lives – from working, to communicating, to cooking, to being able to enjoy ourselves. That means, just like health and education, energy and particularly electricity is fundamentally about and for people: it should be universally accessible, and the way we generate it must not endanger lives.

Therefore we firmly believe that all Australians, no matter what they earn or where they live, deserve access to affordable clean energy.

Why we need Renewables for All

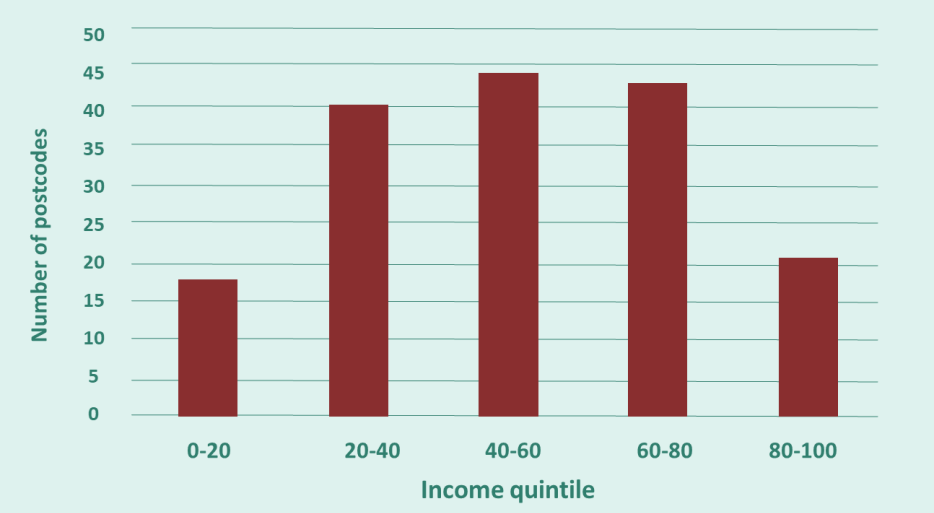
Australian households are still paying off the electricity network companies' latest five-year spending spree, on top of more recent electricity price rises driven by fossil fuelled gentailers gaming the system. Some have been able to take steps to manage this increase and reduce its impact on the household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

Figure 1: Household electricity bills compared: retail tariffs and rooftop solar



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



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, "energy affordability is a growing, and sometimes crushing, problem."

What is the rationale for Renewables for All?

- **It's a big problem**! Queensland still has a high number of locked out energy users (~30%), both in absolute and proportional terms.
- **Barriers to access.** Locked out energy users face a range of barriers to accessing solar, the majority of which can be addressed through a combination of different models. While there is no silver bullet, a Solar for All Rebate would come closest to enable a large amount of users to access clean energy.
- **Creating a market.** Supporting 400,000 locked-out energy users to access solar, will scale business models and help make it normal for apartment developers and landlords to install solar, changing the market and lowering the amount of intervention the Queensland Government needs to do over time.
- **It's only fair!** Past solar programs such as the Solar Bonus Schemes, STCs from the Renewable Energy Target have been extremely successful, helping to deliver huge benefits. However, it is only fair that programs are put in place to support households who have not been able to participate in solar to date. A Queensland Government Solar for all policy would go a significant way to addressing the equity and fairness issues that have faced rooftop solar access to date.
- **Acting on climate.** Supporting 400,000 households will help lower the Queensland Government's greenhouse gas emissions and be a step on the way to achieving its target of 50% renewables by 2030.

What are the challenges?

Note this section is drawn from the Repower Australia Plan.

Locked out energy users are those that cannot install solar, batteries, energy efficiency measures or similar. They include renters (private and social), people who live in apartments, have unsuitable roofs or cannot afford them.

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[1], 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 necessary for a truly competitive market to function.[2]

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).

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 Victoria'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. 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.

