Mapping the diversity of the sector:

what is a community approach to renewable energy?

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Key Words:
Community engagement, organisational models, social license to operate, Australia, renewable energy.

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Introduction

Hello my name is Jarra, I am here representing the Community Power Agency, a community renewable energy (CRE) support organisation in Australia. We are a not-for-profit social enterprise that partners with communities to help them deliver CRE projects. But we also do a lot of research, presenting, publishing on the CRE sector.

I am also the Project Coordinator of Mount Alexander Community Wind, which is in the early stages of establishing a several MW sized community owned wind farm in the state of Victoria.

It is real challenge to be the last speaker of the last session of the last day, not only because we're all a little tired from meeting so many wonderful people and hearing so many ideas, but also because so much has already been spoken about.

Over the past days some of you may of heard the situation for C-O RE in Australia: it is very new, we have only one established CWF, Hepburn Wind, and only a small number of C-O small solar PV farms. You might wonder why I am here, then, to speak with you. Well, in the context of our government's long inaction on climate change and lack of support for RE, many communities in Australia – over 60 in fact – have started in some way to develop CRE. My collegue Nicky Ison and I established the CPA to be able to support these projects to get up and running. In the course of establishing the CPA, we

did a world wide review of literature and an international study tour, covering 40 projects in 4 continents.

What I'd like to talk to you about today is some findings we've collated and specifically on what the distinguishing features of a community approach to renewable energy and wind development constitutes. Through our research we have been able to contribute to mapping the diversity of the community renewable sector and have come up with some general understandings of how community wind projects develop and what form they take. I'll be focusing today on the 'people' side of a community wind project and how different organisation structures and community engagement processes help to shape different project outcomes.

What is Community Renewable Energy?

Community-owned Renewable Energy (CRE) is a well established sector now, especially in Denmark, Germany and parts of the UK and is quickly expanding in the US, Canada, Australia, Japan and more. However, very little analysis of the sector as a whole has been done. The Community Power Agency undertook a study tour of 40 different CRE projects throughout Europe, the UK, the US, Canada and India in 2010 and 2012. We did this study in order to bring findings back to Australia to help kick-start the CRE sector in our country. On the way we met many amazing and inspiring people and began to collate and analyse the information into a format that could be of use to others.

From wind co-ops Denmark; to solar installations in North America; to micro-hydro trusts in Scotland: a wide range of different renewable energy projects identify as community renewable energy projects. Within all of this diversity, how do we know what is meant by 'community' renewable energy? Are they all genuinely a community project?

Based on our tour, we've developed a framework that helps us think through what CRE is and what is involved in setting up a CRE project.

We start with values or motivations. These are many and diverse, for some it might be:
- Local electricity supply
- Greenhouse gas emission reduction and action on climate change
- Bringing new sources of income to a community
- Fostering renewable energy & developing the technology
- Building local understanding, skills and capacity

There are many different possible reasons that drive a group to initiate a CRE project. These Values form the foundation of the project, they direct the process and inform its outcomes. When we condense these values down, we find three overarching benefits that we can use to define what a CRE project is.

We have identified three defining characteristics of CRE projects; they:
- Decarbonise: creating greenhouse gas emissions reductions through using renewable energy and replace reliance on diminishing fossil fuels.
- Decentralise: electricity generation is scaled to local demand and is produced close to where it is used.

- Democtratise: owned and controlled by the community; benefits stay local.

These are the common outcomes we often define a project by: the fact that its renewable energy, most often wind, solar, hydro and biomass. Projects are usually smaller scale than corporate projects, being sized to match demand rather than to generate maximum profit. They are located in or near the community that owns them, making use of a locally available renewable resource. These are the physical, visible, obvious outcomes of a CRE project and are often what we think of first when we try to define what CRE is.

