



BUSINESS COUNCIL
OF CO-OPERATIVES AND MUTUALS

Business Council of Co-operatives and Mutuals

Submission to the Economic, Education, Jobs
& Skills Committee inquiry into Community
Energy Projects

September 2016

Introduction

The Business Council of Co-operatives and Mutuals (BCCM) welcomes the opportunity to make a submission to the Victorian government's inquiry into community energy projects. We commend the government on their interest in the role of co-operatives and mutuals in the energy sector and look forward to the discussion this interest will encourage.

It is important to note that the co-operative model, while ideally suited to small and medium community energy projects is able to be scaled to provide significant infrastructure and delivery of service, at little cost to government, and ensuring ongoing community ownership. This is evidenced in America, where 12 per cent of the retail electricity market and 42 per cent of the poles and wires (mainly in rural and regional areas) are owned by co-operatives.

The BCCM stands ready to assist government with the development of community energy co-operatives, and would welcome the opportunity to provide further evidence to the inquiry should that be required.

Yours faithfully,

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Chief Executive Officer
Business Council of Co-operatives and Mutuals

28 September 2016

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1. Executive Summary

This is a submission about ownership. Specifically, it identifies how the co-operative model of ownership can be used by communities to autonomously control their energy production and supply.

Evidence from Denmark and Germany shows that as the share of co-operative ownership of renewable energy increases, renewable energy as a proportion of total energy production increases. If Victoria wishes to become carbon neutral, it must put energy production in the hands of communities.

Further, community owned projects have been shown to deliver superior benefits to the local community and to the economy more broadly than investor owned projects. This is reinforced by research by Ernst & Young which has found that co-operatives create substantial additional value for the local economy they are operating in compared to other corporate models.

Our new energy systems are currently in the process of being created. Distributed energy resources will soon account for a significant proportion of total energy generation, and old fossil fuel generators will be replaced by large-scale renewable energy projects.

This submission will focus on the role that co-operatives could play in our new energy system. Co-operative organisations provide for well governed community ownership of energy-generating assets and management. Their propensity for engendering strong community engagement is a force for delivering community investment in projects and community employment, as well as community education about responsible energy usage.

This submission will briefly outline **the benefits of community energy** (pg 6), **why the co-operative form of business enterprise is the legal model best suited for community energy** (pg 7), **before recommending that community energy projects be defined as energy projects which are owned by co-operatives** (pg 9).

It will then examine the role of co-operatives in the following sectors of the energy system:

- Small-scale renewable energy projects (pg 10)
- Medium-scale renewable energy projects (pg 13)
- Renewable energy manufacturing (pg 18)
- Large-scale renewable energy projects (pg 15)
- Energy retailing (pg 17)

For each sector, this submission will outline the benefits of community ownership, as well as the detractions of investor-ownership. For each sector, ways that the Victorian Government can encourage the uptake of community projects will be suggested by drawing on best practice models from domestic and international jurisdictions. Further, particularly for small- and medium-scale energy projects, ways to support the uptake of community owned renewable energy projects in metropolitan areas will be investigated.

Co-operative ownership of energy should be encouraged in all sectors, and should not be limited to small and mid-scale electricity generation, which is currently its primary domain in Australia.

The main barriers communities face setting up their own energy projects are access to finance and access to information and support. In the section on **finance** (pg 19), ways the government can use **power purchase agreements** (pg 19) and **loans** (pg 19) to support community ownership will be examined. A **Community Owned Renewable Energy Development (CORED) Bank** will be proposed (pg 20), as well as ways the government can **facilitate communities investing in themselves** (pg 21).

The best way that the Victorian Government can deliver access to information and support is to set up a number of **Community Power Hubs** (pg 23). The role that Community Power Hubs can play and what they could be modelled on are outlined.

Finally, an ambitious **target for community and co-operative ownership** of total energy projects, which recognises the significant benefits such ownership delivers relative to investor ownership, will be suggested (pg 25). A target of 50% would prove appropriate.

2. The BCCM and its role

This submission is made by the BCCM on behalf of Australia's member-owned business sector.

The BCCM is the peak cross-sector body for co-operatives, mutuals and member-owned businesses. Its purpose is to promote recognition of the important role of co-operative and mutual businesses in the Australian economy.

The BCCM unites the diverse range of co-operative and mutual businesses in Australia.

Eight in ten Australians are members of at least one co-operatively owned business. Well known examples include motorist mutuals, credit unions, building societies and non-profit health funds. Co-operatives are found in retail (The Co-op Bookshop), agriculture (CBH Group, Norco), healthcare (National Health Co-operative) and housing (Common Equity Housing Ltd). Many sporting clubs and recreational groups are registered co-operatives (RSLs and bowling clubs).

The sector represented by the BCCM is significant to the Australian economy. Including member owned superannuation funds, the contribution of the sector to GDP in 2013/2014 was estimated to be 7 per cent.

A primary role of the BCCM is to work to ensure a level playing field for co-operatives and mutuals with all forms of business operating in the Australian economy.

Since its inception in 2013, the BCCM has advocated for a broad based review of the operating environment for co-operatives and mutuals and on 2 March 2015, the Australian Senate referred the role, importance, and overall performance of cooperative, mutual and member-owned firms in the Australian economy for inquiry. This inquiry reported on 17 March 2016. A list of the recommendations relevant to this submission is attached at Appendix A.

3. Summary of recommendations

Recommendation 1

The Victorian government should implement the recommendations of the Senate inquiry into CMEs to ensure that it is as easy to set up and run a co-operative in Victoria as any other model of business.

Recommendation 2

Community co-operatives should own mini grids and control demand management within the mini grids. The Victorian Government should require mini grid installation at all new property developments.

Recommendation 3

The Victorian Government should provide communities with support to construct and run their own mini-grids. Support should be provided in terms of information and education, infrastructure investment and installation, and help with the development of demand management systems. The REA in the USA and the REB in Bangladesh are good models. More specifically, the support provided by AusNet Services to the Mooroolbark mini grid in Melbourne should be replicated.

Recommendation 4

The Victorian Government should amend the Electricity Industry Act to require commercial retailers to agree to white label agreements with community owned mini grids on reasonable terms that reflect the full value of distributed generation.

Recommendation 5

The Victorian Government should implement a scheme similar to the Colorado scheme which would facilitate medium-scale renewable energy projects. The scheme should approximate the following:

- Energy must be sold directly to a retailer;
- The retailer pays retail price or a designated tariff;
- The retailer provides a Virtual Net Metering credit on the subscribing customer's bill;
- The credit should be provided tax free;
- There must be at least 5 subscribers;
- Subscribers may buy up to 120% of their own power use worth of solar power;
- At least 5% of the energy project must be allocated to low-income subscribers;
- A co-operative must own and administer the project.

Recommendation 6

The Victorian government can facilitate community ownership through requiring all new large-scale renewable energy projects to offer 50% ownership to a community co-operative to reflect the significant benefits community ownership delivers relative to investor ownership.

Recommendation 7

The Victorian Government can support the creation of co-operative energy retailers by making available grant money for feasibility studies and providing information. It can also, in the course of facilitating communities to organise mini grids, provide assistance for communities to set up community retailers by, for example, connecting them with a licensed co-operative retailer.

Recommendation 8

The Victorian Government should provide support for community owned manufacturing projects. It can do this in a number of ways:

- Government-led social procurement programs to roll-out locally manufactured renewable energy systems in public housing and disadvantaged households;
- Better, fairer renewable energy rebate and subsidy programs that advantage high-quality locally produced products over cheaper imports.

Recommendation 9

The auction evaluation principles should be modified to require that 50% ownership of a project must be offered to a community co-operative to reflect the significant benefits community ownership delivers relative to investor ownership.

Recommendation 10

The Victorian Government should create a Community Owned Renewable Energy Development Bank (CORED Bank). It should issue Green Bonds to investors with capital raised invested in community co-operatives which are building or facilitating the use of renewable energy generators.

Recommendation 11

The Victorian Government should help fund and set up an online 'Crowdsourced Community Equity' Platform.

Recommendation 12

The Victorian Government should develop Community Power Hubs to facilitate access to experts such as lawyers, accountants and financiers, who can deliver services to support community energy co-operatives.

