



THE AUSTRALIAN COMMUNITY RENEWABLE ENERGY SECTOR – CHALLENGES AND OPPORTUNITIES

Final Report

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Community Power Agency's mission is to help grow a vibrant community renewable energy in Australia. We work with individual communities to build their capacity to develop community owned renewable energy projects, as well as collaborating with a range of organisations to address systemic barriers to the development of a wider community renewable energy sector. Our particular expertise lie in facilitation and training, network coordination, community renewables research and knowledge.

For further information visit:

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Backroad Connections

Backroad Connections is a consulting business run by Jack Gilding, the former Executive Officer of Hepburn Wind. We assist communities who wish to develop small community based renewable energy projects and conduct policy research and lobbying on issues related to renewable energy development. We are currently working on assisting a number of projects in Tasmania.

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EXECUTIVE SUMMARY

The purpose of this research is to create an evidence base to inform community renewable energy (CRE) policy and action by community renewable energy groups and support organisations. Four research questions were posed:

1. What is the current status of the CRE sector in Australia?
2. What are the strengths of the CRE sector?
3. What are the challenges facing the CRE sector?
4. What are the opportunities that the CRE sector could pursue to help it grow?

These research questions formed the basis of two on-line surveys, one for CRE projects and one for CRE support organisations, as well as a series of follow-up interviews.

Participants in this study believe that a project must have several key distinguishing characteristics in order to qualify as a community renewable energy project. These include: community ownership, offer wider community benefits (financial, community development, community building), and have active engagement of the local community. CRE practitioners also believe that CRE projects need to be led by volunteers from the local community.

The status review of the CRE sector highlighted a small, but growing number of committed CRE projects around Australia. A total of 32 respondents from 28 active CRE projects participated in this research and currently, there are over 300 people actively driving these 28 CRE projects forward. These CRE projects are located in communities that have more than a million people in total, indicating both the potential reach of community engagement and education through CRE projects and the degree of activity and commitment from citizens across Australia.

This benchmark of 28 CRE projects can be compared to international CRE statistics; for example, there are over 300 CRE projects in Scotland alone. There is a large gap between the international uptake of CRE and the CRE movement in Australia. Australian practitioners highlighted the types of international CRE support that would benefit the Australian CRE sector, especially in the areas of government assistance, feed-in tariffs, and supportive grid connection arrangements.

The highest density of Australian CRE projects is in Victoria and NSW, and the majority of CRE groups are currently in the early stages of project development. Over a half of the projects are solar PV and a third are wind energy. The remainder are as yet undecided, but options include are various forms of bio energy.

According to CRE groups and support organisations, there are four predominant strengths of the sector: comprehensive and meaningful community engagement, valuable

partnerships, project teams with the right skills and sharing information around project successes.

Two of the most significant barriers facing the CRE sector are financing the development stage (including inception, social feasibility, technical feasibility, planning) and getting a fair price for the sale of CRE project electricity. However, barriers vary according to technology and the stage of the CRE project. For example, community response is a significant challenge for a sub-category of CRE projects, particularly wind.

Despite the challenges and barriers facing projects, the CRE practitioners demonstrated a great deal of optimism for the future of the sector, based on the many benefits of CRE projects, the urgent need to tackle climate change, and the opportunities for action by the sector.

Table 1: Opportunities for the CRE sector

Opportunities in the external environment	Opportunities for action by the sector
<ul style="list-style-type: none"> • CRE as a response to climate change • Goodwill towards the sector • The falling cost of renewable energy technologies • A focus on developing resilient communities • Rising electricity prices as a driver for change • New funding mechanisms developing • The potential to increase understanding of the CRE sector by policy makers and investment community 	<ul style="list-style-type: none"> • Engaging large numbers of people through project participation • Developing cooperative arrangements for selling power • Developing innovative models that combine energy generation and retailing • Solar PV on commercial and community buildings • Information sharing and advocacy • Developing a peak body for the sector • Collaboration with commercial renewable energy projects

The detailed policy review also highlighted many opportunities to contribute to policy reform to ensure it supports the fledgling CRE sector.

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*“The dividend of community owned renewable energy is so prolific ... in every way, the literal obvious things like financial [benefits], but the below the waterline benefits are much greater; the social capital, the skills development, the social networks, the community pride, the leadership that’s taken. Community renewable energy has to be the most significant opportunity for social, community and environmental enterprise, bar none, in the developed world.” Adam Blakester, Project Director, New England Wind*

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## ABBREVIATIONS

|        |                                                   |
|--------|---------------------------------------------------|
| AER    | Australian Energy Regulator                       |
| AEMC   | Australian Energy Market Commission               |
| AEMO   | Australian Energy Market Operator                 |
| AER    | Australian Energy Regulator                       |
| ATA    | Alternative Technology Association                |
| CCF    | NSW Climate Change Fund                           |
| CEC    | Clean Energy Council                              |
| CENREC | Central NSW Renewable Energy Cooperative          |
| COAG   | Council of Australian Governments                 |
| CRE    | Community Renewable Energy                        |
| DNSP   | Distribution Network Service Provider             |
| ESS    | NSW Energy Savings Scheme                         |
| IPART  | Independent Pricing and Regulatory Tribunal (NSW) |
| ISF    | Institute for Sustainable Futures                 |
| kW     | Kilowatt                                          |
| kWh    | Kilowatt hour (measure of energy)                 |
| LGC    | Large-scale Generation Certificate                |
| LRET   | Large-scale Renewable Energy Target               |
| MW     | Megawatt                                          |
| MWh    | Megawatt hour                                     |
| NEM    | National Electricity Market                       |
| OEH    | NSW Office of Environment and Heritage            |
| PPA    | Power Purchase Agreement                          |
| REC    | Renewable Energy Certificate                      |
| SCER   | Standing Council on Resources and Energy          |
| SRES   | Small-scale Renewable Energy Scheme               |
| STC    | Small-scale Generation Certificate                |
| TEC    | Total Environment Centre                          |
| UTS    | University of Technology, Sydney                  |

# 1 INTRODUCTION

In Australia, there is a growing interest in the development of community renewable energy (CRE) projects. CRE projects are renewable energy projects which involve communities in the development of a renewable energy project and/or communities benefit from the outcome, particularly through ongoing ownership of the renewable energy asset (Walker and Devine-Wright, 2008). Put another way community renewable energy projects help to **d**ecarbonise, **d**ecentralise and **d**emocratise our energy system (Ison, 2009) and **d**emonstrate that renewable energy technologies work.

Much has been written both in Australia and internationally to define community renewables and identify its key features and associated benefits (Walker and Devine-Wright, 2008; Ison, 2009; Hicks, 2009; Hicks and Ison, 2011; Embark, 2010, etc). However little has been done to date which maps the scale of interest in community renewables in Australia or identifies the key challenges and opportunities that face Australian CRE projects. The aim of this research is to fill this gap.

This research maps the fledgling or emerging Australian CRE sector. Common challenges and opportunities that CRE projects are facing are identified. The existing strengths of CRE projects are also noted, to ensure these are shared and continued across Australia. Finally, the policy and regulatory context is outlined, focusing particularly on the current reform and review processes that are of most significance to the CRE sector. The purpose of this policy review is to understand the context within which the CRE sector is developing and to identify the most important areas for future work to promote the interests of the sector.

It should be noted that this research does not provide recommendations about what should be done to address these challenges, although some suggestions are noted from survey respondents. Instead this research is designed to inform the future development of a Community Renewable Energy Sector Development Strategy. This strategy will identify the most appropriate mechanisms to take advantage of the opportunities and address the challenges identified within this report.

The research was undertaken by a consortium including Backroad Connections, Community Power Agency, and the Institute for Sustainable Futures, UTS.



## 2 METHODOLOGY

The purpose of this research is to create an evidence base to inform community renewable energy policy and action by community renewable energy groups and support organisations. To this end, four key research questions were identified to guide the research methodology. They are:

- What is the current status of the CRE sector in Australia?
- What are the strengths of the CRE sector?
- What are the challenges facing the CRE sector?
- What are the opportunities that the CRE sector could pursue to help it grow?

To answer these questions, three research methods were used – surveys, interviews and desk-top research. Two fairly similar surveys were developed that targeted groups involved in the development of CRE projects and groups involved in supporting CRE projects and/or the growth of a wider CRE sector.

The first survey (Appendix A) was disseminated to 30 groups involved in CRE projects, for which the research team had direct contacts. Additionally, the survey was advertised on CRE sector and public forums, such as the Community Energy Australia Linked In group and Community Energy Australia elist. The survey specified that respondents should be involved in a CRE project which had progressed beyond the initial talking or idea stage and at the very least had formed a group to progress the CRE project. These strategies resulted in 32 survey responses from 28 groups developing CRE projects, of whom 28 respondents completed the full survey. A full list of projects that participated in the survey is provided in Section 3, although it should be noted that respondents had the option to keep their responses and group details anonymous, and for this reason one of the participating groups is not listed.

The second survey (Appendix B) was disseminated to 10 organisations that have had some involvement in CRE project, policy development and/or CRE related advocacy. Nine organisations responded (a full list of these organisations is given in Section 3). Note that three of the four authors participated in the surveys as members of CRE support organisations and CRE projects.

To get greater insight into the research questions, six CRE groups who completed the first survey were identified to participate in a semi-structured phone interviews. The research team chose groups across a range of technologies and in a range of CRE project development stages. The groups interviewed are identified by an asterisk in

**Table 2: Community renewable energy projects surveyed.**

The key themes emerging from the surveys and interviews were identified and the discussion of these themes form the basis of this report.

The final component of the research was a desk-top study of the policy and regulatory processes currently in train that may impact positively or negatively on CRE projects. The purpose of this component of the research was to:

- Understand the current policy and regulatory context that CRE projects operate in; and
- Identify any opportunities to influence current policy and energy market regulation that may address challenges identified in the rest of the research.

### 3 STATUS OF THE AUSTRALIAN COMMUNITY RENEWABLES SECTOR

To understand the status of the Australian Community Renewables sector, the research team surveyed CRE representatives about:

- The location of their CRE projects
- The renewable energy technology/ies they are using or planning to use
- The stage of project development
- Size of the project team
- Size of the communities with which they are engaging.

Respondents were also asked to outline why they consider their project to be a *community* renewable energy project. Any thriving sector, be it commercial, welfare, industrial etc has supporting infrastructure and organisations. As such, the research also identified a range of services provided by the CRE support organisations surveyed.

Table 2 is a list of projects from the “CRE Projects” survey, complete with key information – technology, status, size of the community, location etc. Table 3 provides a list of support organisations that participated in the “CRE Support Organisations” survey, including the technologies they support.

#### 3.1 LOCATION

Figure 1 is a map of where the projects surveyed are located. The highest density of CRE projects in development and operating is in Victoria (11 projects), followed by NSW (9 projects). The majority of projects surveyed are in regional areas, with a few in major cities (Melbourne and Newcastle). All projects surveyed bar the Kimberly Solar Project are in locations serviced by the National Electricity Market (NEM) or the South West Interconnected System (SWIS).

Figure 1: Map of CRE projects surveyed



**Table 2: Community renewable energy projects surveyed**

| <b>Project Name</b>                                            | <b>Project Location</b>                      | <b>Technology</b>                         | <b>Scale</b>              | <b>Project Stage</b>  | <b>Size of community</b>               |
|----------------------------------------------------------------|----------------------------------------------|-------------------------------------------|---------------------------|-----------------------|----------------------------------------|
| Blue Mountains Renewable Energy Co-Operative*                  | City of Blue Mountains                       | Pyrolysis (or wind or solar PV)           | Up to 5 MW                | Social Feasibility    | 75,000 in Blue Mountains               |
| Canberra Clean Energy Connection                               | Canberra                                     | Solar PV                                  | 100-200kW                 | Technical Feasibility | 300,000                                |
| Central Coast Community Energy Association Incorporated (CCCE) | Central Coast (Gosford & Wyong council area) | solar + possibly wind                     | starting with maybe 100kW | Technical Feasibility | 300,000                                |
| Central West NSW Renewable energy Cooperative*                 | Central West NSW                             | Initially Wind                            | 2.5-3 MW                  | Planning              | 220,000                                |
| Clean Energy Association of Newcastle and Surrounds            | Newcastle/Lake Macquarie                     | solar PV                                  | 1 MW                      | Social Feasibility    |                                        |
| Clean Energy for Eternity Solar Farm Project                   | Bega NSW                                     | Solar PV                                  | 200 kW                    | Technical Feasibility | 30,000.                                |
| Community Energy Adelaide Hills                                | Adelaide Hills S.A.                          | Solar PV                                  |                           | Technical Feasibility | 40,000                                 |
| Community Owned Solar                                          | Campbelltown                                 | Solar PV                                  | 30 kW                     | Unknown               |                                        |
| Denmark Community Windfarm*                                    | Denmark WA                                   | wind turbines (2)                         | 1.6 MW                    | Construction          | 5,500                                  |
| Fremantle Wind Farm                                            | Fremantle, Western Australia                 | large scale wind turbines, eight turbines | 6.4 MW                    | Planning              | 7,500                                  |
| Hepburn Wind*                                                  | Daylesford VIC                               | Wind turbines                             | 4.1 MW                    | Operation             | 2,000 members; national press coverage |
| LIVE Community Power                                           | South Melbourne                              | Poly-crystalline Solar Panels             | 0.6 MW                    | Planning              | 95,000                                 |
| Low Carbon Kimberley                                           | Broome, WA                                   | Pyron Solar                               | 60 kW                     | Social Feasibility    | 400                                    |
| Moreland Community Solar                                       | Moreland                                     | solar PV                                  | 100 kW                    | Social Feasibility    | not sure                               |
| Mount Alexander Community Wind*                                | Mount Alexander Shire, Victoria              | Wind                                      | 4-12 MW                   | Technical Feasibility | 18,000                                 |
| New England Wind*                                              | New England Tablelands, NSW                  | Wind                                      | 16 MW                     | Technical Feasibility | 55,000                                 |
| Portland Sustainability Group - Community Solar System         | Portland Victoria                            | Solar PV                                  | 30 kW                     | Capital Raising       | 20,000                                 |
| Ranges Energy Co-operative*                                    | Dandenong Ranges Melbourne                   | Solar PV                                  | 50 kW                     | Capital Raising       | 250,000                                |
| Renewable Energy Co-op                                         | Southern Highlands                           | either PV or Wind                         | 99 kW or 5 MW             | Initiation            | 60-80,000                              |
| Renewable Murchison                                            | Murchison - Victoria                         | possible solar PV                         | 1-5 MW                    | Social Feasibility    | 750                                    |

| Project Name                       | Project Location                    | Technology       | Scale                 | Project Stage         | Size of community  |
|------------------------------------|-------------------------------------|------------------|-----------------------|-----------------------|--------------------|
| Renewable Newstead                 | Newstead Victoria                   | Solar PV         | about 0.5 MW          | Technical Feasibility | 600                |
| RePower Bendigo                    | Bendigo                             | Solar PV         | 10-50 MW              | Technical Feasibility | 107,000            |
| SKY - Renewable Kyabram            | Kyabram                             | Solar, bioenergy | As large as possible! | Unknown               |                    |
| Wingecarribee Council Solar Energy | Council properties in Wingecarribee | Solar PV         | 3 MW                  | Construction          | 44,395             |
| WISE Wind Project                  | Woodend                             | wind energy      | 7.5 MW                | Technical Feasibility | about 5,000 people |

