

Victorian Community Energy Parliamentary Inquiry

Coalition for Community Energy Submission

To: The Economic, Education, Jobs and Skills Committee of Victoria

Thank you for the opportunity to input into the Parliamentary Inquiry into Community Energy. This submission has been written by the [Coalition for Community Energy](#) and is supported by the following organisations:¹

- [Community Power Agency](#)
- [Embark](#)
- [Moreland Energy Foundation](#)
- [Alternative Technology Association](#)
- [Institute for Sustainable Futures, University of Technology Sydney](#)
- [Total Environment Centre](#)
- [Starfish Initiatives](#)
- [Yarra Community Solar](#)
- [Surf Coast Energy Group](#)
- [Geelong Sustainability Group](#)
- [Energetic Communities](#)
- [CORENA](#)
- [COREM](#)

This submission is structured around the six issues for investigation by the Inquiry:

- The benefits of community energy projects
- The challenges communities face to establish energy projects
- The best ways to encourage and support the development of community energy projects
- The challenges specific to establishing projects in metropolitan areas and how to overcome them
- Types of renewable energy resources that could be used other than solar and wind power
- Models of community ownership for energy projects.

The Submission also references a number of key documents/bodies of community energy research that we believe should be considered as part of the Inquiry including, specifically, the [National Community Energy Strategy](#) and the [Embark Wiki](#).

1. ABOUT THE COALITION FOR COMMUNITY ENERGY

The Coalition for Community Energy (C4CE) is a network of 72 organisations working to grow a vibrant community energy sector, of which 20 are based in Victoria ([see here for the full list](#)).

C4CE was founded using a Collaborative Impact approach. C4CE facilitates collaborative [Strategic Initiatives](#) that build on the strengths of its member organisations ~ community energy projects, groups, support organisations and stakeholders in the wider renewable and mainstream energy system ~ to create mutually beneficial outcomes. C4CE fosters win-win situations and in so doing is creating a quicker, more efficient path to a community energy sector with hundreds of community energy projects that benefit all Australian communities.

¹ Note this submission does not necessarily represent the views of all C4CE partner organisations.



C4CE's objectives are to:

- Guide and support development of the community energy sector
- Create a coordinated voice to better advocate for the needs of the sector
- Grow the sector's profile, influence and membership (beyond the 'usual suspects')
- Facilitate the alignment of efforts by Members with support, systems, tools and training which enable collaboration for collective impact
- Identify and create strategic opportunities and attract investment for the sector
- Coordinate strategic initiatives which build the knowledge, know-how and capacity of Members and the sector.

2. WHAT IS COMMUNITY ENERGY?

In the National Community Energy Strategy, C4CE defines community energy as follows:

Community Energy is the term used to describe the wide range of ways that communities can develop, deliver and benefit from sustainable energy. It can involve supply-side projects such as renewable energy installations and storage, and demand-side projects such as community education, energy efficiency and demand management. Community energy can even include community-based approaches to selling or distributing energy.

Community energy projects encompass a range of technologies and activities across a breadth of scales, determined by the community needs, availability of local natural resources, technologies and funding, and community support.²

It is particularly important to note that community energy is not defined technically, such as based on the scale of a clean energy project (e.g. a community-scale solar farm), but rather based around community participation and benefit.

In academic literature, Walker and Devine-Write's article *Community Energy: What should it mean?* defines community energy in terms of community involvement in the process (i.e. the process dimension) and community benefit from the outcome (i.e. the outcome dimension) of a clean energy project.³

3. MODELS OF COMMUNITY OWNERSHIP FOR ENERGY PROJECTS

One of the strengths of community energy projects is that they are typically initiated and developed by a community to meet that community's needs and motivations. This leads to significant diversity in the models developed. The National Community Energy Strategy dedicates [a whole section to understanding what is needed to develop a functioning model of community energy](#).

As part of this C4CE has identified four main classes of community energy models:

1. Donation models

These models of community energy involve a community raising funds through donations (either using a crowd funding platform or more traditional fundraising) to install renewable energy systems or undertake energy efficiency measures. Typically, the host site and beneficiary of this model is a community organisation such as a school, surf-lifesaving club, fire station etc. Examples of groups who are using this class of model include Bendigo Sustainability Group, Totally Renewable Yackandandah, CORENA and the People's Solar.



² http://c4ce.net.au/nces/the-nce-strategy/introduction/#12_What_is_Community_Energy

³ Walker, G. and Devine-Wright, P. (2008) 'Community Renewable Energy: What should it mean?' *Energy Policy*, Vol 36, p. 497-500.



2. Investment models



These models involve cases where community organisations develop a sustainable energy project and raise funds through opening up the project to community investors, on the expectation that these investors will receive a certain return on their investment. The legal structures for these models include cooperatives (Hepburn Wind), trust-based models (ClearSky Solar Investments), and share-based models (e.g. Enova - Australia's first community-owned retailer).

3. Community/developer partnership models



These models involve communities partnering with commercial renewable energy developers to deliver clean energy projects that are part community owned/financed and part commercially owned/financed. These models are prevalent in the US and Europe, but are new in Australia. Indeed the Danish Government requires onshore wind developers to open up part of all projects to community ownership. Clearsky Solar Investments is the main operational example of this model, however there are a number in development, particularly with large-scale wind developers.⁴

4. Multi-household models of community energy



These models are about aggregating households to deliver sustainable energy solutions. Examples of such models include solar bulk-buys, the Moreland Energy Foundation rates-backed solar model for low income households (Darebin Solar Savers), Mount Alexander Sustainable Homes, Bendigo Sustainability Group and more.