Recommendation 13

The Victorian Government should ensure that regular official statistics measuring the level of community and co-operative ownership of total renewable energy projects in Victoria are collected.

Recommendation 14

The Victorian Government should set an ambitious target for community and co-operative ownership of energy supply and management which recognises the significant benefits such ownership delivers to Victorians.

4. The benefits of community energy

Community owned projects have been shown to deliver superior benefits to the local community and to the economy more broadly than investor owned projects.

Studies have consistently found that local ownership of wind farms, for instance, generates an average of 2.5 to 3.5 times more jobs and 3.1 to 4.5 times more local dollars compared to absentee ownership¹. This is achieved due to increased use of local labour, businesses and materials; dividends paid to local shareholders; and servicing of local bank loans².

A 2014 study by the UK Department of Energy and Climate Change found the benefits may even offer as much as 12-13 times the community value re-invested back into local areas as would be achieved through 100% commercial models. The blue line below shows the value delivered if a project is 100% community owned; the green line shows the value delivered if the same project is 100% investor-owned³:

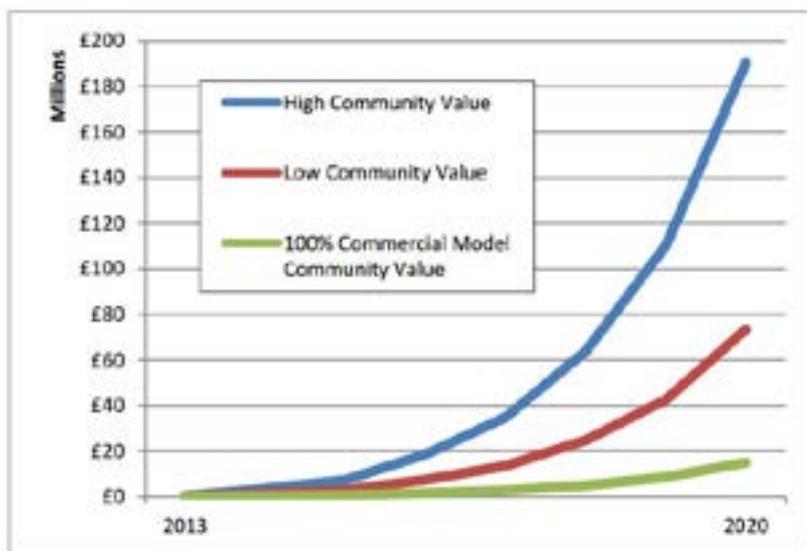


Figure 1: Annual Project Income Retained Locally: 'High (Strong & Sustained)' Scenario

¹United States Government Accountability Office, 'Wind Power's Contribution to Electric Power Generation and Impact on Farms and Rural Communities' (2004), viewed 5 September 2016, <<http://www.gao.gov/new.items/d04756.pdf>> 6; Kildegaard, 'Ownership and Regional Economic Impact: The Case of Wind Development in Minnesota' (2010), viewed 5 September 2016, <http://www.cleanenergyresourceteams.org/files/WindOwnershipMinnesota_ArneKildegaard_July2010.pdf> 1.

²Lantz and Tegen, 'Economic development impacts of community wind projects: a review and empirical evaluation' (National Renewable Energy Laboratory, US Department of Energy, 2009) 1.

³UK Department of Energy and Climate Change, 'Community Renewable Electricity Generation: Potential Sector Growth to 2020' (2014), viewed 5 September 2016, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/274746/20140108_Community_Energy_Modelling_FinalReportJan.pdf.

5. The co-operative form of business enterprise is the legal model best suited for community energy

5.1. Co-operatives provide superior protections for community ownership

Community ownership of renewable energy projects provides local economic value and increased uptake of renewable energy only if the project remains in community hands. The co-operative legal model can ensure this.

Due to the “active membership” provisions in the Co-operative National Law, shares in co-operatives are not freely tradeable⁴. Shares can only be sold, with the consent of the board, to a person who will be an active member.

This ensures that, under the co-operative model, it is difficult for those outside of the community to take control of the community energy project. This can be contrasted with the investor-owned company model:

Company	<p>Control can easily be taken out of community hands</p> <p>Shares presumed to be freely tradeable⁵</p> <p>Restrictions on the right to transfer shares are construed strictly⁶</p>
Co-operative	<p>Community control protected</p> <p>Shareholders must be “active members”</p> <p>Shares can only be sold with the consent of the board</p>

Further, in an investor-owned company control in the form of voting rights is tied to the number of shares held and so to capital contributions. This means that control can be concentrated in the hands of only a few community members, who can, as a result, dominate other community members invested in the energy project. If this occurs, benefits will also be concentrated in the select few who hold power.

In contrast, control in a co-operative is tied to membership rather than the number of shares held. A co-operative operates on the principle of one-member-one-vote⁷. This ensures that co-operatives are democratically controlled by their members in common. It will also ensure that benefits go to members collectively.

Company	<p>Benefits and control can be concentrated</p> <p>Control tied to capital contributions</p>
Co-operative	<p>Community can benefit and control collectively</p> <p>Democratic control – one member one vote</p> <p>Benefits distributed widely</p>

Co-operatives are therefore the ideal vehicle for the “high degree of ownership and control” communities must exhibit for an energy project to be a ‘community energy’ project. Co-operatives are the ideal legal mechanism for ensuring communities benefit collectively from the energy project, and for ensuring that the energy project continues benefiting communities collectively. The CNL provides a robust framework for decision making at the local level, increasing the say of communities in decisions which affect them.

⁴ Co-operatives National Law Application Act 2013 (Vic) s 112.

⁵ Austin and Ramsay, Ford, Austin and Ramsay’s Principles of Corporations Law (LexisNexis Butterworths, 16th ed., 2015) [21.320].

⁶ Ibid.

⁷ Co-operatives National Law Application Act 2013 (Vic) s 228(2).

The complimentary nature of co-operatives and community energy was recognised in the recent Federal Senate Economics References Committee report on co-operative, mutual and member-owned firms. The committee made the following recommendations:

Recommendation 2

The committee recommends that [the] co-operative and mutual sector be better represented in government policy discussions, and is actively promoted as a possible option for service delivery particularly where community based initiatives are being considered⁸.

Recommendation 3

The committee recommends the Commonwealth Government work with states and territories to develop a program of supports to encourage the establishment of new co-operatives and mutual enterprises.

5.2. Co-operatives provide superior protections for community ownership

Research by Ernst & Young has found that co-operatives create substantial additional value for the local economy they are operating within compared to other corporate models. Money spent at a co-operative, it was found, is recycled in the community to create a resilient and thriving local economy: for every \$1 dollar spent at a co-operative an additional 76c of value is created for the local economy⁹. This is known as a '**local multiplier effect**¹⁰'.

Further, co-operatives have proved resilient in the face of crises and excellent mechanisms for smoothing the business cycle and ensuring stable economies. This is due to their multi-stakeholder model and their ability to engage with their communities, ensuring ongoing community support for their ventures¹¹.

6. Defining 'community energy'

The BCCM supports the Government's attempts to define 'community energy' in its recent [Community Energy Projects Discussion Paper](#).

This is particularly important since if the government is going to seek to deliver support for community energy initiatives and to relieve community owned projects of cost and regulatory burdens, it needs a working definition for 'community energy'.

BCCM submits that ownership is key to the definition of community energy. BCCM submits that the definition of community energy provided by the Dutch Research Institute for Transitions is a good starting point:

'Community energy' refers to energy projects where communities (of place or interest) exhibit a high degree of ownership and control, as well as benefiting collectively from the outcomes.

The BCCM further submits that 'community energy' should be defined as projects where community ownership, control and collective benefit are protected so that the community will continue to control, own and benefit collectively from the project.

Co-operative law has evolved to provide protection for the 'high degree of ownership and control' communities must exhibit for an energy project to be a 'community energy' project. It has evolved to ensure that communities benefit collectively from an energy project, and that they continue to benefit collectively.

Communities should be encouraged to use the co-operative legal form since it is specifically designed for community ownership.

Recommendation 1

The BCCM submits that 'community renewable energy projects' should be defined as projects owned using the co-operative legal form.

⁸ Senate Economics References Committee, Parliament of Australia, Cooperative, mutual and member-owned firms (2016) 22.