\*Projects interviewed

**Table 3: Community energy support organisations surveyed**

| Organisation                                                           | Technologies Supported                                                                                                                 |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| <b>100% Renewable</b>                                                  | All renewable technologies                                                                                                             |
| <b>Alternative Technology Association</b>                              | All small to community scale renewables, energy and water efficiency, emerging smart energy devices, cogen etc                         |
| <b>Backroad Connections Pty Ltd</b>                                    | Any but most experience in wind projects                                                                                               |
| <b>Community Power Agency</b>                                          | All                                                                                                                                    |
| <b>Embark</b>                                                          | Across range, mainly wind & solar                                                                                                      |
| <b>Office of Environment and Heritage - Renewable Energy Precincts</b> | Still being determined - primarily demonstrated technologies<br>Wind, Solar, possibly bio energy - some investigation into small hydro |
| <b>Starfish Enterprises Network Limited</b>                            | All proven renewable energy technologies including wind, solar (Pv, HW, cooling, heating), bio-gas                                     |
| <b>Sustainable Regional Australia</b>                                  | Solar Photovoltaic                                                                                                                     |
| <b>Total Environment Centre</b>                                        | All                                                                                                                                    |

## 3.2 STAGE

**Figure 2: Stages and tasks of CRE project development**

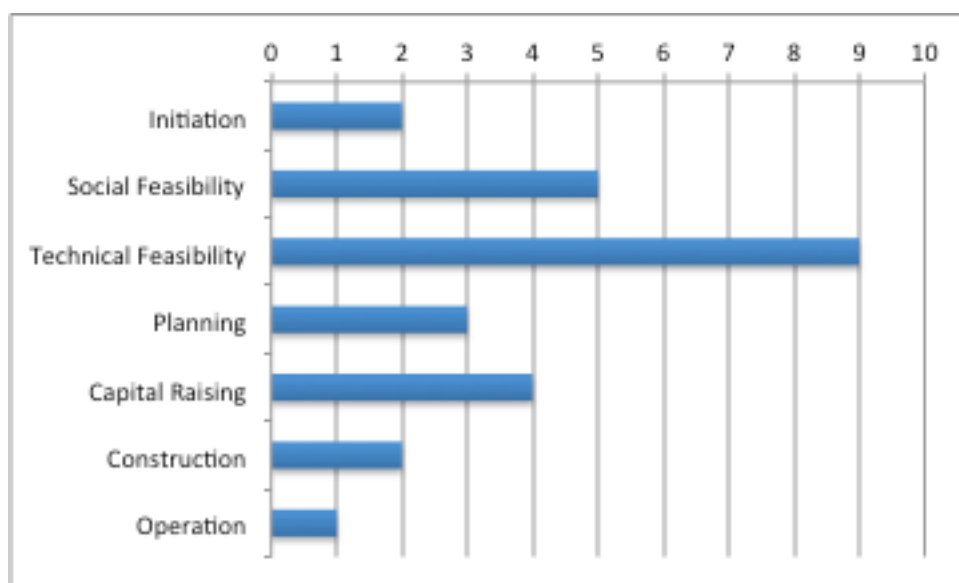
CRE Project survey respondents were asked to identify a range of activities they had undertaken. After the surveys were completed, the research team split these activities into project development stages as shown in Figure 2. Projects were then allocated a project stage, based on the most progressed activity they had undertaken. However, it should be noted that groups do things in varying orders and just because a group, for the purpose of this research, is in the planning stage, for example, does not necessarily mean they have completed all of



the activities associated with the technical and social feasibility stages. Nevertheless for the purpose of analysis this was deemed the best approach. Figure 3 shows the number of groups currently at each stage of CRE project development. It indicates that the majority of CRE groups are currently in the early stages of project development, e.g. social<sup>1</sup> and technical feasibility.

<sup>1</sup> Social feasibility equates to the pre-feasibility stage in utility scale renewable energy project development. This research talks in terms of social feasibility however to emphasise the strong community engagement element of this stage of CRE development.

**Figure 3: Number of CRE projects by stage**



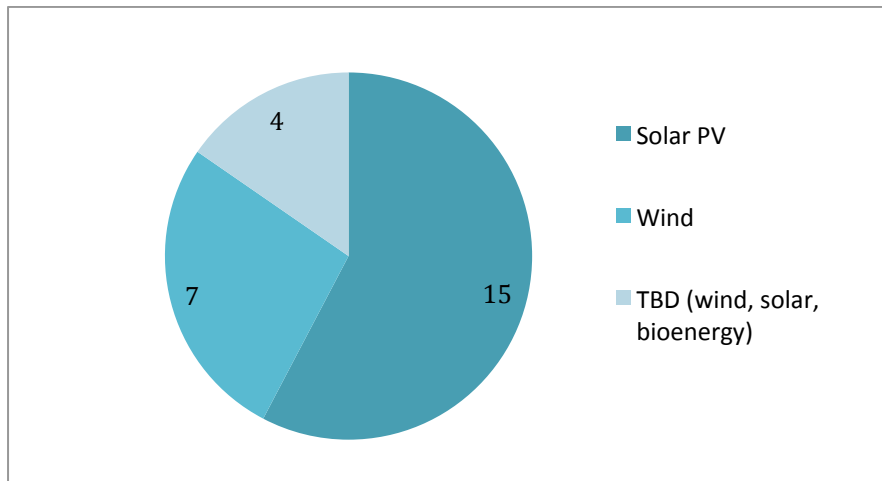
### 3.3 TECHNOLOGY

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Figure 4 shows that of the 26 CRE projects responding to this question, over a half are solar PV projects, just under a third are wind projects and four are still determining what technology is most appropriate. The abundance of solar PV projects could be attributable to the technological feasibility of PV in most communities across Australia and because it is a proven and scalable technology. Comparatively, locations with a good wind resource are more specialised and bioenergy, while technically and commercially proven internationally, is still a relatively new technology in the Australian context. However, it should be noted that at the time of this research the most progressed projects are wind projects and from this research there is not yet an operational community solar project. The size of the installations under consideration or implemented are:

- Solar 10kW-50MW, mostly in the range of 100-300kW
- Wind 1.6 - 16 MW
- Bioenergy 500kW - 5MW

**Figure 4: CRE Projects by technology**



### 3.4 COMMUNITY INVOLVEMENT AND CRE DEFINITIONS

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Developing CRE projects takes significant time, effort and skill. Currently, there are over 300 people across Australia who are actively involved in and driving forward the 28 CRE projects surveyed. These CRE projects are located in communities that in total have more than a million people in them. This indicates both the potential reach of community engagement and education through CRE projects and the degree of activity and commitment from citizens across Australia.

When asked what makes their project a *community* project, common answers included:

- Lead by volunteers from the local community and significant volunteer effort
- Active engagement of the local community
- Community ownership
- Wider community benefit – financial, community development and community building

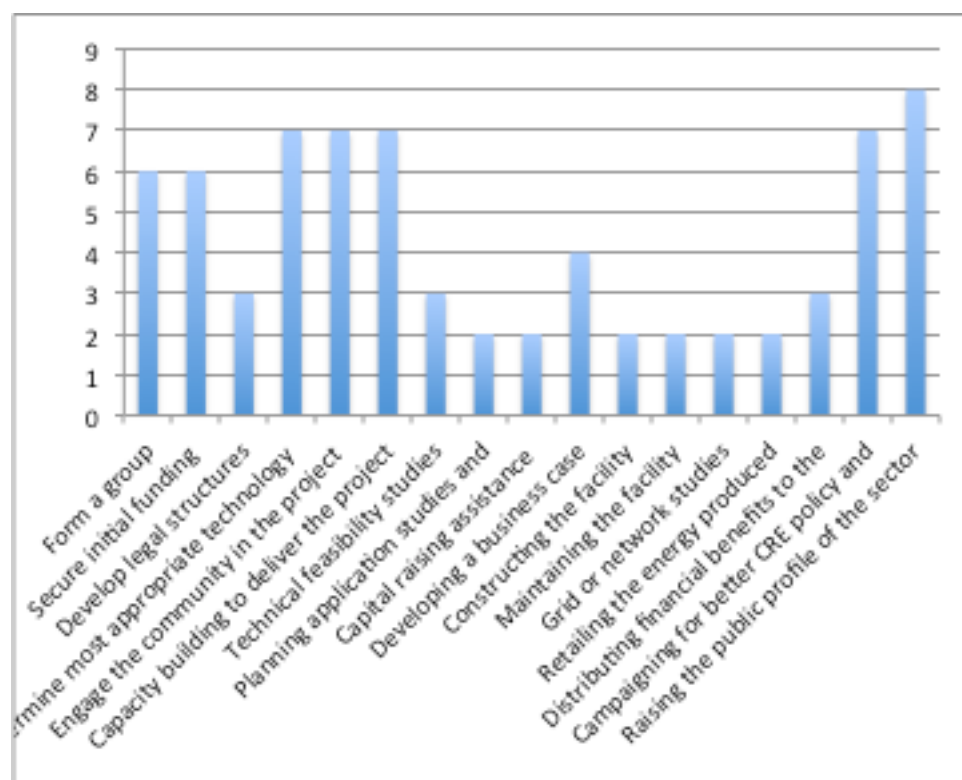
### 3.5 CRE SUPPORT SERVICES

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Figure 5 outlines the range of support and advocacy services that the nine CRE support organisations respondents offer. It should be noted there are other organisations that offer services to CRE organisations that were not surveyed, so this figure should be considered a partial snapshot. Figure 5 shows that eight of the nine organisations consider themselves engaged in activities that raise the profile of the sector, while only a couple of these organisations provide more technical assistance such as grid connection studies. This equates to about 6.5FTE paid positions currently involved in supporting CRE across Australia, although in this support organisation space as well as within CRE projects themselves, there is a significant amount of volunteer time and effort.



**Figure 5: CRE support organisation services and activities**



### 3.6 INTERNATIONAL COMPARISON

This snapshot of CRE projects and support organisations indicates a CRE sector in development. While there is only one project operating (Hepburn Wind), there is significant activity and potential. Examples include the 27 additional projects in development and the un-quantified number of communities interested in developing a CRE project, but who have not yet started. However, if compared to CRE sectors internationally, Australia has significant opportunities for sector development.<sup>2</sup> International examples include:

- Over 300 CRE projects in Scotland (CES, 2012);
- An active coalition advocating for CRE policy across the UK, which includes a range of CRE support organisations (Co-ops UK, Community Energy Scotland, Energy4All) as well as organisations such as the National Farmers' Union, National Federation of Women's Institutes and the National Trust (Forum for the Future, 2012);
- In 2010, 51% of Germany's installed renewable energy capacity was owned by individuals and communities (WWEA, 2012);
- In 2008, more than 100 wind cooperatives own 75% of Denmark's wind turbines (Nordik Folke Centre for Renewable Energy).

<sup>2</sup> Note, this research project did not undertake a literature review or any primary research of international CRE projects and/or activity. However, a few key statistics have been identified for the purpose of a high-level comparison.

## 4 COMMUNITY RENEWABLES – STRENGTHS OF CURRENT INITIATIVES

In the spirit of appreciative enquiry, both CRE groups and support organisations were questioned about the strengths of current CRE initiatives. Presented below, the analysis of these perceived strengths provides insight into what is currently working well with CRE initiatives. For both CRE groups and CRE support organisations, this predominantly includes comprehensive and meaningful community engagement, valuable partnerships, project teams with the right skills and sharing information around project successes.

### 4.1 CRE GROUPS

Twenty-nine of the 32 respondents answered three questions on strengths of current CRE initiatives:

- What has worked well in your project to date?
- What are the key factors that have made your project’s progress to date possible?
- What are the key things you have learned?

A summary of the themes arising from the survey respondents and telephone interviews is presented in the table below. The themes are described in more detail in the following sections.

