29 September, 2016

By email: eejsc@parliament.vic.gov.au

RE: Submission to Parliamentary Inquiry into Community Energy Projects

Thank you for the opportunity to make a submission to the Victorian Parliament's Economic, Education, Jobs and Skills Committee's inquiry into community energy projects.

The inquiry represents a significant opportunity to develop policies which will rapidly boost renewable energy in Victoria, and ensure local communities can participate in, contribute to and benefit from the renewable energy transition.

Environment Victoria has welcomed the Andrews government's recent announcement of Victorian Renewable Energy Targets (VRET) of 25 percent by 2020 and 40 percent by 2025. We see community owned renewable energy (CORE) projects playing a critical role in the achievement of these and potentially more ambitious targets, while also delivering a range of job-creation, environmental and social benefits.

We urge the committee to endorse the recommendations outlined in this submission, to grow Victoria's community energy sector and maximise the benefits to Victoria's economy and environment.

About Environment Victoria

Environment Victoria is one of Australia's leading independent environment groups. With over 40 member groups and tens of thousands of individual supporters, we've been representing Victorian communities on environmental matters for over 40 years.

Environment Victoria's responses to the questions posed by the Inquiry are outlined below.

1. The benefits of community energy projects

The Collective Impact Assessment undertaken as part of the National Community Energy Strategy concluded that community power projects deliver a range of environmental, economic, social and technological benefits (see Figure 1).[1] While the community energy sector is still in an early stage of development, it has already:

- Contributed over $23 million in community funding for energy infrastructure;
- Installed over 9 MW of renewable energy systems;

[1] Kirsch, C., Jackson, M., Langham, E. & Ison, N. (2015) *Community Energy Collective Impact Assessment (An Appendix of the National Community Energy Strategy)*

- Produced over 50,000 MWh of clean energy (as at the end of 2014);
- Avoided over 43,000 tonnes in carbon emissions; and
- Developed a membership and supporter base of over 21,000 people.