⁹ Ernst & Young, 'Sticky Money - Recognising the total value created by Australian Co-operatives and Mutuals' (2014).

¹⁰ Shuman, The Local Economy Solution (Chelsea Green Publishing, 2015) 35.

¹¹ Birchall Resilience in a Downturn: The Power of Financial Co-operatives (International Labour Office, 2013); and Birchall and Ketilson, Resilience of the Co-operative Business Model in Times of Crisis (International Labour Office, 2009).

6.1. Practicalities

Currently, not all community owned energy projects use the co-operative legal form – some use the company form. This means that if ‘community energy’ is defined purely with reference to co-operatives only a small class of total renewable energy projects will be captured in the definition.

This can be rectified through the Victorian government providing financial and legal support to enable community energy projects to transition to the co-operative legal form. This should not prove costly, and would help provide protection for the ‘community’ nature of energy projects. For more on this see the section below on Community Power Hubs.

7. Small-scale renewable energy

Recent technological advances in energy production, storage and digital metering have meant that the way we use and consume energy will soon undergo a tremendous transformation. The transformation has already begun, with around 15% of households already producing their own energy using solar panels¹³. The CSIRO has described this as a “customer driven revolution¹⁴”, which is shifting decision-making power towards residential, commercial and industrial end-users¹⁵.

Uptake so far, however, has been uncoordinated and has been made on the basis of individualised benefits.

Individualised uptake of distributed energy generation is extremely inefficient compared to more collective models.

For example, AusNet Services has found that if distributed energy generation infrastructure (solar panels and batteries) is shared among a number of households this will greatly reduce the costs of renewable energy generation:

Locally produced energy	Cost
A single household produces 90% of the energy it uses	\$25,000
A single household produces 99.9% of the energy it uses	\$60,000-\$120,000
30 households produce 90% of the energy they use using shared infrastructure	\$12,500

A group of 30 households using shared infrastructure can achieve 90% energy independence for half the cost that a single household could¹⁶. This is possible through the use of mini grids.

A mini grid is a localised grouping of electricity sources and loads that normally operates connected to and synchronous with the traditional centralised grid (macro grid), but can disconnect and function autonomously as physical and/or economic conditions dictate. The operation of mini-grids offers distinct advantages to customers and utilities:

- improved energy efficiency
- reduced environmental impact
- minimisation of overall energy consumption
- improvement of reliability of supply
- network operational benefits such as loss reduction, congestion relief, voltage control, or security of supply
- more cost efficient electricity infrastructure replacement

¹² Walker and Devine-Wright, ‘Community renewable energy: What should it mean?’ (2008) 36:2 Energy policy 497-500.

¹³ Ernst & Young and the Climate Council of Australia, ‘Renewable Energy Jobs: Future Growth in Australia’ (2016), viewed 5 September 2016, <<http://www.climatecouncil.org.au/uploads/7b40d7bbefbdd94979ce4de2fad52414.pdf>> 14.

¹⁴ CSIRO and Energy Networks Association, ‘Electricity Network Transformation Roadmap: Interim Program Report’ (2015), viewed 5 September 2016, <http://www.ena.asn.au/sites/default/files/roadmap_interim_report_final.pdf> 67.

¹⁵ Ibid 25.

¹⁶ Presentation by Mark Judd, Energy Services Innovation Manager Ausnet Services Ltd, ‘Local Schemes to Deliver Renewable Energy’ (John Cain Foundation, 7 September 2016), <http://www.johncainfoundation.com.au/event-view/local-schemes-to-deliver-renewable-energy/>.

Mini grids can coordinate local energy assets and present them to the mega grid in a manner and at a scale that is consistent with current grid operations, thereby avoiding major new investments that are needed to integrate emerging decentralised resources¹⁷.

AusNet Services recently launched a trial mini grid in suburban Melbourne, in Mooroolbark¹⁸. The trial points to the fact that mini-grids may be used within major towns and cities. AusNet Services is also to launch a mini grid trial in Yackandandah¹⁹, and Powercor is working with the town of Newstead on a similar project²⁰.

Recommendation 2

Community co-operatives should own mini grids and control demand management within the mini grids. The Victorian Government should require mini grid installation at all new property developments.

There is an extensive history of co-operative ownership of the grid. For example, in the early 1930s nearly 90% of US urban dwellers had electricity but 90% of rural homes were without power. Investor-owned utilities argued that the costs of providing electrification to rural areas were too high.

In response to this, as part of Roosevelt's New Deal, the Rural Electrification Administration (REA) was created in 1935. In 1937, the REA drafted the Electric Cooperative Corporation Act, a model state law for the formation and operation of rural electric co-operatives. The REA administered low-interest and long-term loan programs for rural electrification, and also provided technical, managerial, and educational assistance. By 1939, the REA had helped to establish 417 rural electric cooperatives, which served 288,000 households. By 1953, over 90% of the US farms had electricity²¹.

The same has occurred in Bangladesh. There, the Rural Electrification Board (REB) worked with rural communities to establish local electrical co-operatives to develop and distribute electricity. The local co-operatives draw up an electrification master plan for their own operational area, and their members (the rural consumers) "participate in decision making through elected representatives" to the co-operatives governing body²².

REB assistance takes the form of "initial organisational activities, training of manpower, operational and management activities, procurement of funds, liaising with energy utilities and other relevant agencies, and conducting elections". Moreover, the REB offers the co-operatives subsidised financing through low-interest loans with long repayment periods.

The REB scheme is regarded "by many as one of the most successful rural electrification programmes within developing countries".

Community ownership offers technical benefits through creating a more context-appropriate, responsive and innovative energy system²³. A report by the University of Cambridge Centre for Sustainable Development has stated that, "...electric co-operatives require fewer subsidies than private investor-owned or municipality-owned utilities²⁴".

If investor-owned network companies own the mini grid and control demand management this presents significant dangers.

Evidence from Australia supports this: as a result of reforms in 2005 customers have subsidised investor-owned network operators an amount between \$4.5-\$7.5 billion, and have paid between \$15-25 billion for unnecessary investment in network infrastructure²⁵.

17 Microgrids at Berkeley Lab, 'About Microgrids', viewed 5 September 2016, <https://building-microgrid.lbl.gov/about-microgrids>.

18 AusNet Services, 'Media Release: AusNet Services launches ground breaking community mini grid trial' (19 April 2016), viewed 5 September 2016, [http://www.ausnetservices.com.au/CA257D1D007678E1/All/41F5DC5437B4E7C2CA257F3A00205770/\\$file/160419%20Mooroolbark%20trial%20launch%20FINAL.pdf](http://www.ausnetservices.com.au/CA257D1D007678E1/All/41F5DC5437B4E7C2CA257F3A00205770/$file/160419%20Mooroolbark%20trial%20launch%20FINAL.pdf).

19 Presentation by Mark Judd, Energy Services Innovation Manager Ausnet Services Ltd, above note 13.

20 Victorian network signs up to help rural community go 100% renewable (15 February 2016) RenewEconomy, <http://reneweconomy.com.au/2016/victorian-network-signs-up-to-help-rural-community-go-100-renewable-49476>.

21 Yadoo and Cruickshank, 'The value of cooperatives in rural electrification' (2010) 38:6 Energy Policy 2943.

22 Ibid.

23 Hicks and Ison, 'Community-owned renewable energy (CRE): Opportunities for rural Australia' (2011) 20:3 Rural Society, viewed 5 September 2016, http://cpagency.org.au/wp-content/uploads/2014/03/Community-Renewables-Benefits-and-Challenges-HicksIson_Rural-Society_2011.pdf 249.

24 Ibid.

25 Beyond Zero Emissions, 'Zero Carbon Australia: Renewable Energy Superpower' (2015), viewed 5 September 2016, http://media.bze.org.au/resp/bze_superpower_plan.pdf, 7.

There may also be significant community resistance to outside control of local energy generation and demand management. Outside control would alienate communities and decrease the potential benefits of a move to distributed energy generation. This was exemplified by the recent mandatory roll-out of smart meters in Victoria, “a problematic process that included failings in community engagement²⁶”. Groups such as ‘[Stop Smart Meters Australia](#)’ were created, who have concerns around privacy.