**Table 4: Summary of strengths and lessons for respondents of CRE projects**

| What has worked well?                                                                                                                                                                                                                                                                                                     | What has helped you progress?                                                                                                                                                                                                         | What have you learned?                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Valued partnerships</li> <li>• Early and appropriate community engagement</li> <li>• Voluntary EoIs for landowners</li> <li>• Membership structure</li> <li>• Committed and cooperative team of experts</li> <li>• Feasibility testing</li> <li>• Setting a precedent</li> </ul> | <ul style="list-style-type: none"> <li>• Committed, passionate and experienced team guided by a shared vision</li> <li>• Diverse group of skills and expertise</li> <li>• Funding and donations</li> <li>• In-kind support</li> </ul> | <ul style="list-style-type: none"> <li>• The time is right</li> <li>• Just get started</li> <li>• It’s a difficult process</li> <li>• If at first you don’t succeed, try, try, try, try again!</li> <li>• Value of interactive engagement</li> <li>• Need for support from all sides</li> </ul> |

#### 4.1.1 WHAT HAS WORKED WELL IN YOUR PROJECT?

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The CRE groups were asked to reflect on what has worked well in their project to date. This was an open ended question and themes have been identified from the free text answers. Where a number of respondents are quoted below it does not mean that other respondents did not also find this aspect successful, just that they did not mention it in their answer. The majority of respondents stated partnerships and community engagement as project strengths. Only one respondent thought that “not much” has worked well in their project to-date.

##### Valued partnerships

Thirteen respondents identified partnerships as an aspect that has worked well for them in their project so far. The partners were varied and included passionate and committed volunteers, other community energy projects, other community groups (*Landcare, University of the Third Age*), professional support from CRE support organisations (*Starfish Enterprises*), a wide range of local and technical partnerships (*including Home Energy Auditors*), other state government programs (*Central Victorian Solar Cities Project*), local and federal government, local media, large renewable energy developers (*Infigen*), and network service providers.

A few respondents explained the benefits of these partnerships. For example, David Robison, Project Manager of LIVE Community Power, described the benefits of their close working relationship with the local council and a consulting firm:

*The site is owned and operated by our local council. Council is very keen on our idea, and have provided us seed funding to prepare a technical and financial feasibility study. This will be completed in February 2013 and will then be considered by council. Council have appointed 3 council officers to our working group. We have a site (the new South Melbourne Market Roof) that has been specifically designed (by GHD) for Solar Panels.*

Mount Alexander Community Wind, “a project of a well-respected Sustainability Group with a long-standing and good relationship in the community”, also has an MOU with the local Council from which they can leverage “in kind venue hire and printing.” The Portland Sustainability Group’s Community Solar System project has partnered with a local solar company who “has agreed in principal to install first stage at cost price.”

Not every partnership has been easy to develop. A respondent for one project who has partnered with a renewable energy developer, acknowledged the partnership “was rocky to start with but has developed and matured to a valued partnership that has enabled us to progress relatively rapidly.”

## Early and appropriate community engagement

A further 11 respondents named community engagement and generating public interest as a component that has worked well in their project. Several respondents noted in particular that very early community engagement, and engagement tailored to the needs of the community, was very important for their projects. For example, Jarra Hicks, Project Manager of Mount Alexander Community Wind wrote, “The decision to focus scoping and building community interest and support as a starting point” is a strength because it resulted in:

*... a proven broad base of support and knowledge of how the local community would like to see the project progress and how they would like to be involved in that process. We also know what people's main concerns are, so we can go about addressing them effectively. This process has built relationships and trust as well as enhancing community awareness of and support for renewable energy.*

Jamie Ally (Fremantle Wind) agrees and believes “the community ownership approach helps get people on board quickly”. In terms of scoping community engagement, the Project Director of New England Wind, Adam Blakester, noted their “pre-feasibility study to assess community support and identify community requirements” worked well, while another respondent suggested “community engagement through employment of a local person who understands local networks.”

Fremantle Wind Farm’s Project Manager, Jamie Ally, explained another benefit of community engagement:

*Negative comments from people that are concerned about noise or visual amenity are more easily addressed by their community peers that are in favour of the project instead of a direct response from the project team, and we have been able to let that conversation develop.*

Other CRE project representatives mentioned specific tools for developing strong buy-in from community that worked well for their project, such as emails, press, workshops, online surveys, presentations, public forums, project launch, stalls and displays at markets and festivals, home energy assessments. Geoff Lodge of Renewable Murchison, attributed the strong buy-in from each community organisation to their positive previous experience with renewable energy, “as all have recently installed a solar PV system and look forward to further energy efficiencies and potential generating plant.”

### Committed and cooperative team of experts

About a third of respondents mentioned that their CRE project team and internal processes have been working well. Cooperative and motivated teams were a strong reoccurring theme for the respondents. Central NSW Renewable Energy Cooperative maintains motivated teams by providing “strong support of all interested people by the group - no one has been excluded and people have worked to be inclusive”. Similarly, the “consensus decision-making” in the Blue Mountain Renewable Energy Co-op has worked well (Erland Howden, member and founder).

Clean Energy for Eternity Solar Farm Project and Fremantle Wind Farm thought it had worked well to have members with specialised skills and expertise from various disciplines, such as energy industry professionals. Wingecarribee Council Solar Energy specifically mentioned the value of “financial input from a working group member with a background in financial engineering for renewable energy projects”. Having paid project managers (Clean Energy for Eternity) and a “facilitation team to handle administrative tasks and keep things on track” (Blue Mountains Renewable Energy Co-op) have worked well.

### Feasibility testing

Three respondents noted the importance of technical feasibility study and testing to provide “some reality to the scale of the issue.”

### Voluntary ‘Expressions of Interest’ for landowners

Three respondents thought their approach of using voluntary expressions of interest to develop a list of landowners, or “asking land-owners to express interest if they would like to host the turbines, rather than going and knocking on doors” had worked well for their project. Jarra Hicks pointed out that because of the voluntary EoI, “We now have a good news story that 60 local people want turbines in their back yard and it’s good to have been invited onto their land.”

*It’s not just NIMBYs, there are people who want wind turbines in their backyard ... They’re TWIMBYs – turbines wanted in my backyard, Jarra Hicks, Project Manager, Mount Alexander Community Wind*

Adam Blakester from New England Wind spoke in the phone interview about a successful voluntary expression of interest program that had identified 120 potentially interested landowners. This was narrowed to 12 possible sites before a single preferred site was chosen.

## Membership structure

Two respondents identified that their membership structure had worked well as they “have found a lot of potential within membership” (Central Coast Community Energy Association Incorporated) and used the ability of “capital raising through membership and cooperative structure” (Hepburn Wind).

## Setting a precedent

With every completed project, the CRE network and industry has another case study to learn from. Hepburn Wind acknowledges this and aside from noting “the technology is performing well,” the respondent noted how the development of the Hepburn Model has worked well “so other projects can more easily be enabled.”

### 4.1.2 WHAT ARE THE KEY FACTORS IN YOUR PROJECT’S PROGRESS?

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CRE groups were asked “What are the key factors that have made your project’s progress to date possible?” Most respondents thought that specific skills, support they has received or team qualities could explain the project’s progress to date, as well as “some good luck” with an ideal site, and “the high cost of electricity” didn’t hurt either.

## Committed, passionate and experienced team guided by a shared vision

More than half of the respondents mentioned that the passion of the people was a key factor in the project to date, including: personal commitment, highly motivated group of individuals, dogged determination and not letting up for one minute, persistence, congenial and optimistic board meetings, and significant investment of time by consortium partners. Several respondents note the “drive of a very small group of core people” and “a few key people driving things forward (at least one in each working group).”

Low Carbon Kimberly and LIVE Community Power both mentioned the asset of team members who have previous experience. Mount Alexander Community Wind has “a paid, 4 day a week staff person with knowledge of and passion for community renewable energy and community engagement.”

Renewable Murchison and Hepburn Wind also noted the importance of a shared group goal, and the “shared vision to help alleviate GHG emissions” and “commitment to the objective” were key factors for their group. Similarly, another respondent thought their following shared goal was valuable: “Keeping Community wellbeing foremost in consideration. No social division. The project has not been agenda driven.”

### Diverse group of skills and expertise

More than half of the respondents also noted the importance of having access to diversified skills and expertise, including many (if not all) of the following: technical, technologies, energy industry, policy settings, engineering, social, community engagement, media and press, written and verbal communications, facilitation, governance, legal, campaigning, grants, economics, financial structures, business skills. Fremantle Wind Energy notes why having a mix of skills and recognised expertise is essential:

*The core team includes energy engineers, which brings credibility to the business case and technical feasibility of the project, and local community engagement experts who balance the technical side of the project team with social skills and a local presence that can draw a crowd and facilitate a conversation. Both are essential.*

The CRE groups had access to these skills either in the core team, working groups, partnerships, and/or project officer. Several noted that having access to these skills 'in-kind' or as part of expertise of paid staff is very beneficial.

### Funding and donations

Six of the respondents mentioned funding as a key reason for their progress and one mentioned it as a key factor in their lack of progress.

Funding was specifically mentioned for salary of a part-time officer and early stage funding. Portland Sustainability Group believes that first stage funding was key as “an already funded project is far easier to receive further interest and backing than an aspirational project.” This is echoed by the NSW Southern Highlands Renewable Energy Co-op that at the moment has “gone as far as possible without some cash injection.”

Mount Alexander Sustainability Group noted the value of their project status in relation to the ease of receiving donations and therefore their progress to date:

*Being a project of an incorporated association with charity status. Means we have a 'legal' standing (to sign agreements and protect working group members from liability) and we can get donations, without having to have the hassle of setting up and maintaining a new legal entity.*

### In-kind support

In-kind support can be just as valuable as funding. Mount Alexander notes the important role of “attracting huge amounts of in-kind labour and equipment (wind modelling, site assessment, 2 x wind masts).” Central NSW Renewable Energy

Cooperative “got some uni students to develop an advertising/ communication strategy for us and that was awesome.” Low Carbon Kimberly and Hepburn Wind cite the importance of “an incredibly strong volunteer base during the commencement phase.” Even a “free suitable meeting place” can help progress the project (Central Coast Community Energy Association Incorporated).

#### 4.1.3 WHAT ARE THE KEY THINGS YOU HAVE LEARNED?

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Most of the key lessons were in regards to challenges associated with CRE projects and how to overcome these challenges.

##### **The time is right**

Several respondents have learned that CRE “is supported” (WISE Wind Project) and that “big things are possible for small communities” (Hepburn Wind). Portland Sustainability Group learned:

*timing for community systems is perfect right now, and external funding is relatively easy to achieve. A large range of stakeholders do want to see projects like this be successful, and it only takes someone to drive them.*

No other respondents share the view that external funding is relatively easy to achieve.

##### **Just get started**

Lessons around the chronology of tasks were also noted by several respondents. One respondent learned that “Funding feasibility is the first major step” and another learned to not “wait until you have all the answers to take the idea to the community, start engagement early, even before you have clear ideas of cost, technology, scale, etc.”

##### **If at first you don’t succeed, try, try, try, try again!**

Many respondents presented lessons learned about the methods needed to overcome these challenges, with responses such as “patience”, “persistence”, “keep plugging away, looking for opportunities to progress the project” and of course “If at first you don’t succeed, try, try, try again!” (Warren Yates, Clean Energy for Eternity). In line with the idea of looking for opportunities to progress the project, Jarra Hicks from Mount Alexander noted “you need good spokespeople and advocates.”



## Interactive engagement

Wingecarribbee Council Solar Energy has learned that “community support for wind farms is very polarised - you either love ‘em or hate ‘em - there seems to be no in between” which may be why other CRE groups have learned that “a strong community foundation and social feasibility study is key” (Jarra Hicks from Mount Alexander). Several respondents noted how they learned the importance of community engagement, and specifically face-to-face community engagement. David Robinson learned that:

*You have to have listened to everyone who has an interest, and take this into consideration as to what you do. Conversations (so many conversations) have to be interactive, not one-sided, or people are put off.*

This idea of listening to everyone who has an interest was also supported by an anonymous contributor. This respondent also highlights the role of shared goals:

*Local people work well together when agendas are removed and shared goals are stressed whatever their motivation for being involved. Community engagement works best when a local is employed.*

Alongside engagement, Fremantle Wind Farm learned that importance of media engagement and “how to determine what the media strategy for the project should be.” They also learned the “importance of combining the technical, financial and social aspects of the project, and knowing when to talk about what.”

## Support from all sides

Several respondents noted that they have learned that they will “require support from a number of different specialist areas” (anonymous) and “lots of support from all sides (members, media, council, ...)” (Jo Muller, Secretary of Central Coast Community Energy Association Incorporated).

## 4.2 SUPPORT ORGANISATIONS

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All nine respondents from the support organisations answered three questions relating to the current strengths of CRE initiatives:

- Name three things you have seen that have worked well in developing community renewable projects in Australia.
- Name three things you have seen that have worked well in growing the community renewables sector in Australia.

- What are things that you have seen working well in growing community renewables sectors in other countries that could be applied in Australia?

The summary of themes arising from these questions are presented in the table below and described in more detail in the section.