Models of community energy vary on a number of factors, including but not limited to technology, scale, legal and ownership structure (see the challenges section for more discussion on legal structures). The [Embark Wiki documents a number of case-study examples](#). However, the most prevalent community energy models currently are behind the meter solar projects, which are set-out in detail in the [Guide to Community Solar](#) the main operational models are set-out.

We note that while community ownership is a focus of many community energy groups, communities sharing in the benefits and having a say in the development process are also other key features of community energy projects. Not all community energy projects will be community owned. For example the Lismore Farming the Sun project is community financed rather than community owned. See more here - <http://farmingthesun.net/lismore/>.

⁴ Two useful resources for this class of model include:

<http://cpagency.org.au/wp-content/uploads/2014/03/Attachment-E-Best-practice-community-engagement-in-wind-development-FINAL-V1.0.pdf> and www.environment.nsw.gov.au/resources/communities/EY-wind-farm-shared-benefits.pdf



4. THE BENEFITS OF COMMUNITY ENERGY PROJECTS

Figure1: Community energy - motivations and benefits⁵

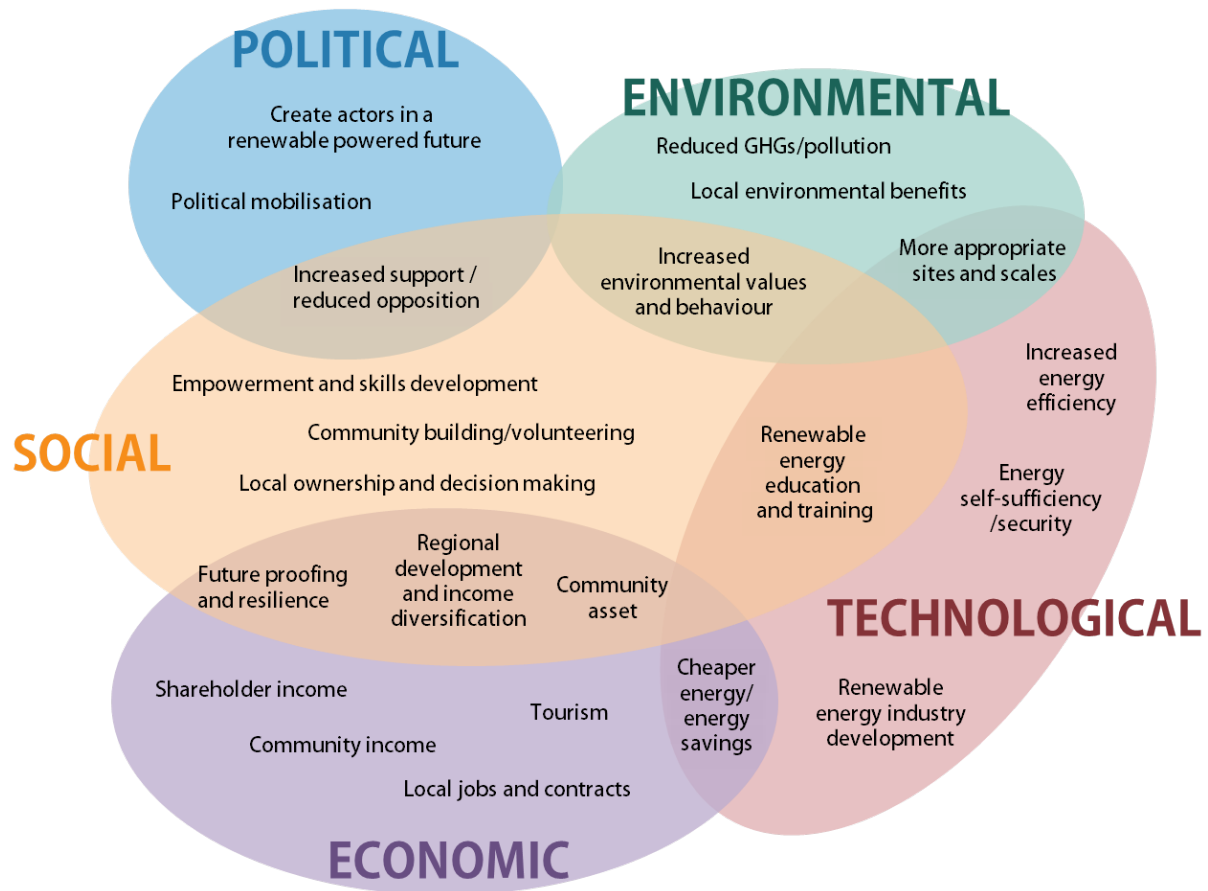


Figure 1 outlines the wide range of benefits that community energy projects can deliver, seven of these are outlined in more detail below.

1. More renewable energy and energy efficiency projects

There are now over 80 community energy groups developing innovative community energy projects across Australia, approximately 27 of which are in Victoria. These groups are innovating, pioneering new scalable, replicable ownership and operating models of renewable energy and energy efficiency. Whether they are for-profit, not-for-profit or a hybrid, these groups are social enterprises - delivering economic and social/environmental outcomes through energy projects. The results of this are more installed renewable energy capacity and more energy efficiency uptake, which in turn can help governments like Victoria meet their targets.