Recommendation 3

The Victorian Government should provide communities with support to construct and run their own mini-grids. Support should be provided in terms of information and education, infrastructure investment and installation, and help with the development of demand management systems. The REA in the USA and the REB in Bangladesh are good models. More specifically, the support provided by AusNet Services to the Mooroolbark mini grid in Melbourne should be replicated.

Currently, a community can collectively purchase and consume locally produced energy only by licensing its own retailer or through agreeing a ‘white label’ agreement with a commercial retailer to set up an unlicensed ‘community retailer’. The community retailer is the customer of a commercial retailer which secures the energy the community needs from the mega grid.

Recommendation 4

The Victorian Government should amend the Electricity Industry Act to require commercial retailers to agree to white label agreements with community owned mini grids on reasonable terms that reflect the full value of distributed generation²⁷.

8. Medium-scale renewable energy

Currently customers will have the energy they generate from solar panels purchased by their retailer, with payment made in the form of a credit on the electricity bill of the customer²⁸. The customer can only use the credits to offset on-site consumption²⁹. They cannot use the credits to offset consumption at another property - it is not a relocatable right.

8.1. Energy credits should be a relocatable right

If credits were a relocatable right, households could purchase a shareholding in a co-operatively-owned medium-scale energy project, like a solar park, that might be located elsewhere — perhaps even in a sunnier part of the state. As stated by Embark,

“A community solar park representing 100 households on the local supermarket would be much more capital efficient than 100 individual systems. Further capital efficiencies might be obtained by locating community solar parks in parts of the state with cheaper access to land, or with better solar resources³⁰”.

Further, the development of hundreds of medium-scale renewable energy projects will provide local firms with the opportunity to increase their expertise in the production of renewable energy technologies. Currently only foreign firms have the expertise to build large-scale solar parks. This ought to be rectified in order to increase local employment.

26 Productivity Commission, ‘Digital Disruption: What do governments need to do?’ (Commission Research Paper, 2016), viewed 5 September 2016, <http://www.pc.gov.au/research/completed/digital-disruption/digital-disruption-research-paper.pdf> 204.

27 This includes a) the value of avoided line losses; b) the value of energy produced during peak energy use periods; c) the value of decreased network maintenance costs. See Deutsche Bank, ‘Paying for Renewable Energy: TLC at the Right Price’ (2009), viewed 5 September 2016, <https://institutional.deutscheam.com/content/_media/1196_Paying_for_Renewable_Energy_TLC_at_the_Right_Price.pdf>.

28 Electricity Industry Act 2000 (Vic) s 40FB.

29 Electricity Industry Act 2000 (Vic) s 40F.

30 Embark, Submission to Victorian Department of Primary Industries’ Discussion Paper on Medium Scale Solar, 9 November 2010, 16.

Allowing energy credits to be relocatable would greatly encourage medium scale energy projects.

For example, 'Community Solar Gardens' legislation in Colorado and in a number of other US states has greatly encouraged medium scale solar. Solar Gardens represented 96% of all active and planned community solar capacity in the USA in 2014³¹.

Similarly in Denmark, energy credits are available for owners of wind turbines on the portion of the wind generation that offset a household's domestic electricity consumption. This has incentivised over 150,000 households to own shares in co-operatives which own wind farms³². The energy credit is provided tax free³³. Wind power supplies almost 20% of Denmark's energy. 80% of the turbines are owned by households and communities³⁴.

Recommendation 5

The Victorian Government should implement a scheme similar to the Colorado scheme which would facilitate medium-scale renewable energy projects. The scheme should approximate the following:

- Energy must be sold directly to a retailer
- The retailer pays retail price or a designated tariff³⁵
- The retailer provides a Virtual Net Metering credit on the subscribing customer's bill
- The credit should be provided tax free
- There must be at least 5 subscribers
- Subscribers may buy up to 120% of their own power use worth of solar power
- At least 5% of the energy project must be allocated to low-income subscribers
- A co-operative must own and administer the project

Such a scheme would make it obligatory for energy retailers to purchase the energy from medium-scale projects. This would make it unnecessary for the project to acquire a generation license, and since the energy credits are relocatable, the project would not have to operate behind the meter.

The price which retailers pay for energy produced by co-operatively owned medium-scale renewable energy should be assessed. For example in Germany, a higher tariff is available for energy projects which have community participation and local economic retention. Citizens now own over 50% of Germany's installed renewable energy capacity³⁶. Similarly Ontario, in Canada, offers premiums based on project ownership, with bonuses for community and Indigenous ownership. Renewable energy projects owned by co-operatives should get a higher tariff to encourage community ownership³⁷.

31 Community Power Agency, 'Briefing Paper – Solar Gardens', viewed 5 September 2016, <http://cpagency.org.au/wp-content/uploads/2016/04/Renewables-For-All-Policy-Briefing-Solar-Gardens.pdf> 2.

32 Community Power Agency, 'Renewables for All: Increasing Customer Access to New Energy Technologies' (2015), viewed 5 September 2016, <http://cpagency.org.au/wp-content/uploads/2015/10/R4A-Victorian-Discussion-Paper-Final.pdf> 11.

33 Community Power Agency, 'Government Support Options for Community Energy: Best Practice International Policy' (2014), viewed 5 September 2016, http://cpagency.org.au/wp-content/uploads/2015/01/CPA_Best-Practice-International-Policy_Oct-2014.pdf 8.

34 Ison, 'Overcoming Technical Knowledge Barriers to Community Energy Projects in Australia' (2009), viewed 5 September 2016, <<http://cpagency.org.au/files/NickylsonCommunityEnergy.pdf>> 1.

35 See above note 27.

36 Community Power Agency, above note 34, 8.

37 bid 9.

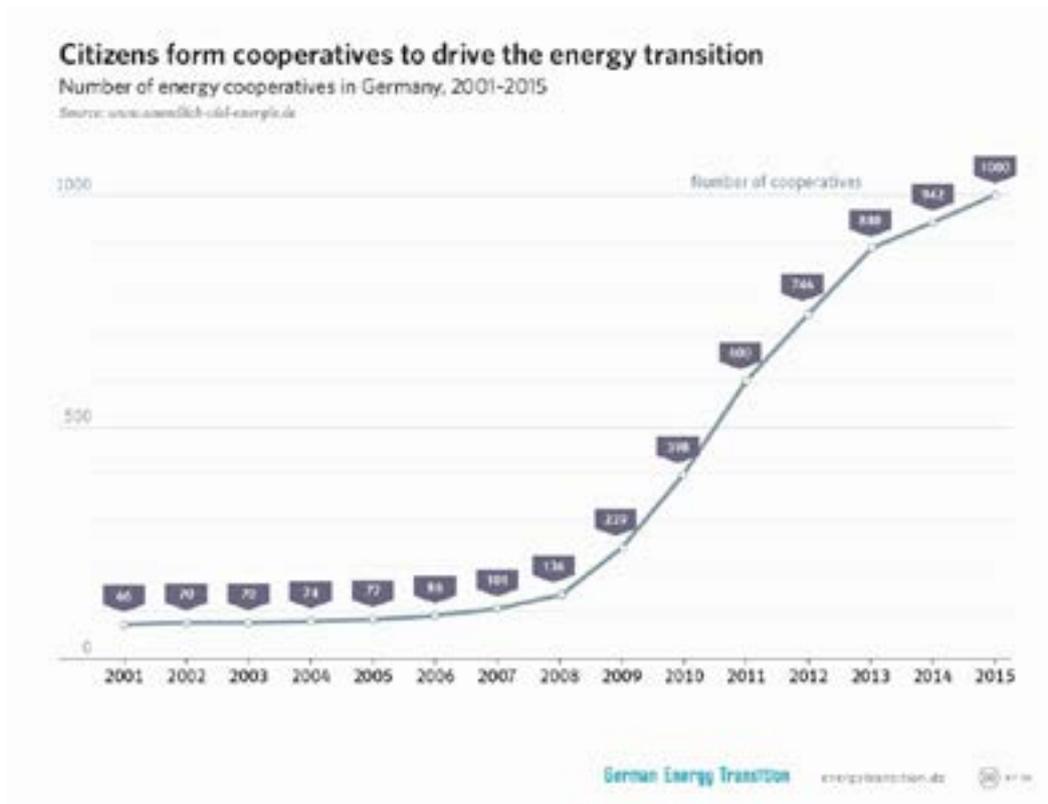


Figure 2: Citizens form cooperatives to drive the energy transition



Hepburn Wind turbine in Victoria

9. Large-scale renewable energy

As stated by the Dutch Research Institute for Transitions, it is important to reorient the tendency to “develop things for community members, towards developing things with community members and/or support things which are developed by the community”.