**Table 5: Summary of strengths CRE projects and sector for respondents of CRE support organisations**

| <b>What has worked well in developing projects?</b>                                                                                                                | <b>What has worked well in developing the sector?</b>                                                                                                                                                             | <b>What international strategies can we apply in Australia?</b>                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Community enthusiasm and ownership</li> <li>• Assistance and collaborative partnerships</li> <li>• Team skills</li> </ul> | <ul style="list-style-type: none"> <li>• Enabling and support organisations</li> <li>• Exchanging information among peers</li> <li>• Policy and advocacy to support CRE</li> <li>• Experience with CRE</li> </ul> | <ul style="list-style-type: none"> <li>• Government assistance</li> <li>• Feed-in tariffs</li> <li>• Grid connection</li> <li>• Support and structure</li> </ul> |

#### 4.2.1 WHAT HAS WORKED IN DEVELOPING AUSTRALIAN CRE PROJECTS?

Similar to the CRE Group survey, CRE support organisations were asked to name three things they have seen that have worked well in developing community renewables projects in Australia. Support group respondents echoed the responses of the CRE groups. Community engagement, collaboration and access to skills were the three main themes arising from this question.

##### Community enthusiasm and ownership

Almost every respondent agreed that it is important to have support, enthusiasm and ownership from the community. To develop this support, respondents have seen many tools used:

- Whole of community approach
- Extensive community consultation and education
- Leveraging community enthusiasm for advocacy
- Strong, influential, passionate, representative and committed community leadership group
- Visionary community leaders with time to dedicate to motivating others / selling the idea.

### Assistance and collaborative partnerships

Respondents found it was important to collaborate with industry, lead regional agencies, local businesses, commercial developers, and energy retailers. In particular, the “innovative relationships between communities and commercial developers such as Future Energy and Infigen” was mentioned by several respondents.

Examples of assistance mentioned by respondents included pro-bono, in kind, or discounted resources, information, local expertise and support. Assisting on the business case, seed funding, market opportunities, and project development were specifically mentioned.

### Team skills

CRE support organisation respondents felt that team characteristics were in their ‘top three’ of things that they have seen work well. These team characteristics include: endless energy, goal setting skills, listening and good communication, coordination by a paid staff member and having a volunteer working with group with diverse skills that drive project development.

### 4.2.2 WHAT HAS WORKED IN DEVELOPING THE AUSTRALIAN CRE SECTOR?

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Participants were asked to name things they have seen working well in growing the community renewables sector in Australia. In terms of growing the CRE sector, the variety of factors listed by respondents that have worked well were fairly consistent, and ranged from support organisations to policy to networking.

**Enabling and support organisations:** The current cooperation and collaborative approach between support organisations and projects to grow the sector.

**Exchanging information among peers:** Networking and information sharing about learnings, ideas, successful projects; building linkages between organisations via email lists, online and at CRE conferences.

**Policy and advocacy to support CRE:** Champions of the sector and advocacy organisations are loud enough to raise the profile of CRE; get onto the political and energy sector radar; to create a supportive policy environment; and ensure entities like the Clean Energy Finance Corporation (CEFC) recognise community projects.

**Experience with CRE:** Learning by doing, successful projects to date, and site visits to existing renewable energy projects.

Other factors that got a single mention by respondents include pilot funding, focusing on formats with broad application, and energy and commitment of CRE

practitioners. Only one respondent didn't "think the sector exists as such, so hard to say" (Mark Byrne, Total Environment Centre).

#### 4.2.3 WHAT HAS WORKED IN DEVELOPING THE INTERNATIONAL CRE SECTOR?

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Respondents were asked about the things they have seen working well in growing community renewables sectors in other countries that could be applied in Australia. The majority of respondents highlighted aspects of government assistance that could be applied in Australia and more than half mentioned feed in tariffs and grid connection.

**Government assistance:** An equal number of respondents mentioned financial and regulatory government support. In terms of financial government assistance, respondents listed tax benefits and incentives, start-up financing, dedicated grant or loan funding. Regulatory support included policy support in the energy markets, regulatory reform, supportive regulatory environment (e.g. Scottish Community Renewable Energy Scheme), and planning policies that "don't disadvantage renewable energy and particularly wind over other forms of development" (Nicky Ison, Community Power Agency).

**Feed-in tariffs:** Four respondents mentioned appropriately scaled, long term, consistent, or fair feed-in tariffs that make CRE projects viable. Virtual net-metering was also specifically mentioned.

**Grid connection:** Two respondents thought grid connection guidelines and regulations that make it simple, transparent, and not too expensive to connect projects to the grid, such as those seen overseas, would be beneficial.

**Support and structure:** Other international features that received a single mention each, but relate broadly to support and structure, include:

- Finance organisations that know about and have dedicated people helping CRE projects (e.g. Triados and the Coop Bank in the UK)
- Support/advocate/coordination orgs e.g. Community Energy Scotland
- Targeted frameworks (policy, investment, etc) for CRE
- Commonality of projects
- Linking projects to the vision of being energy self-reliant, e.g. a holistic picture linking to energy efficiency and what it means for our community
- Creating a culture of cooperation and a can do community attitude (e.g. Denmark)

- Providing support and opportunities for peer to peer learning (e.g. Community Energy Scotland’s Annual Conference)

## 5 COMMUNITY RENEWABLES – CHALLENGES FACING CURRENT INITIATIVES

Despite several respondents feeling the time is right for CRE in Australia, as discussed in the Strengths section of this report, many respondents also found that CRE is a difficult process because “it takes longer”, “costs more”, is “more complicated”, has “lots of policy, financial and system roadblocks” and has “many more steps” than initially believed. As such, the challenges section of the two surveys were the most extensive. CRE projects were asked to:

- Identify to the extent to which a list of identified challenges had been an issue for their group
- Identify any additional challenges and/or barriers their group had faced
- Identify the two challenges that have been of greatest impact or risk for their project to date
- Describe their top two challenges in detail, include the stage of the project at which it occurred and what could be done to overcome it.

Similarly, CRE support organisations were asked to:

- Rate a list of identified challenges in terms of how significant their organization believed the challenge was for growing a CRE sector in Australia
- Identify any additional challenges and/or barriers to growing a CRE sector in Australia
- Identify the two greatest challenges
- Describe their top two challenges in detail.

The analysis of these results has both a quantitative and qualitative component. In this section, the pre-identified challenges provided in the surveys are outlined, an analysis of the top challenges as identified through the surveys is presented and finally a discussion of the nature of these top challenges is provided. The list of potential challenges included in the survey are outlined in Table 6. The list of challenges presented to support organisations is slightly different from the list presented to CRE project proponents. For example sector wide challenges such as the lack of peak body were only presented to support organisations. However, most of the difference is due to the fact that the survey to project participants was distributed earlier, leaving greater time for expansion of the list of challenges presented to support organisations. If this research were to be done regularly to

evaluate the progress of the CRE sector, the list of challenges should be standardised.

**Table 6: Challenges facing CRE project and sector identified in surveys**

| Challenge                                                                                                        | Projects Survey | Support Orgs Survey |
|------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|
| Financing the developmental stage (social feasibility, technical feasibility, planning approval) of CRE projects | ✓               | ✓                   |
| Getting a fair price for the sale of CRE project electricity                                                     | ✓               | ✓                   |
| Grid connection (feasibility and/or cost)                                                                        | ✓               | ✓                   |
| Making the business case work                                                                                    |                 | ✓                   |
| CRE project capital raising (construction, technology etc)                                                       | ✓               | ✓                   |
| Lack of understanding within political, financial and community circles about potential for CRE                  | ✓               | ✓                   |
| Proven business models                                                                                           |                 | ✓                   |
| Financial modelling                                                                                              |                 | ✓                   |
| Knowing how to undertake good community engagement                                                               |                 | ✓                   |
| Planning laws and approval process                                                                               | ✓               | ✓                   |
| Lack of an organisation to advocate for the CRE sector                                                           |                 | ✓                   |
| Access to early technical expertise and information                                                              |                 | ✓                   |
| Knowing where to start                                                                                           |                 | ✓                   |
| Ability to respond to the community (getting support and/or responding to opposition)                            | ✓               | ✓                   |
| Selecting a contractor                                                                                           |                 | ✓                   |
| Understanding electrical terms like metering, grid, etc                                                          |                 | ✓                   |
| Knowing how to approach property owners                                                                          |                 | ✓                   |
| Scouting potential locations                                                                                     |                 | ✓                   |
| Choosing the right technology                                                                                    |                 | ✓                   |
| Finding other groups to collaborate with                                                                         |                 | ✓                   |
| Lack of communications between CRE projects and organisations                                                    |                 | ✓                   |
| Choosing and setting up a legal structure                                                                        | ✓               | ✓                   |
| Understanding construction contracts                                                                             |                 | ✓                   |
| Understanding your health and safety responsibilities                                                            |                 | ✓                   |
| Having the necessary knowledge                                                                                   | ✓               |                     |
| Having the necessary skills                                                                                      | ✓               |                     |
| Access to early technical expertise and information                                                              | ✓               |                     |
| Finding partners and negotiating agreements                                                                      | ✓               |                     |
| Other                                                                                                            | ✓               | ✓                   |

## 5.1 TOP CHALLENGES

Figure 6 and Figure 7 show how CRE groups and support organisations rated the various challenges listed in the survey questions (including an option for ‘other’). There were two methods for identifying how significant a challenge is; firstly, through the rating process (very significant challenge to not significant at all and very challenging to manageable), and secondly, by identifying challenges from the list (including “other”) as one of the top two challenges.

Figure 6: Weighted rating of CRE challenges identified by CRE support organisations

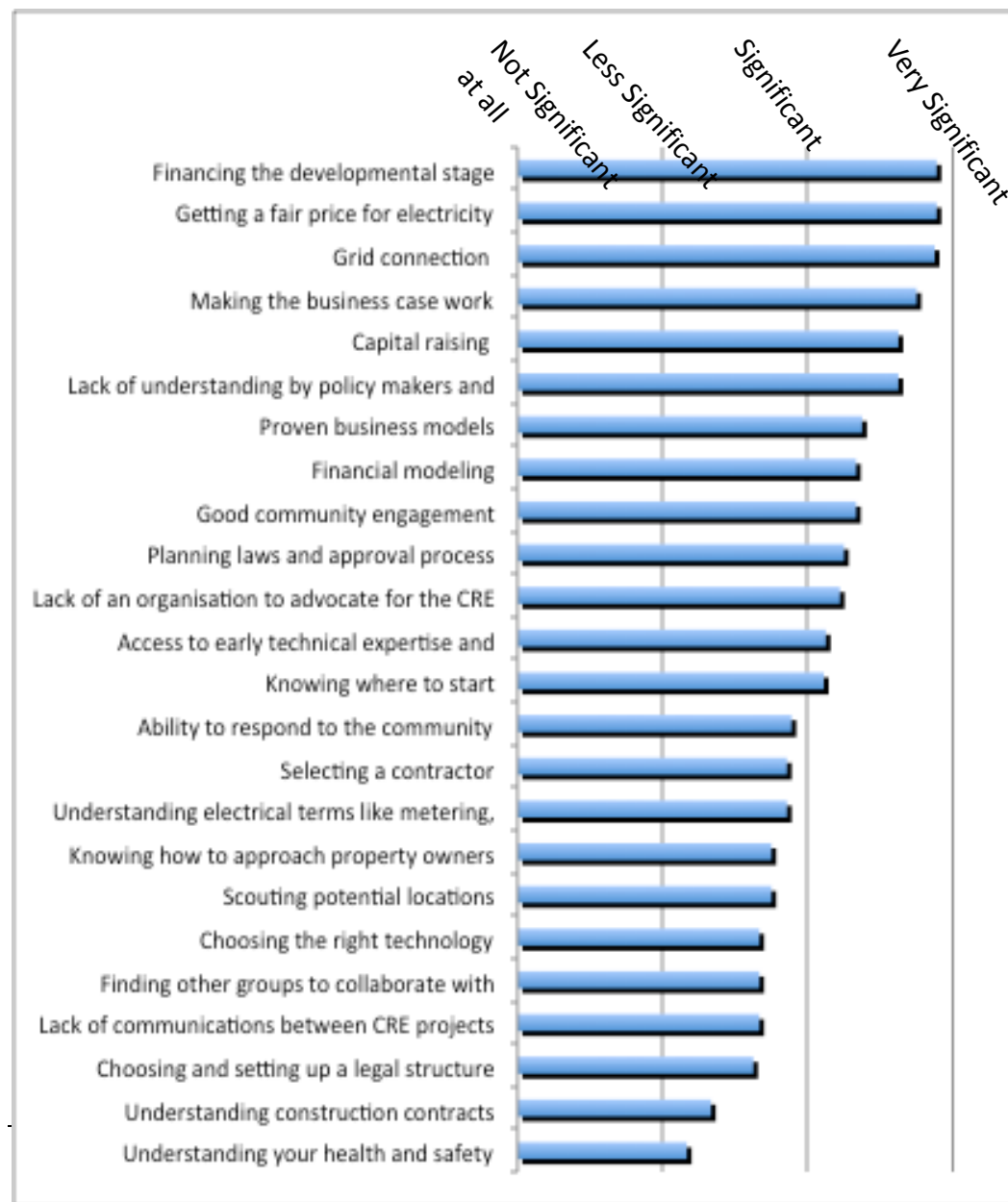
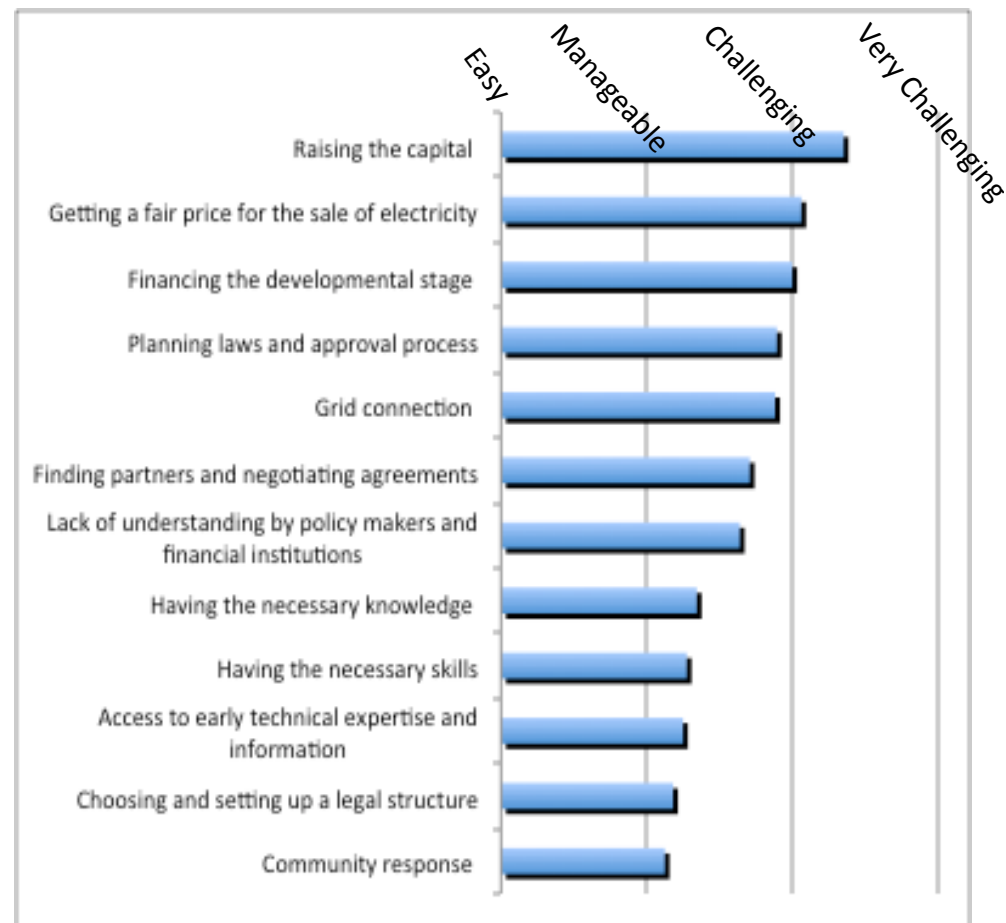