2. Increased energy literacy

Australia's energy system is in the midst of a rapid transition. This is a transition away from a 20th century energy system based on large centralised, mainly fossil fuel generators located a significant distance from the majority of passive energy consumers. It is a transition to a modern, 21st century energy system based on a mixture of centralised and decentralised generators powered from cleaner sources, with more "smarts" and active consumers, many of whom are both energy

⁵ Updated from Hicks, J. and Ison, N. (2012) 'Community Energy' in A. Shepherd, P. Allen and P. Harper *The Home Energy Handbook: a guide to saving and generating energy in your home and community*. Centre for Appropriate Technology, Wales.



producers and consumers aka “prosumers”. The transition is similar to that of moving from the age of the landline telephone to the age of the smart-phone.

This modern, 21st century energy system comes with much greater consumer choice. For this to work in the interests of consumers, it needs a proportion of the population to have greater energy literacy, both to take advantage of these new technologies and also to ensure that consumers are not taken advantage of. The energy system is complex -- engaging with it through the development of community energy projects inherently increases the energy literacy of the people driving the community energy project, the supporters and through osmosis with the wider community.

3. Increased social licence and public support for clean energy

Community energy projects build social licence for renewable energy development by engaging local people and broader communities of interest in the process of developing, owning and benefitting from renewable energy development. Research has shown that public support for specific renewable energy projects (e.g. wind farms) is highest when local people have been genuinely involved in the decision-making and are able to benefit from the outcomes of the development, leading to local perceptions of fairness in the process and outcomes of a development (Devine-Wright 2011b; Devine-Wright 2011c; Devine-Wright 2011a; Bell et al. 2013; D’Souza and Yiridoe 2014; Fast and Mabee 2015; Haggett 2011; Hall, Ashworth, and Shaw 2012; Gross 2007; Hicks 2016). In addition, several researchers have shown that community energy projects are uniquely positioned to build public support for renewable energy as a result of the depth of opportunity for local people to participate in and benefit from developments in their communities (Warren and McFadyen 2010; Haggett 2011; Hicks 2016).

Community energy projects also provide an opportunity for communities and the broader public to proactively engage with and support clean energy. It is important to appreciate that community energy projects offer a new model of engagement around renewable energy and this has flow on benefits the broader renewable sector. The ability of community energy to act as gatekeepers to creating the social license needed to reach the Victorian targets should be a key point in the Parliamentary Inquiry consideration. Indeed, when talking about community energy, the former Liberal Environment Minister of NSW Rob Stokes described how important it has been that community energy projects have demonstrated that renewable energy projects work and that they have provided tangible evidence for the public of how renewable energy technologies work.

4. Greater local economic development outcomes

Evidence (see Table 1) shows that if there is a community ownership component of a renewable energy project, particularly (though not limited to) larger-scale renewable energy projects, the economic benefit derived from the project by the local community is 1.5-7 times greater than it would otherwise have been. This is because projects with a local community-ownership component typically result in:

- Greater use of local content, including more local jobs and contractors, particularly in the construction phase. This in turn increases local skill development, which can be leveraged by regional businesses into contracts in the wider renewable energy industry.
- Larger and more appropriately targeted benefit funds/programs
- More of the profits being retained locally, as local investors/owners spend their profits in the local community.



Table 1: Financial benefits accrued in a local community from absentee versus locally owned wind farms⁶

Country	Absentee/ Corporate owned	Community/ Locally owned
Germany ⁷	€7 million over life of project	€58 million over life of project
UK ⁸	£1,000-5,000 / MW / year	£200,000-250,000 / MW / yr
USA ⁹	\$13,000-55,000 / MW / yr	\$82,000-140,000 / MW / yr
Australia ¹⁰	\$500-1,200 / MW / yr to community fund	\$5,000 - 8,000 / MW / yr to community Fund

5. A fairer transition to clean energy

Community energy projects can enable renters, apartment dwellers and households who cannot put solar on their own roof to access the benefits of renewable energy generation. From the Darebin Solar Savers project that saw solar installed on 300 low-income pensioners' homes in Melbourne using a rates-based financing mechanism, to the efforts to bring the US solar gardens model to Australia, community energy organisations are leading the way in ensuring we have a fair and equitable transition to clean energy where all Victorians can participate and benefit, no matter where they live or how much they earn.

A C4CE Strategic Initiative [Renewables for All](#) outlines the importance of taking a social justice approach to clean energy and sets out four possible models that can help deliver increased clean energy accessibility and affordability:

1. [Rates-based financing](#)
2. [Rent-based financing](#)
3. [Community-owned renewable energy](#)
4. [Solar Gardens](#).

6. Securing new sources of funding for the energy transition: the community investor

The [Collective Impact Assessment](#) undertaken as part of the National Community Energy Strategy in 2014 found that during the period 2008-2013 \$23 million in community funding for energy infrastructure has been secured in the development and delivery of community energy projects to date in Australia (see Appendix C). This figure does not include the significant volunteer and in-kind contributions that are made

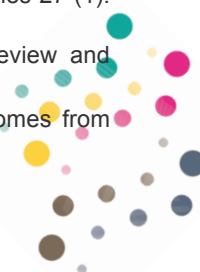
⁶ NOTE: different countries have used different metrics. German figures take into account local jobs, contracts, grant funds and returns to local shareholders; UK and Australian figures only include grant funds. USA figures consider the value of local jobs, local contracts and returns to shareholders

⁷ Gottschalk et al (2016) Regionale Wertschöpfung in der Windindustrie am Beispiel Nordhessen. Institut Dezentrale Energietechnologie. Kassel.