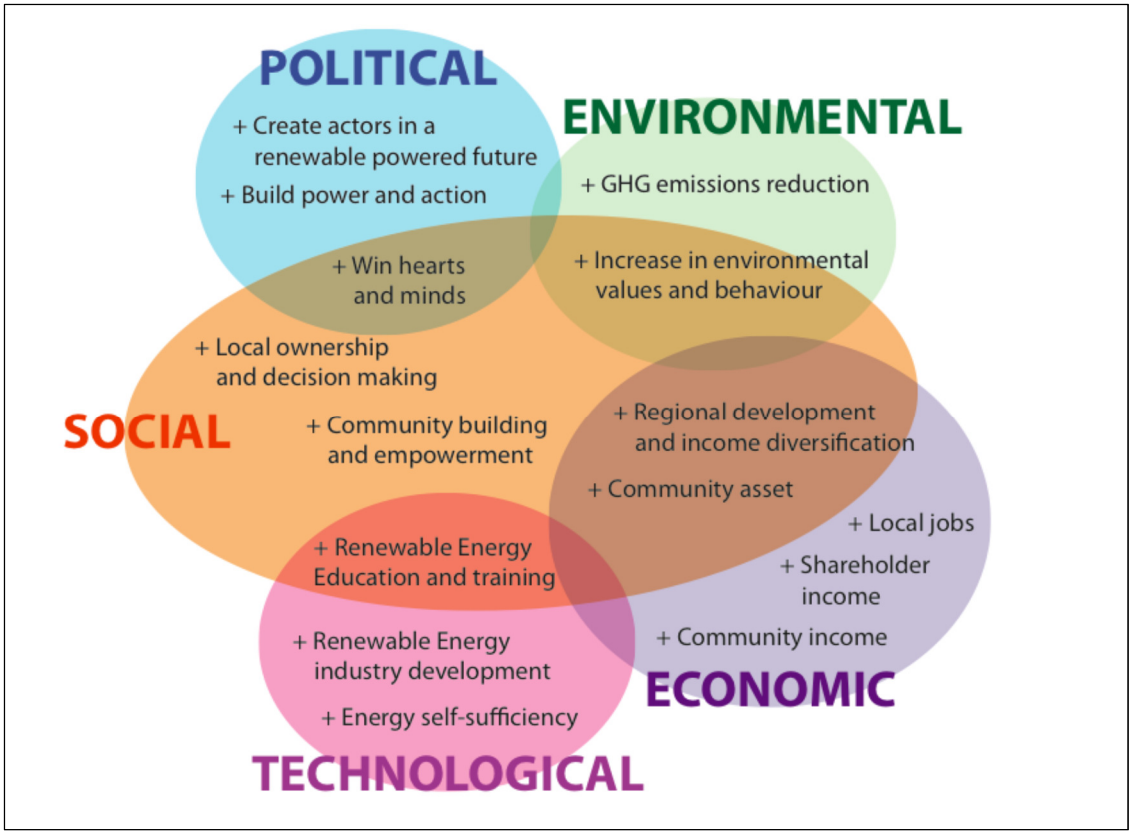

Figure 1. Benefits of community renewable energy projects[2]

Environmental benefits

To date community energy has produced over 50,350 MWh of clean energy in Australia. This equates to over 9,000 cars taken off the road and compares to the annual greenhouse gas emissions from the energy use of over 6,150 Australian households.[3]

Further, community energy projects empower local action to combat climate change and foster engagement of community participants with energy issues and environmental values.

Developing new renewable energy capacity

It is well-recognised that a variety of forms of energy generation will be required to build a resilient, reliable and low carbon electricity grid. Community energy projects are well placed to fill a scale gap

[2] Kirsch, C., et al (2015)
[3] Kirsch, C., et al (2015)

between large utility scale renewable energy projects (10-2000 MW) and household renewable energy (1-10 kW). With community generation projects tending to range in size from 10kW to 10MW, filling this gap provides new opportunities to scale up the renewable energy sector and achieve ambitious renewable energy targets.

Supporting regional communities and fostering local economic development

Importantly, the economic benefits of community power projects are typically reaped by the local and regional economies in which they are situated. The NCES Collective Impact Assessment showed that more than 90 percent of the services required by a community power project (e.g. installers, construction workers, electricians, administration etc.) were sourced locally. On average community energy projects create 4 months of work during development, 1 month during planning, approximately half a year in installation and 37 weeks on an ongoing basis.[4]

Beyond local employment benefits, community power projects also create steady income streams to fund community development projects over the 25+ year project life.

Social equity and energy affordability benefits

Community power projects also deliver important social equity benefits by extending access to renewable energy to vulnerable and disadvantaged groups. While more than one million Australian households now have rooftop solar systems installed, many households are missing out because they can't afford the upfront costs, have shaded roofs, live in apartments or because they rent. Community energy projects – in which a community pools resources and shares the benefits of renewable energy – are a way of continuing to grow the renewable energy sector while ensuring the benefits are shared by all.

Consequently, community energy projects provide disadvantaged groups with an effective response to electricity price rises. Rising electricity prices are exacerbating cost-of-living pressures on Victorian households and growing rates of energy hardship and disconnections. More than 34,000 Victorians had their electricity disconnected for unpaid bills in 2013-14,[5] while energy unaffordability is putting pressure on the government's energy concessions budget. A recent study found that cutting energy bills for Victoria's one million low income households by upgrading the efficiency of their homes, could save the government $2.5 billion from its concessions budget over 20 years.[6]

Health benefits

Furthermore, people living in poor quality housing which is draughty and cold in winter and dangerously hot in summer – or else prohibitively expensive to keep comfortable – face serious health risks, particularly in extreme weather events such as heatwaves. The heatwave in southeast Australia in late January 2009 is estimated to have contributed to 374 excess deaths,[7] while a recent

[4] Kirsch, C., et al (2015)
[5] Essential Services Commission (2016), *Energy Retailers Comparative Performance Report 2014-5*
[6] Alternative Technology Association (2012), *2.5 billion reasons to invest in efficiency*, One Million Homes Alliance
[7] https://blogs.csiro.au/climate-response/stories/explainer-heatwaves-in-australia/

international study concluded that more than 2,200 people per year in Victoria die from the effects of chronic cold.[8] That's more than 12 times Victoria's annual road toll.