There are extensive benefits to developing large-scale energy projects with communities rather than developing them for communities.

For example community acceptance of wind farms “has been shown to increase when there are clear benefits flowing back to the local community, changing the common objection of ‘big business’ invading landscapes for profit at local people’s expense”. This is particularly important in Victoria where community groups such as ‘Stop These Things’, an anti-wind farm group, have been effective as an anti-wind farm lobby. Such groups have legitimate concerns around investor-owned companies entering rural communities purely in order to “line their pockets”.

Wind energy’s general acceptance in Denmark and Germany has often been attributed to the distribution of wind farm ownership across hundreds of thousands of individual participants. As stated above, wind power supplies almost 20% of Denmark’s energy, of which 80% of the turbines are owned by households and communities. Similar developments have occurred in Minnesota in the USA – since co-operative ownership of wind energy was introduced, Minnesota has become one of the country’s top wind energy producers.

If renewable energy is owned by a co-operative which is representative of the community, this creates a social licence to operate in that community. Promoting this model of community energy would therefore help to achieve a more rapid scaling up of the community energy sector, as well as of the renewable energy sector more generally.

For example the Coonooer Bridge wind farm located north-west of Bendigo, which will supply the ACT, is jointly owned with landholders neighbouring the project. It is the first renewable energy project in the country with an ownership structure that includes the local farming community in this way. As a result, community opposition to the project has been low.

- 38 Avelino et al., ‘The (Self-)Governance of Community Energy: Challenges & Prospects’ (2014), viewed 5 September 2016, https://www.drift.eur.nl/wp-content/uploads/2014/02/PracticeBrief_CommunityEnergy_DRIFT_2014.pdf 25. See also Charles Leadbeater’s article ‘For, With, By and To’ (2010), viewed 5 September 2016, <http://charlesleadbeater.net/2010/05/for-with-by-and-to/>.
- 39 Hicks and Ison, above note 24, 248.
- 40 Disciplined and on-message, wind farm opponents are a force to be reckoned with (19 June 2013) The Conversation, viewed 5 September 2016, <https://theconversation.com/disciplined-and-on-message-wind-farm-opponents-are-a-force-to-be-reckoned-with-15258>.
- 41 Angus “The Enforcer” Taylor – out to settle the score (4 November 2013) Stop These Things, viewed 5 September 2016, <https://stopthesethings.com/2013/11/04/angus-the-enforcer-taylor-out-to-settle-the-score/>.
- 42 Embark, ‘History of community energy’, viewed 5 September 2016, <http://www.embark.com.au/display/public/content/History+of+community+energy>.
- 43 Ison, above note 35, 1.
- 44 Embark, above note 42.
- 45 Coalition for Community Energy, ‘National Community Energy Strategy’ (2015), viewed 5 September 2016, http://c4ce.net.au/nces/wp-content/uploads/2015/04/NCES_2015_Final01.pdf 3, 18.
- 46 ACT Government, ‘How wind will power Canberra homes’ (2015), viewed 5 September 2016, http://www.environment.act.gov.au/__data/assets/pdf_file/0009/688275/150048-Renewable-energy-brochure-ACC.pdf 2.
- 47 Coonooer Bridge Wind Farm a renewable win for Victoria in dire environment (28 April 2015), viewed 5 September 2016, <http://www.theage.com.au/environment/coonooer-bridge-wind-farm-a-renewable-win-for-victoria-in-dire-environment-20150428-1mv971.html>.
- 48 Embark, ‘Community energy in Europe’, viewed 5 September 2016, <http://www.embark.com.au/display/public/content/Community+energy+in+Europe#CommunityenergyinEurope-Germany>.

10. Retailer

Currently commercial retailers have significant power over the viability of community energy projects.

Even if, as suggested above, the Victorian Government makes it obligatory for commercial retailers to purchase the energy generated by small and medium -scale community owned energy, any profits a retailer makes from the energy generated will go to investor-owners rather than back into the community.

This would mean that the commercial retailer would have a vested interest in community energy projects getting as little return as possible from energy produced, as well as a vested interest in selling energy to communities at the maximum price possible.

A co-operative retailer owned by member-customers, on the other hand, would have as its primary responsibility the maximisation of value for those member-customers.

This would mean that the co-operative retailer would seek to purchase excess energy from community-owned generators for the maximum price possible, while selling energy derived from the mega grid to member-customers for the lowest price possible.

There is good evidence of this from Enova Energy, Australia's first community-owned retailer.

"Enova's vision is of a community serving itself, providing its own renewable energy to meet its needs, at competitive prices, and with all in the community able to participate in the shift to renewables."

-Enova

Enova states that it will achieve its vision for community owned energy by:

- Encouraging more efficient use of energy through education.
- Encouraging and aggregating community demand for renewable energy.
- Purchasing existing domestic and business supply at a generous FIT and encouraging the installation of additional renewable technologies in households and businesses⁴⁹.

Recommendation 7

The Victorian Government can support the creation of co-operative energy retailers by making available grant money for feasibility studies and providing information. It can also, in the course of facilitating communities to organise mini grids, provide assistance for communities to set up community retailers by, for example, connecting them with a licensed co-operative retailer.

⁴⁹ Enova Energy, 'Enova Energy Source', viewed 5 September 2016, <http://www.enovaenergy.com.au/faq-renewable-energy/enova-energy-source/>.

11. Manufacturing

The transition to a new energy system means that substantial new infrastructure will need to be installed. This provides significant opportunities for the manufacture and installation of renewable energy.

This has already been recognised by the Victorian Government:

“Growing the share of renewable energy in Victoria is a key part of the Government’s strategy to create jobs, particularly in rural and regional Victoria and with a focus on addressing the reduction in employment occurring in areas such as automotive manufacturing. Renewable energy projects offer opportunities for job creation in a range of fields and skill types. A steady pipeline of projects will also encourage greater development of local supply chains in components and professional services⁵⁰”.

Earthworker Co-operative is a Victorian-based community-led project. Its stated mission is to “respond to the challenges of climate change and the need for local job creation, by facilitating the establishment of a network of worker-owned cooperatives throughout Australia in sustainability-focused industries⁵¹”. It is currently working to grow local manufacturing jobs and support regional communities like the Latrobe Valley community in making a transition from coal-based employment to renewables-based employment.

Recommendation 8

The Victorian Government should provide support for community owned manufacturing projects. It can do this in a number of ways:

- Government-led social procurement programs to roll-out locally manufactured renewable energy systems in public housing and disadvantaged households
- Better, fairer renewable energy rebate and subsidy programs that advantage high-quality locally produced products over cheaper imports⁵².



Pingala and the local community help choose, build and operate the solar farm on the roof of a local host site.

50 Department of Economic Development, Jobs, Transport & Resources, ‘Victoria’s Renewable Energy Roadmap Delivering jobs and a clean energy future’ (2015), viewed 5 September 2016, <http://www.energyandresources.vic.gov.au/__data/assets/pdf_file/0007/1193281/9057-DEDJTR-ESD-Renewable-Energy-Roadmap-20150820.PDF> 7.

51 Earthworker Co-operative, ‘About Us’, viewed 5 September 2016, <http://earthworkercooperative.com.au/about-us/>.

52 Musil, submission to the Victorian Government Renewable Energy Target Inquiry, 2015, viewed 5 September 2015, http://earthresources.vic.gov.au/__data/assets/pdf_file/0004/1235299/Dan-Musil.PDF.

12. Finance

Making it easier for community renewable energy projects - and in particular community co-operative owned renewable energy projects - to access capital is a priority if we are serious about building a strong community owned sector within the energy transition.

12.1. Energy credits should be a relocatable right

The Victorian Government recently introduced its Victorian Renewable Energy Auction Scheme. Based on a similar scheme in the ACT, it provides renewable energy investors with certainty of income on a Contract for Difference basis⁵³.

Project proponents put forward a 'strike' price per megawatt hour (MWh) of generation. If the wholesale price of electricity falls below the strike price during the lifetime of the energy project, the government will pay the difference.