⁸ Munday, Max, Gill Bristow, and Richard Cowell. 2011. 'Wind Farms in Rural Areas: How Far Do Community Benefits from Wind Farms Represent a Local Economic Development Opportunity?' *Journal of Rural Studies* 27 (1): 1–12.

⁹ Lantz, E, and S Tegen. 2009. 'Economic Development Impacts of Community Wind Projects: A Review and Empirical Evaluation'. In . Chicago: National Renewable Energy Laboratory.

¹⁰ Hicks, J., Lane, T., Wood, E. and Webb, A. (forthcoming) Research Report: Enhancing Social Outcomes from Wind Development.



to get community energy projects across the line.¹¹ Further, this figure is now two years out of date and the amount raised has likely significantly increased since.

In 2014, the community energy sector had leveraged \$3 of community energy funding for every \$1 of government investment. One of the most successful community energy groups in the country, [Clearsky Solar Investments](#), has now leveraged (through 12 community solar projects) \$10 in community investment for every \$1 of government funding they received from a NSW Government start-up grant. Modelling conducted by Marsden Jacobs and Associates suggests that with significant funding support and scale-up of the community energy sector, this ratio could improve to 17:1 (\$17 dollars leveraged for every \$1 of government funding).¹²

7. Increased community resilience, empowerment and pride

Communities are motivated to participate in community energy projects by a range of factors from action on climate change, to increased energy independence and control. When they realise a community energy project, having navigating the complex hurdles of the energy system, corporations/co-op law and more, it can bring about a real sense of empowerment, pride and a 'can-do' attitude. Community energy projects are also about bringing people together, increasing social connection and the ability of people to work together voluntarily for the common good. All of these factors are key to increasing community resilience. Hepburn Wind is a key example of this - a trusted community voice with over 2000 members and a community enterprise approach, they have effectively flipped the standard commercial model on its head and delivered a sophisticated benefit sharing model.

5. THE CHALLENGES COMMUNITIES FACE TO ESTABLISH ENERGY PROJECTS

Community energy groups and projects face a range of challenges. These challenges fall into three main categories:

1. **Regulatory and policy challenges** which are predominately to do with the fact that our energy system and policies are not set up for democratically owned, mid-scale, decentralised energy. In addition rules, regulations and laws are also not set up for community enterprises more generally.
2. Challenges associated with the **skills, capabilities and volunteer nature** of most community energy groups as well as the skills gaps in the wider energy and supporting sectors in enabling community energy.
3. Challenges facing **specific community energy business models**. There are numerous different community energy business models, each with their own set of challenges. We have pulled out some of the most material and pervasive in this submission.

More information about the challenges facing the community energy sector can be found in the [2012 research report into Community Energy Challenges and Opportunities](#).

Regulatory and policy challenges

There are six main regulatory and policy challenges that currently materially constrain community energy projects in Victoria.

¹¹ See here for an analysis of the impact of in-kind and volunteer effort to the success of six community energy projects - http://c4ce.net.au/nces/wp-content/uploads/2015/04/Appendix-F_Community-Energy-Cost-Analysis_FINAL.pdf

¹² <http://cpagency.org.au/wp-content/uploads/2014/03/MJA-Report-to-CCE-Final-14Jun13.pdf>



1. The 20/12 investor rule within the Corporations Act.

Seeking investment is a highly regulated process. To seek investment from more than 20 investors, a community energy project most likely will need to be covered by an Australian Financial Services Licence, have a Prospectus, and undertake significant annual reporting. All of these add to the upfront and ongoing costs of a community energy project. For <100kW projects, as most community solar projects in development are, the income generated from the sale of electricity is unlikely to cover these additional costs. These legal requirements affect both the cost of a project (in the development and operation phases) and a group's ability to raise funds.

Two options currently work and neither are ideal:

1. Restricting your project to twenty investors or less, which reduces the community ownership and means that you need investors that can invest larger amounts in many cases \$5000 or greater.
2. More than twenty investors and pay the extra costs, meaning you need a larger renewable energy system (>400kW). This in turn restricts the number of possible host sites as there are few energy users in Victoria that use the amount of electricity generated from a 400kW solar system during the day every day of the year. These large energy users also usually have a very low electricity tariff, which means community solar is unlikely to be of benefit financially to them. See more on this issue of host sites below.

Proposed federal changes to unlock equity crowdfunding could address this challenge, [as outlined in this article](#), but this requires advocacy and support.

2. Payment in Lieu of Rates Formula.

This is the prescribed mechanism for calculating the amount that small scale energy generators pay to Local Government in lieu of rates. This needs to result in an outcome that does not unfairly disadvantage and present a barrier to the development and ongoing operational viability of community energy generators. It should be possible for necessary changes to be incorporated in amendment Bills and/or regulations that are submitted to the Victorian parliament on a regular basis. One method to reach this, would be to waive the \$40,000 component of the default PiLoR formula for community projects. The threshold criteria could have a narrow definition around installed capacity (100kW-10MW) and community-ownership. This would remove one very tangible and unintended barrier to community energy projects in Victoria.