Community power projects which extend access to affordable renewable energy to disadvantaged groups, while taking the opportunity to install basic efficiency measures such as insulation and draught-sealing at the same time, could make a significant contribution to improving health outcomes for many Victorians with chronic health conditions living in poor quality, inefficient housing.

2. The challenges communities face to establish energy projects

The challenges faced by community energy projects are largely related to the fact that the institutions, rules and regulations governing Australia's electricity market are designed for a centralised system powered by fossil fuels. They are not designed to foster the growth of democratically-owned, mid-scale, decentralised energy from renewable sources.

Specific examples of current regulations or other challenges hindering community power projects include:

- The 20/12 investor rule within the Corporations Act, which limits most projects to 20 investors, thus preventing community power groups from accessing equity crowd-funding to finance their projects;
- Lack of access to early-stage funding to get a project from an idea to the point that it has a solid business case;
- The difficulty in securing a host site which meets all the technical, economic and investment security characteristics for a successful rooftop solar project;
- The Payment in Lieu of Rates formula, used for calculating the amount that electricity generators pay to local government in lieu of rates, did not consider small-scale community community renewable energy projects when it was developed in 2004. In particular, the fixed $40,000 component potentially represents a significant proportion of a small-scale generator's income, and hence represents a significant barrier for small-scale projects;
- Prohibitive restrictions on wind-farm development in Victoria's planning system. While the recent reduction in the setback from 2km to 1km is welcome, the remaining 'no-go' zones and 5km setback around 15 regional towns still represent a barrier to the establishment of community energy projects;
- The two main viable business models for renewable energy – 'behind the meter' solar, or large-scale wind or solar – create a number of challenges which affect the economic viability of mid-scale renewable energy projects. These include the high cost of grid connection and of using the grid, even over short distances.

[8] Barnett, A. (2014), "Cold weather is a bigger killer than extreme heat," https://theconversation.com/cold-weather-is-a-bigger-killer-than-extreme-heat-heres-why-42252

3. The best ways to encourage and support the development of community energy projects

1. Establish a Community Energy Target

Establish a specific Community Energy Target, either as part of or additional to current 40 percent or 5400MWs by 2025 renewable energy target. An appropriate and achievable target would be 5-10 percent of Victoria's renewable supply to be delivered from community energy projects by 2025.

2. Develop a policy mechanism to meet CE target

Develop a policy mechanism to meet this target, in order to leverage community, public and private finance. Examples of policy mechanisms to deliver the target include a 'fit-for-purpose' community energy auction, or a community feed-in tariff. This policy mechanism should be underpinned by a series of principles:

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

3. Encourage partial community ownership or benefit-sharing

Provide active encouragement of partial community ownership or sophisticated benefit sharing schemes for the large-scale renewable energy projects delivering the remainder of the VRET, through the reverse auction process.

4. Re-establish Sustainability Victoria as statewide coordinator

Re-establish the statewide strategic coordination role played by Sustainability Victoria (SV) as support agency for community energy. Utilising SV's expertise and existing strong relationships will maximise the impact of government resources invested in this sector. In the recent SV Climate Change Conversations process, community energy was consistently raised as a theme of importance to communities, and is a good fit within the Climate Change Framework developed by the Department of Energy, Land, Water and Planning.

5. Adopt the Community Powerhouses policy

Adopt the Community Powerhouses policy taken to July's Federal election by the Australian Labor Party. This would comprise support for:

- Establishment of at least 10 community hubs (such as 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; and
- Funding for a network for capacity-building, support and information-sharing across the state.

This policy could be implemented unilaterally by Victoria or as part of a national partnership with other jurisdictions, similar to the National Landcare Program.

6. Adopt the recommendations of the National Community Energy Strategy

Other ways to support community energy include ensuring a licensing exemption for solar power purchasing agreements (PPAs), as well as the 34 interventions outlined in the National Community Energy Strategy.

7. Align community power with energy efficiency policy and programs

Victorian government policy settings and programs should reflect the strong links and synergies between renewable energy and energy efficiency objectives.