Figure 7: Weighted rating of CRE challenges identified by CRE projects



As such, Table 7 provides the top challenges in a matrix format that compares the two top challenges identification methods and the two respondent categories. This analysis shows that ‘financing the development stage (inception, social feasibility, technical feasibility and planning)’ is a top challenge in all categories, with the challenge of getting a fair price for the sale of CRE project electricity being a top challenge in three of the four categories. These challenges can be considered the most significant ones facing Australia’s CRE sector.

Other challenges that were identified by participants as significant included grid connection, planning laws and approval process and making the business case work. Also, given that the questions asks, 'Which two challenges have been of greatest impact or risk for your project to date?', certain aspects identified as 'very challenging' drop away, as many projects are in the early stages and have not had to deal with them to date. One example of this is the challenge of 'Capital Raising', which is perceived as the top weighted challenge by projects, but only a few projects chose it in their top two challenges.

‘Other’ was a challenge category chosen by a number of CRE projects, a discussion of the range of challenges identified this response is given in Section 5.2.10. However, political risk and uncertainty was raised a top challenge by a range of groups and as such is discussed in its own section (5.2.8).

**Table 7: Top CRE challenges matrix**

|                         | Community Renewable Energy Projects                                                                                                                                 | Community Energy Support Organisations                                                                                                                              |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Weighting of Challenges | <ol style="list-style-type: none"> <li>1. Raising Capital</li> <li>2. Fair Price for the sale of electricity</li> <li>3. Financing the development stage</li> </ol> | <ol style="list-style-type: none"> <li>1. Financing the development stage</li> <li>1. Fair price for the sale of electricity</li> <li>3. Grid Connection</li> </ol> |
| Top 2 Challenges        | <ol style="list-style-type: none"> <li>1. Financing the development stage</li> <li>1. Other</li> </ol>                                                              | <ol style="list-style-type: none"> <li>1. Financing the development stage</li> <li>2. Fair price for the sale of electricity</li> </ol>                             |



Interestingly, 'Community Response' (building support and dealing with opposition) was rated overall as being manageable, despite being one of the top two challenges for six CRE project respondents. One explanation for this could be that while it is a significant challenge they face, CRE projects feel they have the skills and resources to effectively manage and address it. Alternatively, it could be that community response is a significant challenge for a sub-category of CRE projects, particularly wind (as shown in Table 8), but not a challenge at all for the rest.

When an analysis of the top two challenges is done by stage and technology it reveals interesting stage and technology specific barriers (as outlined in Table 8). Another key barrier for community wind projects was 'financing the development stage' particularly and unsurprisingly in the development stages.

For Solar PV finding appropriate partners and negotiating agreements is a key challenge. Other common challenges (even in early project development phases) for solar PV were getting a fair price and grid connection. Due to the shorter time frames required for a community solar farm compared with a wind farm, hydro or biogas plant, these issues are faced from the outset, rather than several years down the track.

Table 8 looks at the top barriers for the first three stages of CRE project development, as these stages had enough respondents to identify common or top barriers. The analysis shows that having the necessary knowledge and skills is a key challenge in the early stages of a project, however no CRE project beyond the technical feasibility stage identified these challenges as key. This indicates that knowledge and skills are an issue early on, but are surpassed by more significant challenges as a project progresses.

**Table 8: Top CRE challenges by stage and technology**

| Stage                     | Top Barrier                                                                                                                                                    | Technology      | Top Barrier                                                                                                                                                                         |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Initiation</b>         | <ul style="list-style-type: none"> <li>Financing the developmental stage</li> <li>Having access to the necessary skills to develop your CRE project</li> </ul> | <b>Solar PV</b> | <ul style="list-style-type: none"> <li>Getting a fair price for the sale of your electricity</li> <li>Finding appropriate partners and negotiating associated agreements</li> </ul> |
| <b>Social Feasibility</b> | <ul style="list-style-type: none"> <li>Having access to the necessary knowledge to develop your CRE project</li> </ul>                                         | <b>Wind</b>     | <ul style="list-style-type: none"> <li>Community response (getting support and/or responding to</li> </ul>                                                                          |

|                                                                                                                  |                                                                                                               |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Technical Feasibility</b> <ul style="list-style-type: none"> <li>Financing the developmental stage</li> </ul> | opposition) <ul style="list-style-type: none"> <li>Other</li> </ul> <b>TBD (wind, solar and/or bioenergy)</b> |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|

One of the main differences in the challenges analysis between support organisations and CRE groups is the variety of challenges chosen. Of 24 possible choices, only five challenges were ranked in the top two challenges identified by CRE support organisations:

- Financing the development stage
- Getting a fair price for sale of electricity
- Groups having access to skills
- Lack of understanding of CRE in political, financial and community circles
- Finding appropriate partners and negotiating associated agreements.

For CRE groups, all of the 13 listed challenges were chosen by at least one group as one of their top two challenges. This diversity of challenges at a CRE project level highlights the complexity and diversity of these endeavours. Nevertheless, these groups would not be persevering if they did not believe these projects were possible and worth doing.

Not everyone has encountered challenges; for the Central Coast Community Energy Association, a newly established project in NSW, it “looks like we are running into open doors”.

## 5.2 DISCUSSION OF CHALLENGES

As discussed in Section 3.2, the majority of the CRE Groups who participated in the survey are still in the early stages of project development, generally before planning approval, capital raising, construction and operation. The top challenges collated here are therefore likely to be biased to early project development, though many challenges would likely remain as hurdles throughout many or all project phases. The following sections discuss the top challenges identified in more detail, a summary of these is provided in Table 9, as well as the solutions offered to these challenges. A discussion of these proposed solutions is provided in Section 6.

**Table 9: Summary of top challenges and key overarching solutions**

| Top Challenges                                                                                                                                                                                                                                                                                                                      | Key Solutions                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Financing the development stage<br>Getting a fair price for electricity<br>Having access to skills & knowledge<br>Grid connection<br>Community response (getting support and responding to opposition)<br>Finding project partners<br>Lack of understanding of CRE (general public, government, financial sector)<br>Political risk | Developing professional networks<br>Supportive & stable policy environment<br>Increased awareness & understanding of CRE<br>Knowledge & skill sharing opportunities<br>Funding streams for CRE project development<br>Developing good partnerships |

### 5.2.1 FINANCING THE DEVELOPMENT STAGE

Financing the development stage was the most common challenge facing the CRE sector as identified by both CRE Groups and Support Organisations. This challenge includes financing the social and technical feasibility studies and getting the project to the point of planning approval. Financing the development stage is a challenge distinct from capital raising. Capital raising happens when there is definitely a project to progress, the project has planning approval and as such can seek investors to raise the capital to construct the project. Financing the development stage is all the fundraising up until that point.

Many groups are attempting to overcome the challenge of financing the development stage through various means of fundraising, including membership fees, grants, donations and seeking angel investors. However, as one group stated, unfortunately “money does not follow support” (Low Carbon Kimberly).

Lack of access to funding has stalled some projects for an indefinite period, threatening to undo important trust and awareness building within the community and presenting continuity and intellectual property challenges. As Jarra Hicks, from Mount Alexander Community Wind explains:

*Attracting funds at high risk stage (ie before the wind resource and community support is proven) is very hard, especially when the funds needed are massive and you need funds to cover wages. Having at*

*least one waged person to manage the project and do community engagement is essential..... Job insecurity of a staff person who trying to coordinate a long term project on highly uncertain short-term contracts and the IP / continuity risk that this poses to the project.*

The Alternative Technology Association (ATA) identified that “most projects have longer, riskier early project stages with more demands on personal resources as a result of lack of funding.”

As raised by Community Energy Adelaide Hills, one of the issues of relying on grant funding is that applications take a lot of time and isn't necessarily a useful process:

*We had to start again. It was impossible to use anything other than the bare bones of the previous project*

Several groups commented on the time consuming, and often unfruitful, nature of raising funds from grants and donors, especially when having to “compete against other immediate campaigns in community” (MACWind, Mick Lewin). Another issue identified by CRE Groups is the temptation to compromise desired project outcomes in order to fit grant guidelines.

## 5.2.2 GETTING A FAIR PRICE FOR ELECTRICITY

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Getting a fair price for electricity is a challenge faced by all CRE Groups in the current Australian policy context, but especially solar PV projects, where the FiT rates change frequently. This challenge generally arises after the project has completed initial technical and social feasibility stages. As Renewable Murchison puts it, the issue of getting a fair price is a “real dealbreaker” that can enable or debilitate a project.

Embark suggested that this is the biggest challenge for CRE project because “if you can get a good price for electricity, it means you can pay for services and equipment to make the project viable.”

Sustainable Regional Australia also identified a fair price for electricity because

*...securing a minimum price or agreement for energy over a period of 20 plus years through a Purchase Power Agreement (PPA) is a pivotal factor in determining the feasibility of a project. A minimum is required for a project to pay off investment over a period of time and provide appealing rate of return for investment.*

They suggested this should be addressed by influencing policy:

*... for a minimum feed in tariff for medium to large scale distributed generation and to allow this to happen within the current landscape*

*where retailers place a priority on securing forward contract prices from centralised generation to manage their risk.*

Fundamental to the issue of a fair price for electricity is the issue of negotiating a favourable power purchase agreement (PPA). The Bega Valley Community Solar Farm, among others, have found that “energy buyers are reluctant to conclude a PPA without the project being operational”, which of course makes financial planning, business modelling and share offer disclosure statements very difficult. A lack of a PPA and a fair price, or at least price certainty, also makes it very difficult to attract investors in the project. Canberra Clean Energy Connection is attempting to overcome this challenge by partnering with a larger energy developer who is more able to negotiate a favourable power purchase agreement. They “consider themselves lucky”, in being able to negotiate such a favourable partnership and also for accessing a higher FiT rate that will be closed to future project rounds due to changes in policy.

Another means of overcoming this challenge is to seek innovative relationships with energy retailers. To this end, the Southern Highlands Renewable Energy Coop is exploring whether signing all coop members to a particular retailer might therefore entice the retailer to offer a better PPA.

*One of the things we have heard back from our surveys and our forums was the desire for people to be able to close that loop and buy the energy that they own through owning shares. And also for the project to contribute to energy price stability and affordability. So we see figuring out ways to close that loop as being one of the innovative edges that we should look into. There’s a few different options like innovative relationships with existing retailers or setting up aggregate wholesale purchasing, like setting up our own retailer. There are a few options that are worth investigating to try and make that happen. Jarra Hicks, Project Manager Mount Alexander Community Wind*

The Community Power Agency commented that:

*Currently, CRE projects at all scales, are competing with the wholesale price of electricity - approximately 4-8c/kWh. Although for larger projects such as Hepburn Wind a PPA that follows the spotmarket price is also possible. However, either way this is low and risky and doesn't fairly represent the benefits of community solar and other types of CRE to consumers of electricity and the wider community.*

Community Power Agency further suggested several possible options to overcome this challenge:

- *Virtual net metering so that projects can sell electricity directly to members*
- *A CRE specific retailer or a CRE specific electricity aggregator*

- A CRE FiT (national and consistent)
- A deal between the CRE projects and a sympathetic retailer.

A fair price for electricity particularly affects community solar PV projects, where the technology costs per kilowatt hours (kWh) are higher. Renewable Newstead and the Ranges Energy Cooperative, among others, have both determined that without a FiT solar PV only stacks up 'behind the meter', where the electricity produced is used immediately and not fed into the grid. Renewable Newstead has found that “this makes it very hard to help the elderly, the poor or those with unsuitable roofs to participate in the benefits of a larger scale project”. Community solar PV projects are pursuing partnerships with large energy users with appropriate roof space as hosts for their PV installations. They are also interested in pursuing 'virtual net metering' arrangements where “a new model for local distribution (virtual grid) with a ring fence around the town would allow community based generation to be viable without the subsidies currently available to rooftop PV” (Renewable Newstead).