3. Regulatory uncertainty for community wind in Victoria.

The development of wind energy, including community wind across the state, is still largely hindered by the prohibitive clauses in VC82. Whilst we welcome the reduction of the 2km setback to 1km in February of this year, this should be further removed for community wind and made in accordance with noise standards and local topography. Hepburn Wind would never have been built under the current planning regulations as they have more than a dozen neighbours under 1km. There is also still the need to remove the no-go zones and the 5km setback around 15 regional towns across the state.

4. Lack of policy support for mid-scale renewables

Renewables policy in Australia has historically lacked effective support for mid-scale renewables. This has left a gap in the landscape and focussed industry development on behind-the-meter solar (supported by feed-in tariffs and the SRES) and large-scale renewables, particularly wind (supported by LRET and, increasingly, reverse auctions). However, there are 4-5 orders of magnitude in the scale of potential renewables projects, between a residential or small commercial rooftop solar array and a 100MW wind or solar farm, that are currently (and have historically been) unsupported by policy. Community-scale renewables fit into this gap, and while community-scale projects are not necessarily community energy projects they often are.



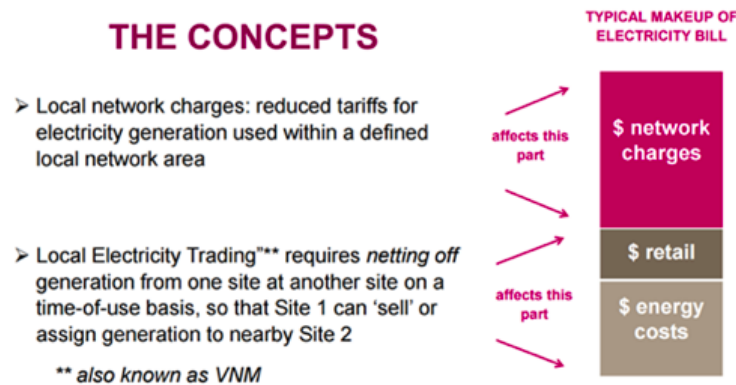
The practice of introducing an added value stream through policy is a standard approach in any new industry development policy framework. Policies such as the RET, FiTs and Reverse Auctions provide additional value or revenue streams from which it is possible to create viable business models for small-scale, and large-scale renewables.

Community energy can be thought of as a new or emerging social/community enterprise sector that to date has lacked a coordinated policy framework to stimulate and support its development.

5. Network costs

While network costs have not risen as much in Victoria as other parts of Australia, network costs still represent a significant proportion of energy consumers' bills. Currently, it is possible to capture the full variable retail value of energy (~15-18c/kWh for small commercial energy customers) if a community energy project is behind the meter, but if a community solar project wants to export electricity through the grid just a few hundred meters to customer/owners, it must pay the full cost of the grid. This fact is creating a range of perverse incentives and outcomes for all energy customers as [documented by the Institute for Sustainable Futures \(ISF\)](#).

Mainly, this means that models of community energy based on Local Electricity Trading are not financially viable (or at least financially marginal), because there is no ability to pay for only partial or local use of the energy network. The Local Generation Network Credit (LGNC) rule change was one proposed solution to this challenge. The following figure explains these two concepts.



However, despite robust modelling from ISF that showed that a well-designed LGNC would both unlock new distributed generation business models and save all energy customers money, the AEMC has proposed rejecting the proposed rule. We hope that the ESC's review of the *True value of Distributed Generation* on board this research and incorporates a local-use of energy network credit into their proposed future methodology.

For detailed analysis about how Local Energy Trading and Local Network Charges could unlock a new model of community energy, [see the Moira and Swan Hill Council Solar Garden Case Study here](#).

6. Victorian licensing arrangements

To date, a significant obstacle to establishing community energy projects in Victoria has been the requirement to have a licence to generate, distribute and sell electricity. This is a barrier not faced by projects in NSW and other states who can receive a retail licence exemption from the AER. C4CE is pleased that the Minister has issued an interim regulation providing an exemption to community groups amongst others from the need to obtain a licence, particularly for solar PPAs. It is essential that the ongoing GEO and the ESC Licensing Framework Reviews do not impinge on this exemption.



Capacity and skills challenges

There are three main capacity and skills challenges that currently materially constrain community energy projects in Victoria.

1. Lack of access to early-stage funding

One of the biggest barriers community energy groups and organisations face is finding the funding to take a project from an idea to a tangible plan: taking it 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 has been shown to make a significant difference both in Australia and around the world.

2. Reinvention of the wheel

The energy market is complex and developing a viable community energy project takes significant skills and knowledge. Community energy groups have access to significant skills and knowledge, and have proven themselves capable of learning and innovating. Indeed, this process of increasing a community's energy literacy and community enterprise skills and knowledge is one of the benefits of community energy. Nevertheless, without dedicated capacity building and information sharing programs, this upskill process can lead to significant reinvention of the wheel, can take a lot of time and can add costs [as outlined in the Finance and Funding sub-strategy of the National Community Energy Strategy](#).