Improving energy efficiency reduces total demand for energy, which means that the same amount of renewable energy covers a larger share of demand. The International Renewable Energy Agency (IRENA) predicts that if there is no change in the rate of efficiency improvement, the world can reach a 20 percent share of renewable energy by 2030. If the rate of efficiency improvement doubles, it could reach a 40 percent renewable energy share.[9]

The Victorian government has recognised the importance of improving energy efficiency and the multiple environmental, social and economic benefits it can deliver, through the release of its Energy Efficiency and Productivity Statement in 2015 and its promise to deliver a detailed strategy.

A key stated objective of the efficiency statement is to raise the efficiency of Victoria's residential building stock, which is poor by world standards. Improving household efficiency will deliver a range of benefits including cutting household energy bills (and addressing growing unaffordability problems), reducing the adverse health risks of living in poor quality housing particularly in extreme weather events such as heatwaves, cutting greenhouse emissions and creating jobs.

Community power models which extend access to affordable renewable energy can make a substantial contribution to improving the liveability and affordability of Victoria's housing, particularly if integrated with basic efficiency measures (such as insulation, draught-sealing and efficient lighting). Consequently, the economic, social and environmental benefits to Victoria will be maximised if household efficiency programs implemented under the government's energy efficiency strategy, align with policies and programs to promote community power.

4. Challenges specific to establishing projects in metropolitan areas and how to overcome them

In addition to the challenges outlined above, the key challenge faced by metropolitan community energy projects is the more limited range of viable technologies available to them, compared to regionally-based projects. The majority of urban community energy projects will be rooftop solar projects, likely to incorporate storage in future.

[9] IRENA (2015), *Synergies between renewable energy and energy efficiency: A working paper based on REMAP 2030*, International Renewable Energy Agency

There are three main models for roof-top community solar, all of which present some challenges:

- "Behind the meter, below the load" model, in which the host site (such as a school or community building) agrees to purchase the energy over the life of the project, thus avoiding the issue of selling the energy into the energy market. Consequently, the scale needs to be less than the minimum load profile to minimise grid connection issues and costs. Many community power groups have reported difficulties with securing host sites for which meet these as well as other technical and security requirements.
- Local energy trading, which is not yet commercially viable. Options for making local energy more economically viable include Local Network Charges for partial use of the electricity network, and Local Electricity Trading (LET) (previously referred to as Virtual Net Metering or VNM) between associated local generators and customers.[10]
- Environmental Upgrade Agreements/rates financing which still face significant complexity and transaction costs in navigating split incentives that occur between a commercial landlord and tenant for solar projects with a duration longer than 5 years.

5. Types of renewable energy resources that could be used other than wind and 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. However, business models for these technologies are not as developed as those for community solar.

There is potential for bioenergy as a community energy resource, as bioenergy has a natural fit with the mid-scale size of community power projects. If a bioenergy project is too small, the project is cost-prohibitive; too large and the costs of transporting the feedstock become prohibitive. Bioenergy from waste represents a particularly good opportunity.

6. Models of community ownership for energy projects

A significant amount of work has been done to develop workable models for community ownership for energy projects, including investigation of how communities could own part of large-scale wind and solar projects. Leading examples of viable community ownership models include Hepburn Wind – our flagship community-owned wind project, and Enova – the first community-owned electricity retailer.

It is important to note that while ownership is a focus of many community energy groups, it is not always the sole priority. Other key features and motivations for community energy projects are for communities to share in the benefits of renewable energy, and to have a say in the development process. Furthermore, not all community energy projects are community-owned. For example the Lismore Farming the Sun project is community financed rather than community owned.

[10] Rutovitz, J., Langham, E., Teske, S., Atherton, A. & McIntosh, L. (2016) *Virtual trials of Local Network Charges and Local Electricity Trading: Summary Report*. Institute for Sustainable Futures, UTS

Thank you for the opportunity to make a submission to the Victorian Parliament's Economic, Education, Jobs and Skills Committee's inquiry into community energy projects. We would be happy to provide any further information to support the work of the Committee.

Regards,

Nicholas Aberle
Campaigns Manager
Environment Victoria
n.aberle@environmentvictoria.org.au