The less obvious, less immediately tangible aspect of CRE projects is that they fundamentally democratise our electricity supply. One of the key mechanisms for this is the *process* of establishing a project and the level of community involvement throughout. To 'democratise' encapsulates this process element and the organisational structures, decision making processes and community engagement techniques that facilitate it. This is what I'd like to focus the rest of this presentation on. After all when we hear the term 'Community Power', we're using power in two senses: 1 as electricity and 2. as people power. Democratising is a key feature of CRE, but how do we facilitate this in our projects? How do we foster genuine community involvement, benefit and support? What does democratising mean for the success, not only of individual projects, but also more generally for the acceptance of wind power?
Walker et al (2008)

Process Choices:
The processes we choose to use in developing and running a community wind project will affect how genuinely embedded a project is in the community. To understand and think about the process element of a project we need to ask the questions like:

- What level of involvement does the community have in the projects?
- What is the role of the community? Are they supporters, advisors, advocates?
- Who makes decisions?
- Who owns the project?

The role of community engagement in building social licence to operate and the CRE sector

For community and industrial projects alike, it is becoming increasingly clear that community engagement and involvement are key factors to successful project delivery. A recent study released by Australia's peak scientific body, CSIRO, reveals the important role that early and well-designed community consultation can play in community acceptance.

Wind is an emerging industry in Australia and currently supplies only 1.5% of national electricity, despite the country having good wind resources. To date, wind development has been dominated by corporate owned, industrial scale projects. Australia's first community-owned wind farm, Hepburn Wind, began operating in mid-2011, with several others currently at various stages of development. One key factor limiting the uptake of wind power is public resistance.

Through contact with projects across the world, we have developed the following 'road map' for effective community engagement and involvement throughout the various aspects of a project.

Project Initiation:
The idea for a CRE project is launched by local citizens, sometimes in partnership with another community group, a municipal government or a company (eg. Developer or energy utility).

Tools: Initial meetings and conversations with key local stakeholders and technicians.

Project Planning:
Performing social feasibility studies to determine the level of community interest and support, along side technical studies and business planning. To build the vision of the project and embed a common understanding and support for renewable energy and community ownership.

Tools include: surveys, stalls, participatory workshops, one-on-one stakeholder meetings, presentations to key groups, utilising grassroots networks, social media.

Project Development:
Keeping regular communication and engagement, addressing community concerns in a transparent way and community participation in decision-making, including setting project design and principles. Include local residents in site discussions and benefits distribution options.

Tools include: participatory workshops, community meetings, surveys.

Project Governance:
Creating governance processes and structures that ensure high levels of community ownership both financially and psychologically. This entails well-facilitated, open decision-making processes, where local people have real power to affect decisions.

Project Benefits:
Ensuring that all local people can benefit financially and socially. Examples include preferential local share offers, a community fund, preferencing local suppliers, local job creation and fun social events. A commitment to distributing payments to more than the landholder who hosts the turbines, acknowledging visual and noise amenity.

This 'road map' is designed to help the wind and wider renewables sectors develop a strong social licence to operate. The concept of a social licence emerged from the mining industry 15 years ago; it describes a "level of acceptance or approval continually granted to an organisation's operations or project by local community". Establishing a social licence, extends beyond specific projects to general public attitudes and building a culture of support. In the face of a coordinated counter movement to wind in Australia,

establishing such a social licence is crucial. To do that we need strong, participatory processes that involve local people in meaningful and substantial ways.

Organisational Models as enablers of varying degrees of democratic participation

The organisational models we choose for our projects are key to limiting or enabling the democratic nature of projects, as they can limit or enable the ongoing engagement and empowerment of communities. The organisational structure also provides the framework for how benefit, usually in the form of profit distribution, comes back to the community. Building on the work of Walker and based on practical experience and our interviews with projects across North America, Europe and Australia, three basic organizational models of community renewables can be identified:

⚐ **Community trusts**
For example, the Isle of Eigg mini-grid and Westray wind turbine in Scotland. Is anyone here from Scotland?
 I want to briefly give you an overview of Westray Renewables. Westray is one of the Orkney islands to the north of mainland Scotland. They have a development trust. That trust created a subsidiary called Westray Renewables, which developed a 900kW wind turbine project. That wind turbine is now generating about 150,000 pounds per year net, for that community. Furthermore, its considered by most people on the island to be their totum pole – there's a huge degree of community ownership over the project.