There are seven evaluation principles which project proponents must address, including the principle of "community engagement". The focus of the scheme, however, is on project proponents offering "the lowest strike price"⁵⁴.

It would be a missed opportunity to focus too closely on the lowest strike price. South Africa, for instance, requires community ownership of a proportion of any project which wishes to access government power purchase agreements. Contract evaluation is based 70% on price and 30% on socio-economic factors⁵⁵.

Recommendation 9

The auction evaluation principles should be modified to require that 50% ownership of a project must be offered to a community co-operative to reflect the significant benefits community ownership delivers relative to investor ownership.

12.2. Loans and upfront capital

One challenge limiting rapid uptake of community owned renewable energy is that almost all capital costs are upfront when projects have the least membership and so the least equity. Further, because community owned renewable energy - and the co-operative legal form more generally - is a relative unknown for large financial actors, it can be hard to secure debt funding.

As such, there is a need for policy support mechanisms for the provision of capital grants or loans. There is good evidence that a small capital injection can create significant leverage for enabling communities to invest in themselves.

A report written by Marsden Jacob Associates, a financial and economic consultant firm, estimates that for every \$1 of government money invested in community owned energy projects, this will leverage an average of an additional \$17. For instance \$15 million would create generation build investment of \$254million; \$100 million would create generation build investment of \$1.7 billion⁵⁶.

Recommendation 10

The Victorian Government should create a Community Owned Renewable Energy Development Bank (CORED Bank). It should issue Green Bonds to investors with capital raised invested in community co-operatives which are building or facilitating the use of renewable energy generators.

It could do this at very little cost to itself.

53 Victorian Government Department of Environment, Land, Water and Planning, 'Victorian Renewable Energy Auction Scheme Consultation Paper' (2015), viewed 5 September 2016, http://www.energyandresources.vic.gov.au/__data/assets/pdf_file/0010/1348183/Consultation-paper-Victorian-renewable-energy-auction-scheme.pdf

54 Ibid.

55 Victoria's new renewables policy, and why it could learn from South Africa (15 September 2016), RenewEconomy, viewed 5 September 2016, http://reneweconomy.com.au/2016/victorias-new-renewables-policy-learn-south-africa-32146?mc_cid=5ceb3a1ba1&mc_eid=0b9f078224.

56 Marsden Jacob Associates, 'Community Renewable Energy Fund' (2013), viewed 5 September 2016, <http://cpagency.org.au/wp-content/uploads/2014/03/MJA-Report-toCCE-Final-14Jun13.pdf>.

12.2.1. Community Owned Renewable Energy Development Bank (CORED Bank)

The Victorian Government has already raised \$300 million through the issuance of Green Bonds. They are five year bonds with a coupon of 1.75%. It is the first Australian government to make such a move⁵⁷.

The Victorian Green Bonds were also the first government-issued bonds anywhere in the world to receive international Climate Bond Certification from the Climate Bonds Initiative, which seeks to ensure Green Bonds are used for low carbon-based endeavours⁵⁸.

The global green bond market is now poised to reach \$US75 billion (\$100 billion) in total volume for 2016 and so set a new record for the fifth consecutive year⁵⁹. The increasing demand has been supported by many big pension funds now carrying mandates that stipulate portfolios must hold required levels of environmentally friendly investments.

By creating a CORED Bank, the Victorian Government could tap into the growing demand for Green Bonds in order to provide communities with the upfront capital they need for their renewable energy projects.

The bank would issue Green Bonds which it would guarantee at a coupon rate similar to the Green Bonds the government has already issued (1.75%).

It would use the money raised to invest in community co-operatives which are building or facilitating the use of renewable energy generators. The co-operatives would include small-scale residential and rural micro-grid co-operatives; medium-scale co-operative solar gardens; and co-operatives building large-scale renewable energy projects in partnership with commercial firms. It would also include co-operative retailers and renewable energy manufacturing co-operatives.

The bank would lend according to the following **investment criteria**:

- It must increase the total proportion of renewable energy under community ownership
- It must develop an extensive network of co-operatively owned mini-grids
- It must develop an extensive number of medium-scale renewable energy projects
- It must foster co-operative ownership of large-scale renewable energy
- It should invest in co-operatively-owned renewable energy manufacturers
- Individual projects must be focused on the development of renewable energy
- Individual projects must be managed by a community co-operative
- The capability and commitment of the community co-operative must be demonstrable

The CORED Bank would guarantee the Green Bonds, so providing certainty for investors. The bank would seek to make a return from its investments in community energy at a higher rate than the bond coupon rate. This would allow the fund to be a revolving fund, with net profits made on investments reinvested in the community owned renewable energy sector. The bank would therefore operate at no net cost to the government.

Similar schemes already operate in other jurisdictions. For example in Germany the government has created the German Development Bank (KfW). Loans by the KfW bank have stimulated 10 billion Euro of investment, which comprises 51% of all renewable energy investments in Germany in 2012. Loans cover up to 100% of the capital costs and offers favourable terms. There is also the regional bank of Baden-Wuerttemberg (a state-owned bank), which offers interest-reduced loans particularly for community wind projects. This can be up to 10 million Euros and cover up to 100% of the investments costs for wind projects owned by local communities⁶⁰.

57 Treasury Corporation of Victoria, 'TCV Green Bond' (2016), viewed 5 September 2016, https://www.tcv.vic.gov.au/page/Market_Activity/TCV_Green_Bond/.

58 Australia's Victoria raises AU\$300 million through world first Green Bond issuance (21 June 2016), PV-Tech, viewed 5 September 2016, <http://www.pv-tech.org/news/australias-victoria-raises-au300-million-through-world-first-green-bond-iss>.

59 Green bonds the new black in the market as environmental financing surges (27 July 2016), ABC, viewed 5 September 2016, <http://www.abc.net.au/news/2016-07-27/green-is-new-black-in-the-bonds-market-environmental-finance/7664414>.

60 Community Power Agency, above note 34, 7.

12.3. Facilitating communities investing in themselves

The Victorian Government can also help to facilitate communities investing in themselves.

12.3.1. Set up a 'Crowdsourced Community Equity' Platform

The best way that the government could do this would be to help fund and set up a 'Crowdsourced Community Equity' Platform. The platform should be modelled on the UK-based community investment platform [MicroGenius](#). There is currently no equivalent platform in Australia, which places communities that wish to co-operatively raise capital for social ventures at a disadvantage.

In the UK, since 2009 almost 100,000 people have invested over £100m to support 350 community businesses⁶¹.

One such business is the Ynni Ogwen community energy project in the UK. It raised £455,050 (\$810,000) from 144 funders within two months of being [listed](#) on Microgenius. The share offer had to be closed earlier than expected due to the high level of demand – the minimum target for the project was initially listed as £160,000.

Crowdsourced community equity funding is already prevalent in Australia. For example, the [Pingala Community Energy Co-operative](#) in Sydney has just secured funds for its first project, a 29.9kW set of solar panels on Young Henry's Brewery in Newtown. In August it raised \$17,500 for the project by issuing 17,500 shares at \$1 each to 52 investors⁶². Pingala expects to use the same funding model for its future renewable energy projects. If an online platform becomes available, co-operatives like Pingala will likely increase in number and effectiveness.

The BCCM recently submitted a funding application to VicLaunch for a \$40,000 grant to set up an online Crowdsourced Community Equity Platform.

For this small fee, the government could help secure significant new sources of funding for community energy in the form of the community investor. Already \$23 million has been invested by Australian communities in community energy projects⁶³. As shown by the UK experience, this amount could be rapidly increased with the provision of a Crowdsourced Community Equity Platform.

Such measures are supported by the recommendations of the Federal Senate inquiry into co-operatives and mutuals. Specifically:

Recommendation 15

The committee recommends that Commonwealth and State Governments support the formalisation of some of innovative market-based approaches to raising capital for small and medium sized co-operative and mutual enterprises, in the form of advice and information, as they become available.

Recommendation 11

The Victorian Government should help fund and set up an online 'Crowdsourced Community Equity' Platform.

61 Community Shares Unit, 'What are Community Shares?', viewed 5 September 2016, <http://www.communityshares.org.uk/find-out-more/what-are-community-shares>.
62 Sydney community solar investment round raises \$17,500 in 9 minutes (23 August 2016), <http://reneweconomy.com.au/2016/sydney-community-solar-investment-round-raises-17500-in-9-minutes-95464>.

