The Solar for All Policy Package– FAQs

Q: What is the Solar for All Policy Package?

A: See the Solar for All Policy Briefer.

Q: Who is locked out of solar and what solutions exist for these customers?

A: See below a table developed by Community Power Agency that looks at the different locked-out energy users, the barriers they face and the possible 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 the benefit Incentivise landlords Virtual Power Plant	High cost business models Federal/state legislative change 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 Mandating solar on all roofs Expanded Regional Community Energy Program (Hubs)	High cost business models Funding availability

Basically, Community Power Agency has identified eight potential Solar for All solutions:

1. Solar Gardens

2. Landlords (or third parties) and tenants split the benefit.
3. Incentivising landlords to install solar and improve energy efficiency - Provide a financial incentive to landlords to install solar and undertake energy efficiency upgrades.
4. Unlocking rates-based financing for private rental properties - Rates financing is where finance for rooftop solar or energy efficiency is facilitated through the local government.
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.
6. Providing funding or loans to build more energy smart social/public housing or upgrade existing public/social housing.
7. Strata solar and apartment microgrids.
8. Mandating solar on all suitable roofs.

Q: Why aren't all these Solar for All models happening in Australia or are they?

A: Community Power Agency will be drafting a series of blog posts about what is happening around Australia with these different solar access models.

Q: How many Australians are locked out of solar?

A: According to ABS 2.7million households are renters or apartments or renters living in apartments. This equates to approximately 35% of all Australian homes. So at least 35% of Australians are locked out of solar and that does not even include low-income or energy stressed homeowners, or those people who cannot put solar on their own roof because they have unsuitable roofs, heritage orders or other planning restrictions.

Q: Why focus on Solar Gardens?

A: Because Solar Gardens are the only option that provides a solution for **all** locked out customers whether they are low-income households, apartment dwellers, renters (social/public/private), or people with unsuitable roofs (shade/heritage). Although there are other pieces to the Solar for All package, they do not enable solar access to all groups of locked out customers in the community.

Q: How does a Solar Garden work?

A: Solar Gardens work by installing a central solar array, generally near a population centre. Households can then become a member of the project, purchasing or subscribing to a part of the solar 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.

Q: Hasn't Community Power Agency already run a Solar Garden project in Australia?

A: No. In 2018 in collaboration with the Institute for Sustainable Futures, Community Power Agency ran a series of Social Access Solar Garden business model design workshops, commissioned research and co-authored the Social Access Solar Gardens 2018 Report. This "feasibility" project was funded by ARENA and the NSW Government.

Q: Aren't Solar Gardens expensive?

A: The most cost-effective way of installing solar is when just two parties are involved – the home-owner and the solar installer. Every time more parties are involved things get more expensive. In the case of Solar Gardens, the parties involved include at least a solar company, a retailer and the households (customers). Unfortunately, all solar access models that aim to overcome barriers like split incentives involve more than two-parties, so will be a bit more expensive.

This additional cost is one of the reasons why solar access models haven't already happened at scale in Australia and without policy support are unlikely to happen at scale. That's why we are running this campaign – to make sure the additional complexity and cost of solar access models do not stand in the way of all Australians benefiting from solar.

In addition, network costs are charged for Solar Gardens located in front of the meter, which make them much more financially marginal than behind-the-meter rooftop solar. A recent NSW Government & ARENA funded study, found that solar rebates for Solar Gardens would help unlock this model in Australia. See full report of study here.

Q: What is the difference between 'in-front of the meter' and 'behind the meter'?

'Behind the meter' solar is most common for households and means the solar produced is used to power the house and then sent to the grid. This means that households do not pay the cost of the grid and other system costs for the electricity produced from behind the meter solar. In-front of the meter solar is connected directly to the grid and uses the grid infrastructure to send electrons to electricity customers.

Typically rooftop solar systems are connected behind the meter and ground mounted solar farms are connected in front of the meter. However, this

doesn't have to be the case, some ground mounted systems can be behind the meter and some rooftop systems on warehouse roofs for example could be in-front of the meter.

Q: Are Solar Gardens popular overseas?

A: Solar Gardens are particularly popular in the US, where there is 1.3GWs of solar gardens installed. See the US National Renewable Energy Laboratory (NREL) for more detail.

Note in the US Solar Gardens are often used synonymously with community solar, in Australia community solar/community energy has a much broader definition.

Q: Why aren't Solar Gardens already happening in Australia?

A: Energy distribution networks costs have risen substantially in the last 15years. These high network costs impacts the financial viability of Solar Gardens compared to rooftop solar. In addition to this, there has been a lack of policy support for locked-out customers (unlike in places like the US). Solar Gardens are also more complex, so they need the right organisations (retailers, solar developers, community energy groups and governments) working together. All of this combined has to date put Solar Gardens in the too hard basket.

A number of community energy groups have been working in partnerships with retailers to try and get Solar Gardens happening. It is likely that we will see the first one or two happen at a small-scale in the next few months. However, Solar Gardens are unlikely to reach a scale where all locked-out energy users can access them, without government policy support.

Q: With solar costs coming down, and with the tech becoming more efficient, isn't it better for everyone to wait a few years before building a Solar Garden?

A: If we take this attitude we would never do anything. Solar technology is highly efficient now. Its also cheaper now than grid electricity and it pays itself back, so why not do it now?

We expect we will see small improvements in space efficiency, energy generation and panel level optimisation like mirco-inverters, but not anything radically different to what we already have. There is definitely wonderful work being done in the field of solar R&D, though new technologies are still years away from commercialisation and therefore they are still years away from being financially viable.

If we all hang around waiting too long for a new technology to come along, we will miss out on the benefits solar can be giving now, both for the climate and in growing renewable access for all Australians.

Q: How does a Solar Garden compare to roof-top solar

A: If you can put solar on your home, you will be better off. Solar Gardens are a solution for those who can't put solar on their homes for whatever reason.

Q: Shouldn't we be investing in energy efficiency instead of solar for vulnerable customers?

A: We don't think it is an either/or approach. Energy efficiency is critical. We fully support all the work being done on ensuring adequate environmental building standards and mandatory energy performance standards for all housing/office/industrial properties and equipment. To properly address the needs of vulnerable customers and meet the demands of the climate crisis, we also need to ensure no one is locked out of solar and clean energy. In addition to this we need to ensure everyone has an opportunity to financially benefit from the renewable energy transition.

Q: What happens when solar panels reach the end of their life?

A: Currently they either go to landfill or get recovered/reused/recycled. Solar panels contain substances such as glass, aluminium and semiconductor materials that can be successfully recovered and reused, either in new photovoltaic (PV) modules or other products. To adequately address waste created by solar panels we must combine sensible polices with business strategy and education to promote recycling rates. This will ensure a reliable and truly sustainable source of renewable energy in Australia. This article gives information about what is currently being researched and practiced in Australia with regards to this issue.