Peter Cook from Ranges Energy explained their response to the uncertainty of feed-in tariffs; that is to develop a model that is successful regardless of the feed-in tariffs:

*We said from the outset that we wanted to come up with a model that was not dependent on rebates or feed in tariffs. We knew historically there were moving goalposts ... things are always changing in response to politics ... we can live with it. Having said that, we believe the new situation is a rip-off of solar households and a disincentive for people to partner with us or similar groups out there in the community. We have written to our local MP and we will be having a meeting with him and putting the point of view that as a bare minimum that community renewable energy projects ... should be able to access the standard feed in tariff which was a one for one tariff. The criteria for the changes by the [Victorian] Competition and Efficiency Commission was supposedly to make it fair and reasonable ... We don't share their view that the new arrangement is in any way fair and reasonable. But our model is not dependent on that. We will move on because we fully expect that they will just say that we have to agree to disagree.*

### 5.2.3 HAVING ACCESS TO SKILLS AND KNOWLEDGE

A wide range of skills and expertise are needed to successfully deliver a CRE project. These include: legal, financial, technical, engineering, governance, community development, communications, accounting, fundraising, administration, project management, public relations and more. In order to overcome this challenge, CRE groups have employed a range of solutions from recruiting particular skill-sets to the project team and securing professional in-kind and paid assistance to developing partnerships and building / utilising networks. As the Community Energy Adelaide

Hills project has found, getting the “right people on board early” is crucial in having the necessary mix of expertise to drive the project forward. Several groups, such as the Denmark Community Windfarm, have also decided that it is important to “hire professional expertise wherever there is a gap in local skills / knowledge”, rather than trying to do everything 'in-house'.

There is a common recognition among CRE Groups and Support Organisations that sharing information and skills is key to saving time, building good outcomes and not reinventing the wheel. This has been the experience of the Surf Coast Community Solar Project, where they “have been looking to find information about other groups that have started the process” and found that resources, such as the Embark website, have “been handy as a guide”.

Another means of addressing this gap has been to secure in-kind contributions from sympathetic professionals. MACWind explains that they have “secured pro-bono assistance, but this was really hard, and probably only possible because one of our board members works in the wind industry” and suggests that “if there was a central CRE body, a person with these technical skills could be employed as a resource to all CRE groups.”

The Central NSW Renewable Energy Coop (CENREC) has established a co-operative to own one turbine in a commercial wind farm developed by Infigen. Jess Jennings describes the advantage of this arrangement:

*Being able to connect to something that is basically going to happen anyway ... is like getting on a moving train. ... I think in this area it's probably going to need that kind of momentum, for people to think that it's a reality and that it's going to happen in the not too distant future, so there's definitely a big advantage there.*

While this arrangement provides access to many of the technical skills necessary, the group's biggest remaining challenge is in the legal and financial side of the project:

*That technical side of when would investment start to pay dividends, how would they be paid, would they be franked, what would the final return be, and all the legal things you need to sort out in terms of having a public prospectus, that side of it have been the largest hurdle.*

The NSW Renewable Energy Precincts program identified a geographical dimension to the problem of access to skills:

*This is more of an issue in regional areas with low population density - active community members are already 'stretched' by the amount of volunteer support required to keep local towns viable. In coastal areas and areas near major regional centres this is less of an issue.*

## 5.2.4 GRID CONNECTION

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Almost all of the CRE projects surveyed are looking to be grid-connected. This poses a range of challenges, including negotiations with grid operators and unknown costs, responsibilities and timelines.

Denmark Community Windfarm, which is currently under construction, faced early challenges in getting the grid operator to agree to even consider the project:

*The State's electricity distributor / infrastructure owner (Western Power) was resistant to the project's small size and "alternative" nature, because we challenged the dominant "poles and wire" culture that then existed. As an edge-of-grid project we posed particular technical problems in terms of existing infrastructure; and because Western Power is a monopoly we were at its mercy in terms of the level of detail and costing of its connection and access studies.*

The Denmark Community Windfarm project was originally conceived as a four turbine, 2.4MW project based on the aim of supplying 80% of the annual consumption of Denmark. On this basis the project obtained both EPA approval and State parliament approval to be constructed on crown land. The project paid Western Power \$50,000 for pre-connection studies, the result of which was that Western Power said the distribution line could only support a 1.6MW project. Faced with the choice of abandoning the project or heavily reducing it, the group proceeded with planning a two turbine, 1.6MW project, even though the financial viability was less favourable. Craig Chappelle describes what happened next:

*Denmark relies heavily on tourism and the two main periods are Christmas and Easter, when the population trebles. Easter 2007 we had blackouts, and some people were without power for up to 48 hours. The tourism operators in town were absolutely rotable, understandably. One of the first things Western Power were instructed to do as a result of that was to upgrade the line down Ocean Beach Road to (no prizes for guessing) 2.4MW. ... The point is we were then stuck with a two turbine project, because we had done our feasibility study, costing and everything else.*

Both CRE Support Organisations and several projects have identified a need for a legal grid connection framework that clearly indicates responsibilities in terms of the costs and timeliness of grid connection. As the Fremantle Wind Farm explains: "It's not a question of whether we can physically connect or not, it is more a question of how much". Both Renewable Newstead and the Denmark Community Windfarm



pointed to a need for innovation within the electricity industry to accommodate the “growing pressure to adopt renewables” and distributed generation.

The Community Power Agency suggested that the grid connection problem should be dealt with in the following way:

*At the very least we need a standard schedule of rates and timings for different grid related services for community scales. Preferably, we would also have a law that requires networks to connect projects at the closest point, with any upgrades on the project side being borne by the project and any on the network side being borne by the network company.*

Similarly, Embark suggested that what was needed was “rules, including timeframes and pricing format, for connecting community projects applied consistently to all network providers in the country.” From the project end, grid connection issues can be somewhat alleviated by careful site selection and beginning discussions with grid operators early.

Hepburn Wind faced many challenges as the first community wind farm to connect to the grid, particularly in terms of the underestimating the complexities of the process, the time it would take to connect and the cost of connect. As they explain:

*The complexities of connecting the wind farm to the distribution network were underestimated by all parties. Detailed grid studies were initiated after the turbines had been selected, which was relatively late in the project development phase. The grid studies identified two issues that had significant impact on connection costs: reactive power control and remote regulator monitoring.*

Their experience is that this challenge continues post construction, while grid upgrade and monitoring issues are sorted out.

### 5.2.5 COMMUNITY RESPONSE

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The community response to a proposed CRE project can present two key challenges: responding to opposition and catalysing general support into participation in the project.

#### Responding to Opposition

Community opposition is an issue faced by wind development generally. International experience tells us that community wind projects are likely to face less opposition than corporate projects and this is proving to be the case thus far in Australia also. However, all five community wind projects who participated in the survey have experienced some degree of community opposition, led by a vocal

minority of opponents, not all of whom are always local people. Opposition is usually based on noise (and health), visual, wildlife impact or property value concerns and usually arises after a preferred site has been made public.

The Central NSW Renewable Energy Cooperative (CENREC) is the first community-developer partnership seeking to co-develop a wind farm in Australia. Infigen Energy began the development several years ago and in 2011 sought community interest in possibility of owning one turbine in the development. CENREC has formed to facilitate the community-ownership element of the project. The development is facing some opposition:

*Our region is currently very much torn in the wind debate. The Landscape Guardians made early inroads and the Flyers Creek Awareness Group has come out of their movement. Infigen had undertaken a lot of planning and assessment and were close to submitting the EIS when they approached the community with offers to support a CRE at Flyers Creek. Being so late it has been hard for us to deflect some of the anti media. CENREC*

CENREC's solution has been to develop an information package that “sticks to the facts” and to continue work in a professional manner and to build trust and relationships in the community.

Similarly, the Denmark Community Windfarm has found the “emotive arguments and distortion of facts by local opposition elements” to be difficult and suggest that CRE projects “bring your community on board from the outset, and keep it informed and involved at all stages” in order to overcome this challenge. Hepburn Wind has found on-going engagement with long-term opponents to be important in building community trust, though difficult. The New England Wind project has responded to opposition via:

*... develop[ing] a comprehensive database to ensure we can communicate with the near neighbours (up to 5km radius) and are working through the various concerns raised while being clear about boundaries in the sense that some concerns are beyond any reasonable expectation that we need to meet.*

One respondent mentioned difficulties related to developing trust (Jarra Hicks, Mount Alexander Community Wind):

*The standard approach to securing a site taken by Wind Developers can make a community very nervous and divided. With no benefits coming back to them, it can be hard for a community to understand why they should support a wind project. This makes it a lot harder to get a community to trust the project if you come in afterwards!*

Community based projects by their nature see it as part of their role to actively engage the community to a greater extent than a commercial developer would. At the same time, it is clear that many projects have spent a lot of time wrestling with issue of how much to respond to individual complainants:

*We are at a point where, were we a commercial developer doing this project, it would be many years before they would consult with anyone, because the site is not yet proven. So we are operating well and truly beyond those parameters because it's a community wind farm and we are working to a higher standard. But having said that, we will have a limit that we will not go beyond and some of the expectations that some of the neighbours have is totally beyond any reasonable impost on us and we will need to get better at clarifying what those boundaries are.* Adam Blakester, Project Director, New England Wind

*Like with any wind project there is a whole bunch of misinformation that comes out and it's really hard to know how to respond respectfully to people's concerns, particularly when they are around health and people's experience of wind turbines. ... Its just hard to manage all these issues.* Jarra Hicks, Project Manager Mount Alexander Community Wind

Several groups expressed frustration at the role of the media in giving undue prominence to objectors:

*I think there is a link there, you can put up all the scientific debate to date saying there is no medical impact of wind turbines, and that could be a representation of 100 scientists around the world, you only need one farmer to stand up and say 'I feel sick and I don't want this' and it gets equated in the media as being the same level of concern.* Jess Jennings, Executive Officer CENREC

Several groups reported that they had come to the conclusion that it was important to put their communications effort into providing factual information rather than responding to individual objectors:

*We've come to the conclusion that they are so 'out there' that answering each and every little concern that they raise just doesn't actually look good and we are not sure that they are having a great impact anyway. ...and I think that's the answer for us, to publish positive stories, rather than respond to somebody who, to quote, says she was 'driving through South Australia and saw some wind turbines some miles away and was immediately sick'. I think this is not taken too seriously by anybody in the community, once they're regularly in the letters [page] like that.* Mick Lewin, Mount Alexander Community Wind

*I guess the message for other people is to expect criticism and deal with it. But be positive about it. Put the facts out there. Don't be reactive, be proactive. If you know your facts are right and you know you're doing the*

*thing that most people want, just get on with it. Don't get waylaid by red herrings and fringe arguments.* Craig Chappelle, Chairman Denmark Community Windfarm

### Participation in the project

Community participation in project design and delivery is identified as being key factor of success by both CRE Groups and Support Organisations. However, harnessing the participation required can be difficult. Participation can take the form of volunteering, being a board member, attending events, donating and more – all of which take time and / or commitment. The Central NSW Renewable Energy Cooperative has found building participation in the project to be very difficult in an “over communicated / time-poor community”. Increasing membership and capacity of the core team to deliver the project has been an issue faced by several CRE groups, as found by Clean Energy Association of Newcastle, it can be “hard to get continued support from members who are already busy in other volunteer roles”. This also relates to the 'lack of understanding' challenge below.

#### 5.2.6 FINDING PROJECT PARTNERS

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Finding valued project partners is both a challenge and a solution for CRE groups: once secured, partnerships can offer valuable enablers to CRE projects. But as Canberra Clean Energy Connection comments, “developing appropriate partnership models can be tricky”. Project partners can offer skills, advice, consulting, funding, resources (such as staff time, venue hire or roof space) and more. A key means of overcoming this challenge is building and utilising CRE networks as well as enhancing common understandings of CRE, see more below.

For Low Carbon Kimberly, once of the most challenging aspects of developing partnerships has been that “plenty of partners have interest but expect to see a fully developed business case before committing”. This presents a challenge, as developing a CRE business case is a big hurdle in itself, requiring many of the initial stages of project development to be completed before a case can be developed. Further, some partnerships require negotiating legal agreements, which can be a complicated and expensive process.

Finding project partners that share a similar vision and commitment can also be a challenge. The Ranges Energy Cooperative has found that it can be difficult to find project partners that are willing to do enter an arrangement which is “outside the square.”

Community solar projects face particular challenges in finding appropriate project partners, as their business models often rely on finding a project partner with an

appropriate site (eg. Roof space) and a significant and constant day-time electricity demand.

### 5.2.7 LACK OF UNDERSTANDING

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A general lack of understanding of what community renewable energy is — its particular features and benefits — presents a challenge when trying to engage stakeholders. Such stakeholders include the general community, the financial sector, politicians and other decision makers. This challenge is eloquently summed up by Adam Blakester at New England Wind, when he says there is:

*... limited understanding and recognition of CRE as a discrete and complementary way to support RE and build community understanding and support. CRE is not specifically considered in existing policy and investment paradigms... Our engagement with policy makers, with financial sector, investment sector people is that they don't understand this space. In fact for most of them they would struggle to articulate what it was. So that makes our job hard because we need to explain who we are and as we all know, you get an elevator pitch and you might not get further than that, because people are bored and they have moved on to the next thing before they even understand it, let alone whether they want to do anything with us. That's a really big issue in this country.*

As the first community owned wind project in Australia, Hepburn Wind found that they were “constantly faced with being the pioneer” and that “building the grassroots movement locally” and “educating and engaging the community about the benefits of a community wind farm” were key to their success. The issue of the as-yet unfamiliar nature of CRE is also experienced by projects when seeking project partners. As the Ranges Energy Cooperative explains, “within the host organisation support was strong at a political level but hesitant at an administrative level”, most likely due to their unfamiliar business model and legal structure.