3. Lack of knowledge about Co-operatives Law

Community energy projects rely on good lawyers and accountants, who are willing to provide their services in-kind or at a good rate, both in the setup and operational phases. Unfortunately, there is a lack of knowledge within the legal and accounting communities about Co-operatives Law. Co-operatives are an alternative to private or public companies and also trusts. They have a regulatory framework that better suits the fact that members participate economically in the activities of the co-operative and are also its owners.

Unlike private companies or trusts, co-operatives do not have the same threshold limits before onerous disclosure requirements kick in (i.e. the 20-12 rule) and unlike public companies the costs and compliance levels are significantly lower. However, a lack of lawyers and accountants familiar with cooperatives law means that many community energy groups are deterred from using this legal structure, as they cannot access good and affordable advice.

Specific community energy business model challenges

There are three main challenges that we want to draw the Committee's attention to regarding specific community energy business models in Victoria.

1. Behind-the-meter community solar - finding a suitable host-site

Behind the meter community solar projects are the main community energy models being pursued by community energy groups in Victoria. The primary reason for this is that they are the most viable. However, if a community energy groups is embarking on an investment- (rather than a donation) based project, they will need an appropriate host site and these are hard to come by. An appropriate host-site is one that has a high daytime electricity demand, an appropriate roof or land, owns or has long-term use of its building, pays a relatively high electricity price and gets the social benefits of a community solar approach (rather than a commercial solar approach). Sites/organisations that fit these criteria are few and far between. See more on [host-site characteristics here](#).



2. Multi-party community energy models - high transaction costs

Community energy models that are trying to overcome fundamental market barriers such as split incentives or the upfront capital cost issue, often require multiple parties/organisations to be involved. For example, the Darebin Solar Savers model that uses council rates to pay-back the cost of installing solar on pensioners roofs at zero upfront cost, involves three to four organisations - the council, an honest broker, the solar installer and potentially a financier. This takes a lot of coordination and is a lot more time intensive than a household simply buying a solar array from a solar installer. However, many households cannot just buy a solar array from a solar installer - hence the need for business models like Darebin Solar Savers. The additional transaction costs that come with models that are also trying to deliver a social good, will not be delivered by the market alone. As such, there is a strong case for government support. See the Community Powerhouses policy (Section 7 below) which is a program designed to facilitate more complex, but socially beneficial models of community energy.

3. Mid-scale community energy projects - not financially viable

The rules of the energy market mean there are currently only two main viable business model for renewables – behind the meter solar, or large-scale wind or solar. Community groups have developed models for both of these approaches, but it means that mid-scale community solar farms, bioenergy projects and even a mid-scale wind farms are difficult to make cost effective, constraining what communities can do. Particular challenges facing the economic viability of mid-scale renewables projects include the cost of grid-connection and securing a PPA with a retailer.

All these challenges combine together to make developing a community energy project hard and limit what is possible. Finding a model that actually works can be thought of as solving a rubik's cube of factors. Further, these challenges interact with each other and should not be considered in isolation.

6. THE CHALLENGES SPECIFIC TO ESTABLISHING PROJECTS IN METROPOLITAN AREAS AND HOW TO OVERCOME THEM

Community energy projects in metropolitan areas face most, if not all, of the same challenges outlined above. However, there are some additional challenges to draw out, specifically to do with technology options and fundamental market barriers such as split incentives.

Technology options

Metropolitan community energy groups have a more limited range of potential viable technologies than regionally based community energy projects. Regional community energy groups have access to greater land area and associated renewable energy resources. However, urban community energy will be constrained mainly to solar projects, most of which will be rooftop solar, likely in the future coupled with storage. As such, the challenges specific to behind the meter community solar (such as accessing good host sites) are particularly relevant to community energy in metropolitan communities.

Of particular relevance for solar in high-density and high-rise areas is the risk of overshadowing. It is recognised that new development has the potential to impact on the performance of existing solar panels through overshadowing. There are currently no statewide guidelines for assessing overshadowing impacts a proposed development may have on solar panels. Moreland City Council for example, has developed a planning advisory note that will assess the impact of development on existing solar panels, however, greater clarity and protections should be given by the State Government to existing solar systems from new developments.



Market barriers

Fundamental market barriers such as split incentives have a particular impact on solar and energy efficiency in the commercial and residential sectors in metropolitan areas. The NSW Department of Industry defines split incentives as:

*Split incentives occur when those responsible for paying energy bills (the tenant) are not the same entity as those making the capital investment decisions (the landlord or building owner). In these circumstances, the landlord may not be inclined to make the necessary upgrades to building services when the benefits associated with the resulting energy savings accrue to the tenant.*¹³

This is relevant as split incentives not only affect renters and landlords, but also apartment dwellers and body-corporates, of which there are a higher proportion in urban areas. This particularly affects the ability to do apartment solar, which can be thought of as a type of community energy project. Currently, there are few examples of successful apartment solar and more needs to be done to unlock models that work for this customer segment. Solar Gardens ([see more here](#)) is one model of community energy, which with support would sidestep the split incentive barriers faced by both renters and apartment dwellers.

7. THE BEST WAYS TO ENCOURAGE AND SUPPORT THE DEVELOPMENT OF COMMUNITY ENERGY PROJECTS

There are six priority interventions that we would encourage the Victorian Government to adopt to support the development of community energy projects across Victoria.

1. Establish a Victorian community energy target

To stimulate the development of community renewable energy in Victoria we recommend that the Victorian Government include a carve-out of 5-10% of its the 5400MW Victorian Renewable Energy Target, to be delivered by community energy projects by 2025. This community energy target could also be additional to the 5400MW target.