63 Coalition for Community Energy, 'Community Energy Collective Impact Assessment (An Appendix of the National Community Energy Strategy)' (2015), viewed 5 September 2016, http://c4ce.net.au/nces/wp-content/uploads/2015/04/Appendix-C_CIA-Final-Report_FINAL.pdf 12.

13. Community Power Hubs

"The Government will establish programs and processes to assist communities to develop their projects"
- Victoria's Renewable Energy Roadmap, the Victorian Government

Hubs would provide legal and technical expertise as well as start-up funding to help communities build and run their own clean energy projects.

While community energy groups have enthusiasm, time and commitment, they can lack the legal, technical and financial support needed to deliver renewable energy projects⁶⁴.

Further, many communities will need to be introduced to the idea of community owned energy at the small-, medium- and large-scales if deep deployment of community ownership of energy is to occur. For example, in the USA in the 1930s, 'field' men were deployed to meet with rural communities to outline to rural leaders the procedures and principles that would create and install community owned power networks⁶⁵.

It is also the case that there is currently a notable lack of professional services available to provide financial, management or legal advice to co-operative enterprises.

In the recent Federal Senate inquiry into co-operatives and mutuals, a lack of awareness and expertise in co-operatives was identified as one of the principle barriers which co-operative enterprises face⁶⁶. Co-operatives have a large amount of unmet legal need and a lack of resources dedicated to meeting that need.

It is for this reason that Embark, for example, has recommended for community solar projects to use a company structure under the Corporations Act 2001, since this will provide "access a broader pool of legal and accounting service providers, as compared to co-operatives⁶⁷".

As detailed above, the co-operative form of business enterprise is the legal model best suited for community energy. If communities face barriers in terms of utilising the co-operative legal form, this will endanger the continuation of community ownership of energy projects and may lead to a concentration of power and benefits in only a few members of a community.

Recommendation 12

The Victorian Government should develop Community Power Hubs to facilitate access to experts such as lawyers, accountants and financiers, who can deliver services to support community energy co-operatives.

13.1. What is a Community Power Hub?

Community Power Hubs would draw from the best examples of local clean energy organisations springing up across the world. They would be modelled on funded volunteer coordination services such as those under the National Landcare Program or the models pioneered by the Rural Electrification Association in the USA and the Rural Electricity Board in Bangladesh.

64 Community Power Agency, 'ALP's community energy plan will turbo-charge innovation' (1 June 2016), viewed 5 September 2016, <http://cpagency.org.au/news/>.

65 Lights on: Rural America is electrified thanks to the REA, above note 94.

66 Senate Economics References Committee, Parliament of Australia, above note 33, 19-21.

67 Embark, 'Raising Capital', viewed 5 September 2016, <http://www.embark.com.au/display/public/content/Raising+capital>.

Hubs would be supported by a Community Power Hub Fund and Network. Community Power Hubs would provide legal and technical expertise and start-up funding to help kick-start clean energy projects in towns and suburbs across Victoria. Specifically, Hubs should engage in the following:

- Coordinating community energy projects
- Providing expert legal and financial advice
- Initiating organisational activities with respect to community owned mini-grids
- Training of workers
- Operational and management training and support
- Help with procurement of funds
- Acting as a localised distributor of loans from funds raised by the proposed CORED Bank
- Liaising with network operators
- Facilitating connections between communities and local energy projects
- Data gathering

This is supported by the following two recommendations from the Federal Senate report on co-operatives:

Recommendation 6

The committee recommends the Commonwealth Government work with states and territories to ensure the continual improvement to advice, guidance and information provided at all stages in the establishment, governance and regulation of co-operatives.

Recommendation 7

The committee recommends that the Commonwealth Government work with all relevant stakeholders to undertake a program of education and training to inform them about the role of co-operatives and mutuals.

An excellent example of a Community Power Hub already operating in Melbourne is [Positive Charge](#), which facilitates solar bulk buys, free home energy assessments, free LED lighting and drought proofing and insulation for households, and information and advice. See more in the case study below under Appendix B.

14. Community energy target

14.1. Data

Recommendation 13

The Victorian Government should ensure that regular official statistics measuring the level of community and co-operative ownership of total renewable energy projects in Victoria are collected.

The development of good policy requires information. Information on community and co-operative ownership of renewable energy is necessary in order to test the impact and success of government policies and regulations.

This is supported by the Federal Senate report on co-operatives:

Recommendation 1

The committee recommends that the Commonwealth Government ensures that a national collection of statistics and data is undertaken to provide an accurate picture of the scale and extent of the co-operative and mutual sector.

14.2. Community energy target

Data collection should be implemented alongside a target for community and co-operative ownership of renewable energy supply and management. 50% of all renewable energy supply and management should be owned and controlled by community co-operatives.

Recommendation 14

The Victorian Government should set an ambitious target for community and co-operative ownership of energy supply and management which recognises the significant benefits such ownership delivers to Victorians.

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15.2 B Legislation

Co-operatives National Law Application Act 2013 (Vic)

Corporations Act 2001 (Cth)

Electricity Industry Act 2000 (Vic)

16. Appendix A

Recommendations from the Senate Economics References Committee report into cooperative, mutual and member-owned firms:

Recommendation 1

The committee recommends that the Commonwealth Government ensures that a national collection of statistics and data is undertaken to provide an accurate picture of the scale and extent of the co-operative and mutual sector.

Recommendation 2

The committee recommends that co-operative and mutuals sector be better represented in government policy discussions, and is actively promoted as a possible option for service delivery particularly where community based initiatives are being considered.

Recommendation 3

The committee recommends the Commonwealth Government work with states and territories to develop a program of supports to encourage the establishment of new co-operatives and mutual enterprises.

Recommendation 6

The committee recommends the Commonwealth Government work with states and territories to ensure the continual improvement to advice, guidance and information provided at all stages in the establishment, governance and regulation of co-operatives.

Recommendation 7

The committee recommends that the Commonwealth Government work with all relevant stakeholders to undertake a program of education and training to inform them about the role of co-operatives and mutuals.

Recommendation 15

The committee recommends that Commonwealth and State Governments support the formalisation of some of innovative market-based approaches to raising capital for small and medium sized co-operative and mutual enterprises, in the form of advice and information, as they become available.

17. Appendix B

17.1. Small-scale renewable energy

Case Study: Rural electrical cooperatives - USA

Rural Electric Co-operatives (RECs) serve rural communities across the USA. Co-operatives own 6% of the country's transmission lines and generate 5% of the country's electricity.

RECs are relevant to the Australian community renewable energy discussion for two key reasons:

1. They illustrate that community ownership can be applied at many different points in the energy system
2. They show that government can play an essential role in supporting community energy co-operatives, particularly in the provision of capital but also in the provision of expertise and information. These large scale community ownership models are hard to imagine without such support.

Story

In the early 1930s nearly 90% of US urban dwellers had electricity but 90% of rural homes were without power. Investor-owned utilities argued that the costs of providing electrification to rural areas were too high.

In response to this, as part of Roosevelt's New Deal, the Rural Electrification Administration (REA) was created in 1935. In 1937, the REA drafted the Electric Cooperative Corporation Act, a model state law for the formation and operation of rural electric co-operatives. The REA administered low-interest and long-term loan programs for rural electrification, and also provided technical, managerial, and educational assistance. By 1939, the REA had helped to establish 417 rural electric cooperatives, which served 288,000 households⁶⁸.

There was a \$5 connection fee to participate in a electricity co-operative. It was said that "women and their egg money helped electrify Colorado. Many a farmwife came forward with \$5 and said, 'Here's my egg money, make sure I'm on the list'".

Today the US has approximately 900 RECs which remain the primary energy provider for most of the country's rural areas. They serve 12% of the nation's electric consumers and own and maintain 42% of the nation's electric distribution lines, covering 75% of the country's land mass.

Consumer co-operatives have not only created an economic mechanism for these areas to access electricity, they have also enabled members to leverage their collective buying power to access electricity at wholesale prices. They are therefore provided with reliable, low-cost energy.