Within the general community this challenge means that it takes more time to build trust in both the model and protagonist before people will participate in the project (as volunteers, members, a good board, partners, investors etc.). For the Central NSW Renewable Energy Cooperative, building this general understanding is crucial to attracting interest from community investors.

A lack of understanding of CRE within policy has meant that CRE has tended to 'fall through the cracks" of policy making and, as yet, is largely excluded from policy support (see Section 8).

A lack of understanding in the financial sector has led to difficulties in securing project development funding (outlined above) and also in securing debt finance and

attracting institutional investors (eg superannuation funds, philanthropic funds, etc.).

Starfish Enterprises suggested that the lack of understanding be addressed by “targeted social marketing campaigns in areas undertaking CRE projects and using successful projects as case studies to target key stakeholders further afield.”

### 5.2.8 POLITICAL RISK

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Political risk was not an option included in the survey, however, it came up as an issue for both CRE support organisations and groups a number of times, particularly in the ‘other’ category. Political risk includes several challenging aspects, including:

- Changing policy environment. For example, the FiT, RET and carbon price policies are currently subject to change or high levels of uncertainty.
- Policy changes mid-project create high degrees of uncertainty in financial modelling and business planning
- No clear grid connection cost and timing schedule / guidelines
- Excessively restrictive state planning policies particularly for wind energy.

Central NSW Renewable Energy Cooperative explains the potential impacts of policy changes on their project:

*... our financial modelling has indicated that if the carbon tax is repealed we will not be able to offer a return to our members. Unless we can find a large grant or similar to help support the first few years of operation it will be very tight... to get our disclosure statements we have had to develop a range of financial models.*

The Energy Ranges Cooperative has had a similar experience:

*Initially the PV system was sized to meet the building’s energy profile. Export of excess power would occur on holidays and weekends. When standard Feedin Tariff (1 for 1) was abolished and replaced with 8 cents per kWh FIT we had to resize system to minimise export.*

Craig Chappelle from Denmark Community Windfarm observed:

*There have been five shire council elections since this project started, four changes of federal government and three changes of state government, so that’s been an interesting exercise in itself.*

For Hepburn Wind, the changing electricity market and highly fluctuating electricity prices has been a challenge.

### 5.2.9 CAPITAL RAISING

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Capital raising (for the construction phase) was identified as a significant challenge by both CRE projects and support organisations. Only Hepburn Wind and Denmark Community Windfarm have completed this phase. Hepburn identified it as “a huge challenge” especially as it took place during the global financial crisis. They identified “educating and engaging the community about the benefits of a community wind farm” as a key part of the process and the role of the Hepburn Renewable Energy Association (HREA) — the community organisation that preceded the establishment of the Hepburn Wind co-operative – in signing up local members.

Peter Cook from Ranges Energy identified the need to have a physical project ready to go before attempting capital raising:

*When you go out to the community, whether it be at a market or at a local sustainability festival, even though you've got what seems like a good idea to people, they will say to you “where is it going to be” and as soon as you say “we're negotiating at the moment with XYZ” their interest drops off. If they are going to invest they want to invest in something that has either happened already, or is happening. So that's an important lesson we have learnt, that you can't really go out and get members until you have something installed.*

Jess Jennings from CENREC identified the difficulty of moving beyond ‘preaching to the converted in order to raise the required investment:

*The people who join the coop more than likely have a very strong understanding and appreciation of the renewable energy debate and discussion, and they can see the logic, and it is also something they are doing for lifestyle reasons, but we need to be able to contact the broader mainstream community. That's the model that we are working on, to have broadscale community acceptance and approval of this kind of project. So marketing and contacting those people, the average person that walks into McDonald's for lunch ... they're the sort of people we need to get the message through to. That, for the select few who are in the local coop is a big challenge. It's easy to preach to the converted, it's very hard to go beyond that.*

But remained confident about success:

*Five million dollars is the cash we want to raise from the community and that sounds like an absolute impossibility but then having heard and seen examples both in Australia and around the world of where it's been possible, and the fact that we're further down the track, in terms of having a wind turbine to point to reasonably soon, it does feel like it is doable.*

## 5.2.10 OTHER CHALLENGES

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### Long Project Timelines

Several projects commented on the difficulty of long project timelines and of maintaining momentum and commitment of the team and the community throughout this process. As Fremantle Windfarm articulated:

*Perhaps the most important lesson for us personally has been the realisation of how long these projects can take to come to fruition. Even in an environment where the vast majority of leaders and community supporters are in favour, it is still extremely difficult to generate the sense of urgency required to get actions happening on the ground.*

Adam Blakester from New England Wind commented on the need to be realistic about ‘the long haul’:

*My main concern with the consortium, given that I effectively fulfil the role of (unpaid) CEO, is to go as swiftly as we can without people burning out and without people losing enthusiasm, and to maintain a standard of quality. There are some who would like to go faster, there are some who have reached their thresholds of capacity and overwhelm and energy and so on. It’s feathering that so we can sustain what is clearly going to be a very long journey.*

Other respondents learned about the difficulties that can arise from within the CRE team, including “obtaining consensus within a broadly-based community group is not an easy task” (Wingecarribee Council Solar Energy) and its “hard to keep a group dynamic and motivated” (Clean Energy Association of Newcastle and Surrounds). Negotiating competing values and goals was also noted as a challenge - “community focused vs commercial business model” RePower Bendigo.

### Matching expertise

Being able to effectively match expertise to projects that need specific help is a challenge. ATA identified that “there is expertise and experience out there but it is challenging for groups to know who to ask and who to heed” and suggested this could be overcome by “better centralised information sharing and resourced support for matching proponents with specialists”. Backroad Connections suggested creating a “capability register of potential partner organisations and the areas of expertise they could offer”. Hence, developing a database of expertise willing to work pro-bono or at discounted rates for CRE projects would be very beneficial.



## Other

Additional challenges identified in the support groups survey included:

- Community resistance to the carbon tax and renewable energy generally
- Negative community perceptions around renewables particularly wind energy
- Current unavailability of virtual net metering or direct selling of electricity to CRE project members
- Grant making bodies want to fund tangible outcomes, and some of the early stages e.g. wind monitoring, if there isn't a good resource or business case, have few outcomes beyond community education

## 6 COMMUNITY RENEWABLES – OPPORTUNITIES FOR THE SECTOR

Both CRE projects and CRE support organisations were asked:

- What do you see as the key opportunities (existing or potential) that could grow the CRE sector in Australia?
- Do you have suggestions about how we (as a sector) could take advantage of these opportunities?

Despite the many challenges and barriers facing CRE projects, the responses to these questions demonstrated that there is a great deal of optimism for the future of the sector, based both on the many benefits of CRE projects and the urgent need to tackle climate change. For example:

*The coming climate catastrophe should do just nicely. Pitching CRE as an answer to both mitigation and adaptation, Mark Byrne, Total Environment Centre*

*Hopefully there will be a huge opportunity once politicians wake up to the urgent need to move to renewable energy to reduce dangerous climate change, Jack Gilding, Backroad Connection*

*There are massive opportunities in the CRE sector. Almost nobody knows just how many advantages and benefits are available. Key opportunities are income generation and widespread rollouts of large numbers of renewable energy systems. This is true across the full spectrum of CRE models - individually owned, community group owned, and hybrids of the two, Portland Sustainability Group*

*The business-as-usual culture has to be replaced – with facts, working examples, education, political pressure ... all underpinned by a genuine belief in the need to stop consuming and producing carbon, Denmark Community Windfarm*

Similar optimism and confidence in the benefits of community energy projects was reflected in the phone interviews:

*The dividend of community owned renewable energy is so prolific ... in every way, the literal obvious things like financial [benefits], but the below the waterline benefits are much greater; the social capital, the skills development, the social networks, the community pride, the leadership that's taken. Community renewable energy has to be the most significant opportunity for social and community enterprise and environmental enterprise, bar none, in the developed world. Adam Blakester, Project Director New England Wind*

*The opportunities are huge... Apart from the fact that it's a good financial investment (and that's probably got to be the driving force in order to capture that mainstream), for biodiversity and air pollution reasons you would invest in renewable energy rather than old fossil fuel methods. You'd also do it to mitigate against climate change, and the carbon tax reasons to price out non-renewable sources. The real advantage here is that we are able to keep profits of the electricity generation at a wholesale level within the local community. That's something that in rural areas people would really connect to. And by doing that you would also secure your local energy supply and heading down the path of becoming a self-sufficient community in terms of your energy. So security and self-sufficiency are two things which people can seriously relate to. You put all those together and you are looking at a very powerful model for transitioning a western style economy to a low carbon economy that also has all these other benefits to it such as a small environmental footprint, local economic development, regional renewal. And people can also take that and use it to inspire them to reduce their energy usage and to increase their efficiency. Because they know that that turbine up on the hill is what they are relying on and that if they curb their usage there is a very good chance that they could have all that usage covered. Jess Jennings, Executive Officer CENREC*

Survey respondents identified a strong interest and goodwill in the community toward CRE projects and specifically identified the success of Hepburn Wind as both evidence that these projects can work and as a model for future projects.

In this section we summarise the opportunities identified by respondents that are a feature of the policy, technical, and regulatory environment in which the sector operates. In Section 7 we identify those opportunities for action which are more immediately in the control of the sector.

**Table 10: Opportunities for the CRE sector**

| Opportunities in the external environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Opportunities for action by the sector                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• CRE as a response to climate change</li> <li>• Goodwill towards the sector</li> <li>• The falling cost of renewable energy technologies</li> <li>• A focus on developing resilient communities</li> <li>• Rising electricity prices as a driver for change</li> <li>• New funding mechanisms developing</li> <li>• The potential to increase understanding of the CRE sector by policy makers and investment community</li> <li>• Distributed energy production benefits</li> </ul> | <ul style="list-style-type: none"> <li>• Engaging large numbers of people through project participation</li> <li>• Developing cooperative arrangements for selling power</li> <li>• Developing innovative models that combine energy generation and retailing</li> <li>• Solar PV on commercial and community buildings</li> <li>• Information sharing and advocacy</li> <li>• Developing a peak body for the sector</li> <li>• Collaboration with commercial renewable energy projects</li> </ul> |

## 6.1 STRATEGIC OPPORTUNITIES

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Respondents identified the following strategic opportunities:

- The falling cost of renewable energy technologies.
- “Improvement to the image of renewables and public awareness that it's not driving up bills.”
- Government focus on developing resilient regional communities.
- Analysis of the grid to determine where the distribution pressure points are to identify where local generation could be most cost beneficial.

## 6.2 RISING ELECTRICITY PRICES

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Rising electricity prices were seen as “a huge opportunity to empower and educate people on the benefits of renewables and the potential benefits of investing in community projects.”

*As the price of power increases more community members will look to get involved. Also, every region has different or additional renewable energy opportunities specific to where they live. Ranges Energy*

*Slowly the community is starting to see that renewable are not the enemy in electricity price rises but the solution. Other forms of fuel only tear communities apart i.e. CSG and Coal Mining. The community is starting to see that renewables are a solution to long term employment and sustainability in their towns. Southern Highlands Renewable Energy Co-op*

*Competition in retail electricity sales and concern about increasing costs are encouraging people to look for new models. Backroad Connections*

### 6.3 POLICY ENVIRONMENT

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Respondents articulated a clear view of the changes they saw as necessary in the political and policy framework of the electricity industry. This included explicit recognition of and specialised support for the community sector and the need to change the electricity system to be both smarter and more decentralised.

*A mandate for government bodies to help facilitate the implementation of community projects would help remove many barriers, particularly for our project. Fremantle Community Wind Farm*

*Lobby Governments to understand the potential for distributed energy systems rather than retaining the existing centralised generation model. The key to success will be developing smarter systems to balance supply v demand on a continuous basis. Wingecarribee Council Solar*

*There is going to be a point when renewables are cheaper than coal. But they are still going to need a massive infusion of government funding. Governments will only do this if they see VOTES in it. People have to demand policies favourable to CRE projects. This in turn will lead to the community, THE VOTERS, demanding large scale SOLAR THERMAL power stations, and the end of coal fired power stations in Australia. LIVE*

*The government money spent on subsidising coal must be redirected to fostering renewables. Anonymous*

Specific suggested policy changes included:

- “A virtual net feed-in tariff would give us all a big boost.”
- “Invest in the Smart Grid. Variable buy back price linked to spot price at time of supply.”
- “Get politicians and the energy system to be more open with information and analysis.”
- “Easier process to connect distributed generation and minimum feed-in tariff for medium scale generation.”

- “Addressing the connection to grid issues and establishment of a fair and flexible sale of electricity.”
- “Changing the policy environment so that owners of panels can get a fair price for their power and the panels don't need to be located on their own home.”
- Changing the planning laws to facilitate the development of CRE projects on Crown land.

While respondents generally wanted to see significant changes in the policy environment, they also recognised the need for stability and predictability to facilitate project planning:

- “Consistent, stable policy support at all levels of government and therefore energy purchasing organisations.”
- “A stable, national policy environment around FiT, RET and Carbon Price.”