In 2011, Scotland introduced a 500MW by 2020 community energy target.¹⁴ By setting this target, the Scottish Government focused policy attention and effort on developing the community energy sector. This target was achieved five years ahead of schedule in 2015.¹⁵ There are some significant similarities between Victoria and Scotland - both have played a leadership role, both are sub-national governments and both have a similar population size.

We urge the Victorian Government to follow in Scotland's footsteps and set an ambitious, but achievable community energy target and support the community energy sector to contribute to Victoria's growth of renewable energy capacity. With at least 27 community energy groups in Victoria and more setting up regularly, there is significant community enthusiasm, passion, time and effort that - with the right policy support - can be unleashed to help deliver a range of Victorian Government priority policy outcomes, including the VRET. However, as we discuss in the following section, achieving a dedicated community energy target or carve out is likely to require a complementary policy mechanism to the reverse auction mechanism outlined in the Victorian Renewable Energy Target and Auctions Consultation Paper.

¹³ www.industry.gov.au/Energy/EnergyEfficiency/Non-residentialBuildings/HVAC/FactSheets/Documents/HVACFSSplitIncentives.pdf

¹⁴ www.gov.scot/Publications/2011/08/04110353/5

¹⁵ <http://news.scotland.gov.uk/news/community-renewables-meets-target-early-1df6.aspx>



2. Develop a policy mechanism to underpin the Victorian community energy target

As outlined in Section 6 above, there has traditionally been very little policy support for community and mid-scale renewable energy projects. We believe this is a missed opportunity and big gains can be made by creating a fit-for-purpose financial policy mechanism for community energy projects, in order to leverage community, public and private finance.

We suggest that the Victorian Government should work with the community energy sector to collaboratively design a policy mechanism to encourage community energy. Further that this policy should be underpinned by a series of principles, for example:

- Encourage collaboration;
- Be simple to administer, with clear objective success criteria;
- Minimise political risk through not requiring ministerial or departmental sign-off on every eligible project;
- Enable projects over a broad range of sizes;
- Focus on delivering the multiple benefits or value propositions associated with community energy particularly the social benefits, in addition to environmental, technical and economic benefits.

These principles could be delivered through a fit-for-purpose community energy auction, a community Feed-in Tariff or similar policy mechanism.

It is vital that any community energy policy mechanism is fit-for-purpose and contractually simpler for community energy project proponents as well as Government. Many community energy projects are designed and managed by volunteers. The resources, both in terms of time and cost, to deliver a typical auction application and adhere to the contractual and compliance activities over the life-cycle of a project (25 years plus), is onerous for a community group developing a relatively small project and in many cases impacts the financial viability.

In designing the policy, it is important to draw on the experience from Europe and here in Australia. For example the ACT Government program has brought up issues of perceived political risks that come with an energy policy based on government selection rather than mass-market requirements (such as the certificate trading scheme underpinning the national RET). This perceived risk will need to be considered in the design of an appropriate policy mechanism. European trends are showing the impact of auctions on the community energy sector as community-scale projects typically cannot compete against commercial projects. The World Wind Energy Association is now advocating for a 'diversity of players' in forthcoming auctions in Germany so that community energy can still participate and have a designated portion.

3. The re-establishment of the statewide strategic coordinators of Sustainability Victoria (SV) as support agency for community energy.

With the efficiencies that need to be made across the government, it makes sense for people already working in the area and with existing strong relationships to play a key role. In the recent SV [Climate Change Conversations](#), community energy was a constant theme of importance to communities and is a fit within the Climate Change Framework developed by DELWP.

The community energy financial mechanism could be an area where the statewide strategic coordinators of Sustainability Victoria (SV) could be of significant assistance. For example, the policy mechanism proposed above could be administered by Sustainability Victoria, who could also actively hold the hand of community groups to help them increase their chance of success.



4. Adopt and implement the Community Powerhouses policy

The Community Powerhouses policy (also known as the Smart Energy Communities policy) is designed to address the capacity, skills, reinvention of the wheel and transaction cost challenges outlined in Section 6 above.

The policy includes:

- The establishment of at least 10 regional community hubs like Moreland Energy Foundation across Victoria, to provide expertise, advice, coordination and support for community energy initiatives in their region.
- Provision of grant funding for community energy projects
- Funding for a network to provide capacity building support and information sharing across the state.

[For more on the Community Powerhouses Policy see here.](#)

The policy was adopted by the [Federal Labor Party](#), [the Greens](#) and supported by key independents such as the [Nick Xenophon Team](#) in the lead-up to the last federal election. As such, this policy could be implemented unilaterally by Victoria or as part of a national partnership with other jurisdictions similar to the National Landcare Program.

5. Proactively encourage community-developer partnerships

The Victorian Government has a significant role to play in supporting community involvement in large-scale renewable energy projects. Community involvement through partial community ownership aka community-developer partnerships or sophisticated benefit sharing schemes have significant social licence and local economic development benefits as outlined in Section 4. Mechanisms available to the Victorian Government include community engagement and benefit sharing selection criteria for the reverse auction process that underpins the large-scale part of the VRET, as well as establishing a dedicated culture-change, brokering and capacity building program.