The network of RECs is represented and serviced by a national service organisation, NRECA (National Rural Electric Cooperative Association). One key service NRECA has auspiced is the Cooperative Finance Corporation which provides access to capital and financial products for RECs.

Government Support

Starting with the New Deal era, rural electric co-operatives have had strong government support, particularly through lending programs and power supply preference programs. REA loans and technical assistance provided the primary momentum for rural electric co-operative formation.

Financing

Over time, however, the level of Federal lending has declined. In 1969 RECs joined together to secure access to capital beyond Government loans and support. The Cooperative Finance Corporation (CFC) initially pooled equity from member RECs and with this capital issued Collateral Trust Bonds. The success of these bonds allowed the CFC to start attracting finance from capital markets. The CFC is a co-operative of co-operatives, which currently has 1000 co-operative members. It has \$20 billion in assets and provides its members with competitive financing and access to capital.

Less than 40% of funding for RECs now comes from the Rural Utilities Service (which replaced the REA in 1994). The other 60% comes from the CFC and its subsidiary, the National Cooperative Services Corporation.

NRECA points out that although RECs receive Federal subsidies (through loan programs), so do all electric utilities. NRECA claims that rural electric co-operatives receive the smallest Federal subsidy per consumer.



⁶⁸University of Wisconsin Center for Cooperatives, 'Research on the Economic Impact of Cooperatives' (2009), viewed 5 September 2016, http://reic.uwcc.wisc.edu/sites/all/REIC_FINAL.pdf 47.

17.2 Community Power Hubs

Case Study: Positive Charge

Come to us for all your energy answers

Positive Charge is a not-for-profit social enterprise. We are energy experts and provide independent advisory services and programs to help households, community groups and businesses to save energy and money. We are committed to reducing carbon emissions at scale across a number of local government areas.

Positive Charge was established by the Moreland Energy Foundation Limited (MEFL) and is backed by more than 15 years' experience in creating and delivering community energy efficiency and renewable energy services.

Positive Charge is a community service, backed by local councils and run by award-winning sustainability experts, the Moreland Energy Foundation.

Getting help is easy. Whether you rent, own your home, or run a small business, we can help you with straight-talking advice.

How does it work?

Get advice on making your home, business, community group or school more energy efficient. Start saving and be more comfortable. The energy experts at Positive Charge can offer advice and recommendations on solar, lighting, insulation, heating, hot water, windows and more.

I run my own business...

...can we help? Absolutely. We have expert advice for your business, support to cut your lighting overheads in half and installing solar, insulation and more.

How is the service funded?

Local Councils each pay an annual membership fee to join, and in exchange residents and businesses receive an extended service – including access to our energy helpline, along with tailored local workshops and events.

As a social enterprise, all Positive Charge fees are invested back into the service to help us bring you and others even more smart energy answers.

Positive Charge is a social enterprise, with a mission and purpose to deliver carbon emission reductions at scale across a number of local government areas. The enterprise was set up with support from Social Traders and an investment from the Moreland Energy Foundation (MEFL). Our core mission is to reduce greenhouse gases, and we remain sustainable and viable through revenue generated from Council subscription fees and income from supplier management fees through the delivery of projects such as bulk-buy programs.

18. Appendix C

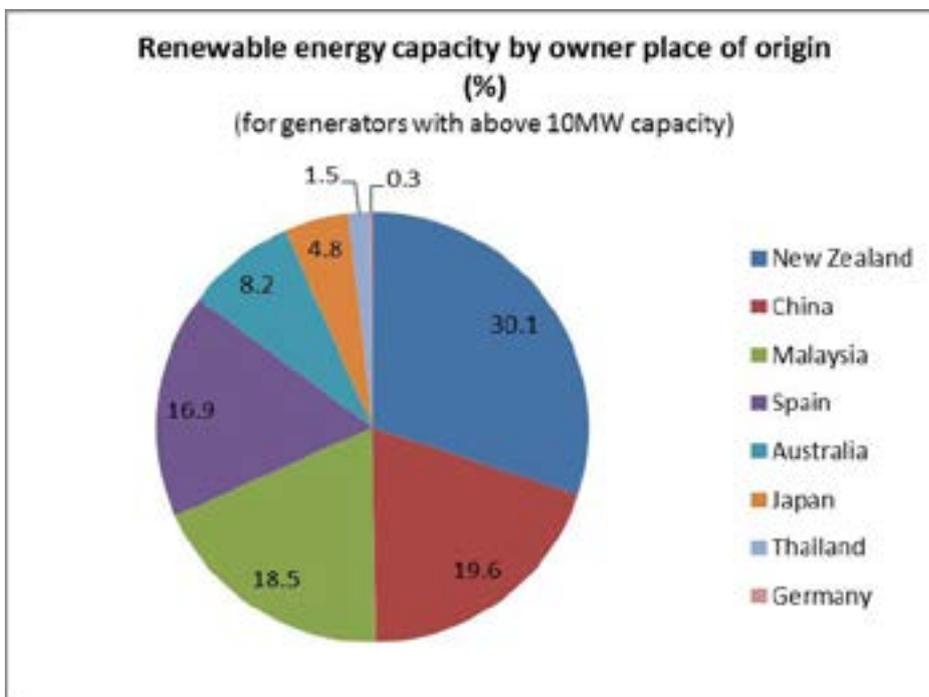
18.1 Who owns Victoria's large-scale renewable energy?

Currently Victoria's large-scale renewable energy plants are largely foreign-owned and entirely investor-owned. For example the Macarthur wind farm, which is the largest wind-farm in the Southern hemisphere, is half-owned by New Zealand based investment management fund H.R.L. Morrison & Co, with the other half owned by Malakoff, a Malaysian based company.

The following is a list of renewable energy projects with over 10MW capacity in Victoria and the owner place of origin⁶⁹. Victoria's largest solar park is included too, though it only has 3.2MW capacity.

ENERGY PROJECT NAME	CAPACITY (MW)	OWNER PLACE OF ORIGIN
Macarthur wind farm	420	50% New Zealand, 50% Malaysia
Waubra wind farm	192	100% Spain
Mt Mercer wind farm	131.2	100% New Zealand
Oaklands Hill wind farm	67.2	100% Australia
Cape Bridgewater wind farm	58	100% China
Maryvale paper mill (bioenergy)	54.5	100% Japan
Chalicum Hills wind farm	52.5	100% China
Cape Nelson South wind farm	44	100% China
Yambuk wind farm	30	100% China
Toora wind farm	21	80% Thailand; 20% Australia
Mortons Lane wind farm	19.5	100% China
Codrington wind farm	18.2	100% China
Wonthaggi wind farm	12	100% Australia
Werribee sewage treatment plant (bioenergy)	10	100% Australia
Mildura Solar Park 1 - Koorlong	3.2	100% Germany
Total capacity	1133.3	91.8% foreign owned 8.2% Australia owned 100% investor-owned 0% community-owned

⁶⁹ List taken from Department of Economic Development, Jobs, Transport & Resources, above note 50.



The effect of foreign ownership of Victoria's largest renewable energy projects is that profits made from those projects will flow out of Victoria and overseas.

What is more concerning, however, is that there is zero community ownership of Victoria's largest renewable energy assets. All assets are owned by investor-owners. This means that profits made from such projects will leave the local community in which the energy asset is operating.

The benefits which do flow to the local community are largely tokenistic. For example the Macarthur Wind Farm Community Fund website states that there is a "limited budget available for the Community Fund Program", and does not further specify what level of funding is available.

There is also potential for investor-owned companies to cause division in communities by concentrating the benefits of the renewable energy project in only one section of the community. One community member, after complaining that the Macarthur wind farm had interrupted their business operations, went on to say:

"In the mean time our neighbours will benefit from unbelievable income (individually possibly between \$500,000 and \$750,000 or more per year) from turbines, for the next 25 years, at our expense⁷⁰".

They went on to state that "wind farms have DIVIDED COMMUNITIES". Had the wind farm been at least part-owned by the community, the division of communities - particularly over fees earned from the wind farm - would have been less likely to occur. The community would have benefitted as a whole.

⁷⁰ Gardner, Submission No 945 to the Senate Community Affairs Committee, The Social and Economic Impact of Rural Wind Farms, 2012, viewed 5 September 2016, http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Community_Affairs/Completed_inquiries/2010-13/impactruralwindfarms/submissions.