4. Brief 3: Unlocking community power

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

4.1 Australians love local renewables

SA is a genuine world leader in renewables. At a local level the uptake of household PV is one of the highest in the world. Equally, we have an exciting number of large scale projects such as the recently announced solar thermal plant at Port Augusta. However, energy efficiency, mid-scale and community led renewables are areas where SA is lagging behind many other places. This presents untapped potential for SA.

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.

It's spreading fast: Across South Australia, over 200,000 households and businesses benefit from rooftop solar PV, and more than 90 innovative community energy groups have sprung up across the nation. There are thousands of Australians willing and able to get local renewable energy projects going in their communities, particularly in regional and rural areas.

It's popular: 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. International research shows that community energy projects help create greater levels of support and social licence for renewable energy more broadly.[1]

It's an international trend: Australia is not alone in embracing community renewables. In Scotland there are over 500 community energy projects delivering affordable electricity, energy independence, and start-up funding for new regional enterprises. In the U.S., community solar is one of the fastest-growing markets for solar PV.

It creates regional jobs: Research shows that if there is a community ownership component of a renewable energy project, the economic and job creation benefit for the local community is 1.5-7 times greater than it would otherwise have been.[2]

It's played an important role already: Community groups helped spark the solar rooftop revolution through many successful bulk-buy programs.

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[1] Warren and McFyden 2010; Hindmarsh 2010; WWEA 2016; WISEPower 2016; Devine-Wright 2011;
Bell et. al. 2013; Bridge et. al. 2013; Walter 2014; Haggett 2011; Munday, Bristow and Cowell 2011; Ernst and Young 2015).

[2] http://cpagency.org.au/wp-content/uploads/2016/12/C4CE-Submission-Vic-Community-Energy-Parliamentary-Inquiry.pdf, p6

4.2 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."[3]*

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 New South Wales;
- A community-owned solar or wind farm at the edge of town, such as Hepburn Wind in Victoria 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;
- The first commercial micro-grid, which is a partnership between community energy group Totally Renewable Yackandandah and the local utility Ausnet Services;
- Community solar and battery bulk-buys, as is currently happening in New England by Farming the Sun and a by Victor Harbor Council which led to 40% of residences having solar; and
- Community pumped-hydro projects, as is being planned by communities in Mullumbimby in NSW and in the Strathbogie Ranges in Victoria.

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.

4.3 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. Some people are missing out on the clean energy boom 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.

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[3] Coalition for Community Energy (2015) *National Community Energy Strategy*, www.c4ce.net.au/nces

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 .

Indeed, 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 Victoria, the Government has funded over 30 community energy feasibility studies and has just launched three pilot Community Energy Hubs.

Community energy policy as outlined below would also be an effective way of implementing the recommendation of the SA Government's Expert Climate Panel for a comprehensive engagement program for developing low carbon transition plans.

4.4 Introducing the Smart Energy Communities Policy

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

Organisations	Establish six Regional Energy Hubs – not-for profit organisations in six regions (urban, regional and remote locations) across South Australia. 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 incoem households can reduce their energy costs.
Programs and Funding	A Community Power Fund would provide funding for community clean energy organisations (both those with and without start-up funding) to: ● Develop local renewable energy plans ● 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.

Capacity Building Network	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 South Australians to innovative and emerging energy technologies such as solar and battery storage.

Box 3: 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!

4.5 Unlocking more than community energy

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.

4.5.1 Access to trusted information

There is a huge amount of complexity, confusion and imperfect information in the energy space. The clean energy industry is relatively new and as such there is little understanding of what constitutes a suitable quality product or service. In addition, Australia's energy retailers are trusted less than the big banks.[4] Households, businesses and other consumers wanting to participate in the clean energy revolution are therefore unsure of who to turn to for good advice. The six Regional Energy Hubs established in this program can be that source of impartial and trusted advice.

4.5.2 Overcoming fundamental market barriers

There are fundamental market barriers in the energy system that have stumped policy makers for years. These include:

- **Split incentives faced by renters, where** neither landlord nor tenant accrues sufficient benefit from installing solar or energy efficiency measures to warrant doing so, leaving renters with ever higher energy bills.

- **High upfront costs**, where low-income households typically cannot afford the outlay for many clean energy measures, although they would save money. Available finance products are typically not appropriate as either the interest rates are too high or the low-income household is not eligible due to credit rating issues.

The good news is that there are models that can overcome these barriers, from social access solar gardens to rates-based financing.[5] 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 for developing and deploying programs, hubs with the expertise and social purpose to coordinate the public and private partners involved in these models and a network to share information about what works and what doesn't. Furthermore, the

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[4] https://www.theguardian.com/money/2015/jan/26/energy-giants-more-disliked-banks-guardian-icm-poll

[5] See the Renewables for All project - www.cpagency.org.au/renewables-for-all-resources for case studies of these and other models of socially beneficial clean energy provision.

Hubs and/or regionally based welfare organisations could be the local delivery agencies for Power Access, 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.

4.6 How much would it cost?

With an investment of $11.5 million in state funding over the forward estimates period (a total of $32 million dollars over 10 years – see Table X for the breakdown),[6] six Regional Energy Hubs would help ensure 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.

Year	1	2	3	4	5	6	7	8	9	10
Cost ($m)	$1.88	$2.28	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63	$3.63

Modeling undertaken by Marsden Jacobs and Associates found that, given time, community energy projects could leverage up to $17 of community funding and in-kind contributions for every $1 of government funding.[7]

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[6] Costings N. Ison analysis.

[7] McKenzie, P. (2013), 'Community Renewable Energy Fund', Report by Marsden Jacobs and Associates for the Coalition for Community Energy