Community-developer partnerships as outlined in Section 2 above are where the community or a renewable energy developer initiates a renewable energy project and both parties agree to deliver it in partnership. This structure is used typically for large (multi-MW) renewable energy projects where a community investment vehicle is part owner, along with the renewable energy developer and possibly other entities. The community often leads community engagement and consultation activities while the developer leads the technical studies.

6. Drive broader energy market reforms to enable decentralised clean energy solutions

Community energy projects face similar challenges to the wider decentralised and renewable energy industries. Driving broader energy market and policy reforms to enable new decentralised generation and demand side management business models will have a flow-on benefit to the community energy sector. These energy market reform efforts should range from:

- Advocating within the COAG Energy Council to change the National Electricity Objective to include climate/environment and social/fairness criteria, to
- The Essential Services Commission (ESC) of Victoria allowing retail licensing exemptions for Solar PPAs, to
- Support for the Local Generation Network Credit Rule-change or the introduction of similar through the ESC's *True value of Distributed Generation Review*.



Additional information

Finally, we encourage the In the Economic, Education, Jobs and Skills Committee to consider two documents that outline recommendations for how to support community energy:

1. The National Community Energy Strategy - <http://c4ce.net.au/nces>, which identifies 34 interventions to support community energy. These interventions fall into five main areas identified as needing to be addressed in order to grow the community energy sector:
 - Community energy models: clarifying and documenting standardised “models” of community energy, which form the basic components of a project that can be utilised by or adapted by new communities across Australia.
 - Funding and Financing: identifying the funding and finance needs of community energy projects and the wider community energy sector.
 - Capacity Building: building the capacity of community energy proponents to successfully implement and deliver their projects.
 - Profile raising and Stakeholder Support: raising the profile and build broad community support to make community energy ‘mainstream’
 - Policy and Regulatory Reform: articulating the range of government interventions and support programs required to realise the vision for a vibrant community energy sector.
2. Research report into *Barriers to Innovative Distributed Generation Business Models*, conducted by the Institute for Sustainable Futures, UTS and Moreland Energy Foundation for the Victorian Department of Economic Development, Jobs, Transport and Resources.
3. The recent C4CE Guide for Community Renewable Energy for Victorian Communities delivered for the State Government: <http://earthresources.vic.gov.au/energy/sustainable-energy/community-energy>.

8. TYPES OF RENEWABLE ENERGY RESOURCES THAT COULD BE USED OTHER THAN SOLAR AND WIND POWER

There are community energy groups in Victoria and across Australia developing community energy projects with a wide range of technologies, particularly sustainable bioenergy, small-hydro, pumped hydro storage, batteries and EV charging. Examples include (but are not limited to):

- The [Warburton Community Hydro](#) project that has been under development for a number of years, and another micro-hydro project under development by Hepburn Wind,
- A community [pumped-hydro concept in the Strathbogie Ranges](#),
- Community bioenergy which in Victoria is being led by [Mount Alexander Sustainability Group](#), and another project in the Hepburn Shire.

There are also significant opportunities for community-based energy efficiency and demand management programs. Examples like [CORENA](#), the [Isle of Eigg in Scotland](#) and Denmark Community Wind in WA show that energy literate communities can play an active role in coupling energy efficiency with renewables and managing peak-demand.

However, the challenge is that these technologies do not have the same viable business models particularly compared to behind-the-meter community solar. The underpinning reasons for this are outlined in Section 5 above and the proposed solutions are outlined in Section 7.

Community Bioenergy

In particular, we see significant synergies between community energy and bioenergy. There are a few reasons for this. Firstly, bioenergy has a natural economy of scale at a



community level – too small and the project is cost-prohibitive, too big and you have to transport the biomass feedstock too far.

Secondly, there are valid concerns about bioenergy associated with where the feedstock is sourced from. In particular, energy crops at the expense of food crops and burning of native forests. Community energy groups are in significant part motivated by environmental concerns. Having environmentally minded community members involved in developing and implementing bioenergy projects is likely to lead to bioenergy projects that are environmentally beneficial.

Thirdly, one of the best bioenergy feedstock opportunities is waste, which is already collected at a community scale by local councils.

Finally, compared to wind and solar, bioenergy inherently involves more transaction costs, due to the ongoing feedstock issues. These like other more complex community energy projects, benefit from coordination and multi-party brokering. This coordination and brokering role is one of the main purposes of establishing the proposed 10 Community Powerhouses (see Section 7 above). As such, we believe the implementation of the Community Powerhouses policy would help unlock community bioenergy as well as new models of community energy based on other emerging technologies.

Community Microgrids

There is currently significant interest in microgrids; community energy and microgrids are often conflated for good reason, given that microgrids are a community-scale energy solution. Nevertheless, whether a microgrid is a community energy project depends on the level of involvement, ownership and direct benefit to the community. What is clear, is that we will see both commercial and community microgrids in the next years.

Already many community energy groups are developing zero-net energy or 100% renewable plans (for example the [Z-NET Uralla Blueprint](#)). Whether these will be a dedicated micro-grid or an aggregation of a range of community energy projects and interventions will depend on a range of factors. However, already a number of communities are talking with their Distribution Company about the potential for community energy micro-grid solutions. [Renewable Newstead](#) with the support of the Victorian Government is the most advanced of these groups.

For more on community energy and microgrids [see this briefing paper](#) from the C4CE Renewables for All strategic initiative.

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