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[1] The Guardian, 2015. Accessible at https://www.theguardian.com/money/2015/jan/26/energy-giants-more-disliked-banks-guardian-icm-poll

[2] Consumer Action Law Centre, 2016, Power Transformed

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 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. For example, high grid costs, make models like Solar Gardens more costly in Australia than in most parts of the US where the model originated.

Barriers and Solutions

There are solutions that can address each of the barriers. But there is no silver bullet (though Solar Gardens is the closest). These solutions in turn face their own barriers as Table 1 shows. This has traditionally put solar access for locked-out energy users in the too hard policy basket. But that excuse is no longer acceptable as innovative business models and new approaches provide viable and feasible ways to enable all Australians to participate in the clean energy transition.

Table 1: Locked out energy users – barriers & solutions

Customer segments	Primary barrier(s)	Solutions	Secondary barriers
Low-income households	Upfront cost	Grants Low/zero interest loans Solar Gardens Virtual Power Plant	Funding availability Credit rating High cost business models
Renters (social/public)	Split incentives	Finance for social/public housing providers Solar Gardens Virtual Power Plant	Repayment mechanism prohibited under Federal Regulations High cost business models
Renters (private)	Split incentives	Solar Gardens Rates financing Landlord/tenant split	High cost business models Federal/state legislative change

		the benefit Incentivise landlords Virtual Power Plant	required
People who live in apartments	Split incentives Unsuitable roofs	Strata solar Solar Gardens	Administrative & space barriers High cost business models
Other/potentially all	Unsuitable roofs (shaded, heritage) Complexity and confusion	Solar Gardens Expanded Regional Community Energy Program (Hubs)	High cost business models Funding availability

Options for private renters

Community Power Agency have identified five main approaches or model types to support private renters to access clean energy solutions such as solar, energy efficiency and storage.

Model 1: Solar Gardens. 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. In this way private renters can sidestep their landlords and still access the benefits of solar without having to install it on their own roof. Because solar gardens are in front of the meter (not behind the meter like rooftop solar), network costs are still charged, this makes them much more financially marginal. A recent NSW Government & ARENA funded study, found that solar rebates for Solar Gardens would help unlock this model in Australia.

Model 2: Landlords (or third parties) & tenants split the benefit. 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 or higher rent). This requires both a property with a suitable roof to install solar and a landlord willing to enter into such an arrangement. This model comes with high transaction costs and thus is not as commercially viable as selling solar to homeowners. Support for social enterprises such as Sun Tenants delivering this model could be considered, or a rebate solution similar to the Victorian Government's solar for renters program (which is a mix of Model 2 & Model 3).

Model 3: Incentivise landlords to install solar and improve energy efficiency. Provide a financial incentive to landlords to install solar and undertake energy efficiency upgrades. Financial incentives could come in the form of make the upgrades/solar installation tax deductible or eligible for accelerated depreciation.

Model 4: Unlock rates-based financing for private rental properties. 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. To do this requires the Queensland Local Government Acts to enable opt-in council rates and to allow special exemption in the Tenancy Acts for landlords to pass-on this opt-in rate.

Model 5: Virtual Power Plant. A third party provider installs solar and batteries in households, the ownership of the assets stays with the third party provider, but the household gets a reduced electricity bill. The third party provider then manages the solar and storage as a power station, bidding into the wholesale and ancillary services markets. Tesla and the South Australian Government are currently undertaking a trial focused on social housing and to a lesser extent private renters, with a commitment to scaling up to a program for 50,000 customers. This model still requires both a suitable roof and the consent of landlords, but because landlords aren't required to make any capital outlay, it could be attractive.

Options for social/public housing

All the models above would also work for tenants of social and public housing. However there are other options available to social landlords, specifically:

Directly funding and undertaking retrofits. For example the Victorian government offer subsidised energy efficiency and renewable energy upgrades to a limited number of social housing tenants. 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.[3] The program is implemented through community organisations like Moreland Energy Foundation.