⚐ **Community Investor Co-op or Company**
For example Hepburn Wind in Australia, MinWind in the US and Baywind in the UK
Hepburn Wind is Australia's first wind co-op. Its two 2MW wind turbines, owned by a cooperative of about 2000 members. Located in central Victoria in Australia, it started generating electricity last year.

⚐ **Partnerships between a Community Trust or Coop and a Developer**
For example, Dardesheim wind farm in central Germany, Middlegrunden in Denmark and Flyers Creek in Australia.
Middlegrunden is 20 wind turbines of the coast of Copenhagen. It's a 50/50 partnership between the Copenhagen electricity utility and a cooperative.

Decision Spectrums, examples and implications
In choosing an organisational structure there are a series of important decisions that a project makes, either by default or consciously, that affect the way they interact with, benefit and involve the community. In essence, this is about how democratic they are within these three basic organisational models.

As you may know, there is huge diversity and a range of hybrid models across these three basic models of community renewable energy projects. In fact, every different place, with its different context and people, will have slightly different arrangements, based on what is most appropriate for them. This variation is important, but we can also see that much of this variation can be linked to three main organisational and financial dimensions. These dimensions correspond to the following questions and associated spectrums:

1. Where does the project financing come from? From local individual ownership and investment to non-local organizational ownership and investment.

For example Hepburn Wind specified 51% local ownership. In a cooperative or company model of community renewables finance is tied up in membership of the project. Whereas in a trust based model like Westray the finance comes predominantly from debt and grants, but the project is solely owned by an organisation with 100% local membership.

2. How is the income generated by the project distributed? From all profit going to a community fund to all profit going to investors.

In a trust based model all the profits go to the trust (which is a type of community fund), an organisation owned by the community for the community. In a co-operative or company model money generated goes to investors as dividends, however in many cases a community fund is also set up so money is returned to the wider community through a grant program. Torrs Hydro and Baywind both have community fund to distribute financial benefits to the community. Where as Minwind Companies in the US has chosen to only return money to shareholders, but have put limits on share holdings to make sure as many people as possible can participate and benefit.

3. Governance/decision making – who is involved and how are they involved? From one vote per person to one investor holding all the votes.

For example, in a company, people usually have a number of votes that relates to their level of investment. So, if they have a large share holding, then they have more decision-making power in the project. Because the Minwind companies operate on a one share-one vote basis but still want to uphold democratic principles, no one person can own more than 15% of the project's shares. Further, each company (so, each different project) must have a completely different bunch of investors. This enables as many local farmers to participate in the projects as possible, spreading the economic and social benefits widely. All together, over 590 people are benefiting directly from their investment in Minwind. All shareholders must be Minnesota residents.

In the Trust model, decision-making isn't related to investment at all. Rather, any member of the trust can vote, even if they're not investors. Membership to the Trust is generally kept low, in the range of 5-20 pounds (eg. Westwray in the UK). For a Cooperative, like Middelgrunden in Copenhagen, decision-making operates on a one-person, one-vote basis, to make sure everyone has the same level of power, despite their level of financial contribution. In the case of the Hepburn Wind cooperative in Australia, the shareholdings of coop members range from $100 to over$100,000.

Analysing renewable energy projects using these three dimensions helps to identify stronger and weaker *community,* or *democratic,* approaches to renewable energy. Of course, the realities of a project often means that tensions and trade-offs between what is practical and what is ideal, based on your values, have to be made. For example, If you want all the share holders or members of decision making to be local, all the money to come from local people, then your project is likely to be of a smaller scale than might other wise be possible. Most trust-based projects are typically in the 100s kWs scale to the 1MW, whereas cooperative projects tend to be in the 1-10MW scale, while developer community partnerships can be up to the 100MWs scale. So, where you sit on this spectrum will have implications for the other outcomes of your project.

Conclusion

We hope that the CRE Framework we have introduced here might enable you all to understand the diversity of the sector better, but also to approach new projects with a more informed perspective, contributing to finding the most appropriate way forward for community renewable energy projects.

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