Providing loans to build more energy smart social/public housing. 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.[4]

Providing low-interest loans for existing social housing upgrades. CEFC or other financial providers could provide low-interest loans to social housing providers to upgrade existing housing and install solar. However, social housing providers will need to recoup the cost of the loan over time. Social housing providers could charge their tenants an additional utilities bill, which would be highly undesirable and inefficient or could slightly raise the rent, where the household is better off from lower power bills. This was not possible under the National Affordable Housing Agreement, that is social housing providers would not be able to do a small rent increase and still be eligible for federal funding. It is unlikely that this has changed under the new National Housing and Homelessness Agreement.

Financing

Energy efficiency and rooftop solar stack up economically and can substantially reduce household energy bills. It thus follows that financing should be possible to support renters and low-income households to do clean energy. There are two main issues and additional barriers that make financing options difficult in practice:

Credit rating issues. Low income households who would most benefit from clean energy are not credit worthy and thus ineligible for finance. The Federal Government could fix this issue by underwriting loans, it could start with solar, energy efficiency and storage upgrades in edge of grid and off-grid Aboriginal communities.

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[3] Victoria State Government (2017) Affordable Retrofits Program. Available: https://www.energy.vic.gov.au/affordable-retrofits-program (accessed: 27/11/2017).

[4] 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

Repayment mechanism. A loan must be recouped somehow. For most vulnerable households an additional bill (loan repayment) is undesirable, impractical and adds further bill stress. Tying repayment to an existing bill is likely to be much more effective, in addition, since the upgrades are made to the house, the repayment should stay with the house, rather than the tenant. This rules out retail electricity bills, which are impractical for other reasons such as not allowing long-term contracts. Existing bill options to tie a loan to are thus:

a) Council rates (see above)
b) The electricity meter component of the electricity bill – which has become more difficult with contestable metering.
c) Rent (see above option for social housing providers).

Duty of care & delivery agency

Even if all the issues above are worked through, there are still issues of trust, complexity and confusion. Furthermore, for vulnerable households it is imperative that the organisations delivering these options have a duty of care to the people involved. Any policies implemented must ensure households are better off and not being sold a bad deal. This is where community energy groups and the Smart Energy Communities Program becomes essential.

Solar for All rebate is a simple way to address the majority of these barriers

1. The Queensland Government would announce a Solar for All Rebate as an extension to the existing solar for renters program. The Solar for All Rebate would be capped at 100,000 customers per year for 4 years.
2. The Rebate would have clear requirements, to ensure only households that either cannot afford to put solar on their roof or do not have a suitable roof are eligible, including those who:
    - Are low-income (means testing, eligible for current energy concession schemes etc)
    - Rent
    - Have a shaded roof
    - Live in an apartment
    - Are a first-home buyer
3. The Rebate would be between half and the full-cost of solar, up to ~$4400. This would cost in the order of $1.1billion in the next term of Government. This assumes 25% of applicants would receive the full rebate and 75% would receive the half-rebate.
4. The Rebate would support various eligible models of solar access, for example:
    a. A direct rebate for low-income owner-occupiers
    b. A rebate for a household to buy into a Solar Garden (see Solar Gardens Policy Briefing)
    c. A rebate split between landlords and tenants (similar to in Victoria)

   d. A rebate that can be claimed by social housing providers, as long as they can prove the tenant will get the financial benefit of the solar
   e. A rebate for apartment owners to help fund an apartment micro-grid (assuming administrative hurdles can be addressed)

5. Applicants to the Solar for All rebate would need to provide a year's worth of electricity bills (to provide a baseline) and watch a short video about how they can get the most electricity savings from their solar.
6. Applicants would have to give up their energy rebate, but after 6months if they are worse off (their electricity bills are higher) they would be able to re-apply for the normal rebate.
7. The Solar for All Rebate should be accompanied by additional energy education and advice services. We recommend the Smart Energy Communities Program (see separate briefing paper on this).

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