## 6.4 FUNDING MECHANISMS

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Respondents saw positive opportunities in the establishment of the Australian Renewable Energy Agency (ARENA) and the Clean Energy Finance Corporation (CEFC), as well as the CRE pre-feasibility study funding proposed to be provided by the Office of Environment and Heritage under the draft NSW Renewable Energy Action Plan.

Many respondents identified the need for specific funding mechanisms that addressed the problem of paying for project feasibility and other developmental stages to get projects to a stage where they could approach community investors. Suggestions included:

- Specific allocation for CRE projects within government funding programs such as ARENA and the CEFC.
- “Tax benefits for community projects would also increase the incentive.”
- “A government funded grants or loans scheme, independently administered.”
- “Develop a philanthropic fund for CRE seed funding.”

Analysis of the likely response from the identified funding sources to requests from the CRE sector are beyond the scope of this report but initial indications are positive.

The CEFC Expert Review Panel (2012) stated that:

*The development of community generation projects is a worthy initiative. With Australia's broad land mass, regional and remote power generation will play an important role in building renewable energy capacities and in our transitioning to a lower-emissions environment. ... Community based projects may need a package of assistance where the project initially progresses through local community efforts and seeks to attract grant funding.*

The recently released ARENA General Funding Strategy (ARENA 2012) states that it will support “knowledge development and sharing: industry, researchers, community groups and other stakeholders will be able to apply for funding to carry out knowledge-based projects or activities.”

## 6.5 UNDERSTANDING OF THE CRE SECTOR

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Respondents identified a lack of understanding of the CRE sector by policy and regulatory bodies and the investment community as both a barrier and an opportunity:

- “Increasing key stakeholder understanding of CRE as a discrete and complementary segment of the sector.”
- “Debt or equity investors looking to fund community projects would be ideal. That would send a strong signal that these projects are viable.”
- “Develop policy frameworks for Superannuation Industry, Australian, State & Local Governments.”
- “Cracking into the superannuation funds and self-admin super as potential investors.”

## 7 OPPORTUNITIES FOR ACTION BY THE CRE SECTOR

As noted in the introduction, it is not the intention of this report to make recommendations on policy or strategy. The purpose of this section is to capture the opportunities for action that were identified by respondents which will inform the future development of a strategy for the sector.

### 7.1 STRATEGIC OPPORTUNITIES

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Respondents identified the following strategic opportunities for the CRE sector:

- Engaging a large number of stakeholders and supporters through project participation.

- Overcoming the difficulty in selling the generated power by cooperative arrangements.
- Developing innovative models that combine energy generation and retailing.

Respondents identified specific opportunities in solar PV on commercial and community buildings.

- “I believe there is a huge potential in commercial roof space for adoption of solar PV systems, in areas where solar radiance is high.” [RePower Bendigo]
- “Behind the meter PV systems on buildings with constant daily loads. Partnerships could be replicated with supermarkets (IGA), councils, water authorities, new housing developments.” [Surf Coast]

## 7.2 INFORMATION SHARING AND ADVOCACY

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Sharing of the experience of successful (and unsuccessful) projects was a recurrent theme, with suggested mechanisms including:

- “Replicable open-source project plans”
- Documentation of successful case studies, including process information and funding sources
- A CRE Toolkit and/or “a set of published guidelines on how to develop a community energy project (like Embark, but instead in a printed form which can be taken to meetings, etc)”
- Use of social media and campaigns in local media
- “Identify all opportunities to deliver reports and presentations within key regional conferences and workshops on energy, localism and regional development”
- In relation to sharing experiences one respondent said “the community banks became good at this about a decade ago”.

## 7.3 ROLE OF A PEAK BODY FOR THE CRE SECTOR

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There was support for action to establish a CRE peak body with roles identified for both advocacy and support.

Identified opportunities for the sector to work together through a peak body or other arrangements included:

- “Better networking among groups facing the same challenges.”
- “Seeding the formation of local groups and connecting them to existing groups with similar project options.”
- “Maintain pressure on governments at all levels.”
- “Continuing to lobby, regarding special categorisation for CRE projects.”

- “Organise a high profile National Community Renewable Energy conference include reps from successful community projects.”
- Mechanisms to help CRE projects “get through the very early stages such as a library of wind anemometers or other equipment.”
- “Cooperate to advocate and establish norms around CRE PPA and grid connection.”
- “Working together to share experiences and ideas. Regular coming together to share information. Great coordination between groups.”

## 7.4 COLLABORATION WITH COMMERCIAL RENEWABLE ENERGY PROJECTS

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Several respondents saw opportunities for new forms of collaboration between communities and commercial renewable energy projects:

*I think the model we are working on with Infigen could hold a lot of power not just for wind but also large scale solar projects - there is a real win-win if we can make our model work and promoting such close ties with the community will bridge a gap between the 'unknown' wind company and the locals who just hear stories and myths. CENREC*

*Create a commercial-community partnership model that could embed a degree of local community ownership in all commercial RE projects. Starfish Enterprises*

*Develop and prepare a range of workable examples to communities. Engage governments to ensure their policies support these initiatives and do not block such projects. The conventional power industry needs to change their culture to support these projects, rather than consider them as a competitor. RePower Bendigo*

*Key RE industry actors are becoming more interested in CRE. Increase talks with RE industry actors about CRE and skill-share with them. Community Power Agency*

## 8 AUSTRALIAN POLICY CONTEXT

This section provides an overview of how the electricity industry in Australia is regulated with an emphasis on those aspects of the regulatory framework which are most relevant and important to the development of the community renewable energy sector. As well as providing an overview of the regulatory framework, it



describes in more detail selected current regulatory initiatives and processes and the avenues which exist for the CRE sector to provide input to them.

The methodology consisted of a review of documents and websites from the various regulatory and policy agencies and discussion with community groups which have been actively involved in policy issues around the electricity industry.

## **8.1 REGULATION OF THE ELECTRICITY INDUSTRY IN AUSTRALIA**

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Electricity generation, distribution and sale in Australia is a highly regulated industry with many players and a complex set of arrangements which govern its operation. The National Electricity Market (NEM) is a wholesale market for the supply and purchase of electricity that covers the area serviced by an interconnected set of networks which extends from Port Douglas in Queensland to Port Lincoln in South Australia and Tasmania. The NEM services approximately 8 million end consumers and trades around \$9 billion of electricity annually (AEMO 2011).

The NEM started operation in December 1998 with Tasmania entering in 2008 with the commissioning of the Basslink undersea cable.

Key bodies in the regulation of the electricity industry include:

- Overall political decision making on the electricity industry rests with the [Standing Council on Energy and Resources](#) (SCER), a ministerial council chaired by the Commonwealth Minister for Resources and Energy and consisting of energy and resources Ministers from the states, territories and New Zealand.
- The [Australian Energy Market Commission](#) (AEMC) is responsible for determining rules and policy advice covering the NEM.
- The [Australian Energy Market Operator](#) (AEMO) operates the national market (NEM) as well as being responsible for system security of the NEM electricity grid. It also has responsibilities related to the distribution of natural gas and the operation of the Short Term Trading Market for gas.
  - The [Australian Energy Regulator](#) (AER) is the regulator of energy distribution and transmission networks, wholesale electricity and gas markets, and in some jurisdictions energy retail, in Australia and enforces the rules established by AEMC. The AER operates as part of the Australian Competition and Consumer Commission.

**Figure 8: Australian stationary energy sector governance<sup>3</sup>**

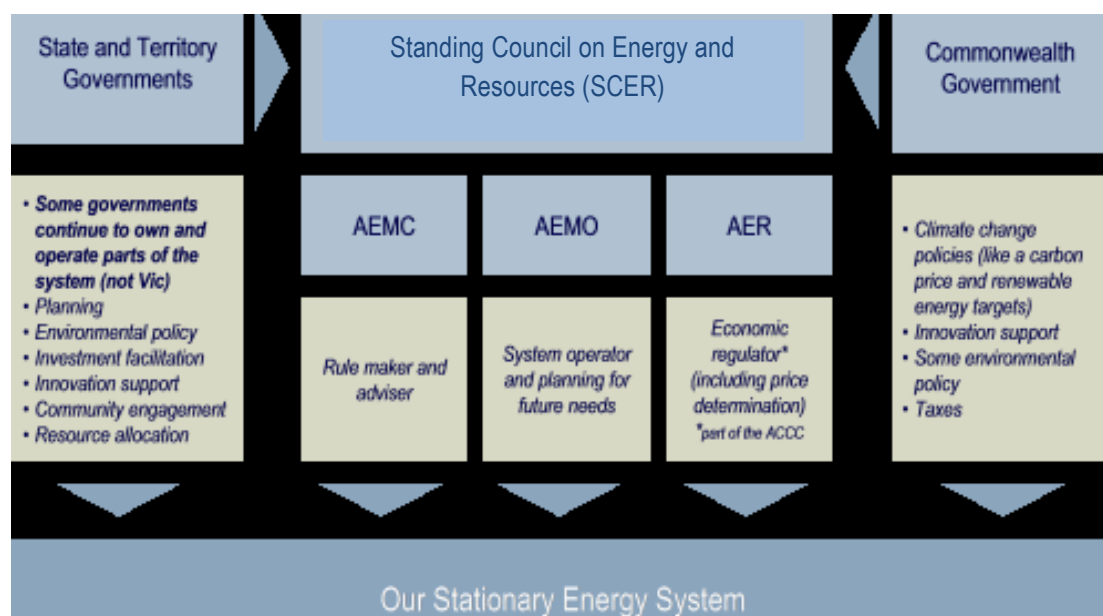


Figure 8 outlines the governance structures of Australia’s stationary energy system. The AEMC makes changes to the operation of the national electricity market through two main mechanisms:

- Market Reviews
- Processes for changes to the National Electricity Rules.

### 8.1.1 WHAT IS ITS RELEVANCE TO COMMUNITY ENERGY PROJECTS?

For any project connected to the national grid, the regulatory environment determines the cost and practicality of many aspects of a community renewable energy project, including the terms on which it can be connected to the grid, who bears the cost of any required network upgrades, and sets the environment which determines the income received from the sale of electricity and the renewable energy certificates generated. With an annual turnover of around \$9 billion it is hardly surprising that the major players including generators, retailers and both private and state-owned instrumentalities spend considerable resources promoting their own interests in the operation of the market.

This process was recently described by journalist Tristan Edis (Edis 2012) as follows:

*Those that are not central players can quickly find themselves tied up in knots by the bewildering details and the range of players and processes through*

<sup>3</sup> Note the Ministerial Council on Energy is now called the Standing Council on Energy and Resources and is a body of COAG.

*which the electricity market rules are written and interpreted. To participate in this game you better get yourself settled in to read thousands upon thousands of pages of deathly boring documents. In the end the amount at stake for the incumbent electricity supply industry is so big, they can afford to dedicate teams to it. Meanwhile those trying to break into the electricity club or involved at the periphery, such as consumers, tend to get worn down and give-up.*

### 8.1.2 WHAT CAN THE COMMUNITY ENERGY SECTOR DO ABOUT IT?

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As there are many different policy and regulatory processes which have implications for the CRE sector, there will be a range of mechanisms which the sector should pursue in order to promote the interests of the sector. Opportunities to participate in specific processes are described in subsequent sections.

The overall scope for action by the sector includes:

- Becoming educated about the way the policy and regulatory environment for the electricity industry operates
- Identifying priorities for action based on the most important issues for the sector and the opportunities that arise from particular review processes
- Participating in relevant policy processes, including reviews and consultation on proposed rule changes
- Potentially developing and promoting rule change proposals, if a specific regulatory change is identified which would benefit the sector
- Making linkages with other consumer and environmental groups that are involved in policy work related to electricity industry
- Using the community networks built up by CRE projects to mobilise the community's voice when important political decisions are being made that affect the sector.

#### Identifying priorities for action

Energy policy and the energy market review processes are constantly changing. It is important that the CRE sector both monitors new opportunities for engagement as they develop and prioritises which review processes to engage with.

#### Participating in review processes

Where review processes are important for the sector and opportunities are available for engagement the sector can participate in a number of ways:

- Developing a sector position and having it endorsed by individual CRE projects and support organisations.
- Providing background information that allows individual CRE projects and support organisations to put in submissions.
- Endorsing submissions prepared by other organisations (eg ATA, TEC, 100% renewables, Clean Energy Council)

### Linkages with other consumer and environmental groups

In many cases, the interests of the CRE sector are compatible with other organisations and effectiveness can be increased and effort avoided by working with them.

The Energy Consumer Roundtable is an informal grouping of consumer and environmental organisations that are involved in consumer advocacy around energy issues. It includes environmental groups such as ATA and TEC, welfare groups such as ACOSS and state councils of social service. The work of the roundtable is funded by the National Electricity Consumers Advocacy Panel.

Discussions are currently being held on what a more formal national consumer energy body would look like. It is worth the CRE sector being involved in these discussions and seeking some level of participation in the work of the Energy Consumer Roundtable.

Participation in existing energy consumer advocacy networks would assist the CRE sector by:

- Providing an avenue to explain the benefits of community energy sector to consumers.
- Helping refute the argument that renewable energy adds significantly to the cost of living by pushing up energy prices and is an impost on consumers.
- Providing access to information and informed discussion of policy and regulatory processes.

### Mobilise the community's voice

Many important decisions that affect the development and viability of the CRE sector are ultimately made through the national political process. It is important that detailed policy arguments are made through formal processes, but it is also necessary to engage in the debate at the political level where decisions such as the existence and level of the renewable energy target and the CPRS are made.

CRE projects have extensive networks in communities all around Australia. These networks can be used to inform communities about political decisions that affect the viability of community energy and sustainability initiatives and to encourage making the communities voice heard in conjunction with wider political campaigns run by organisations such as 100% renewables, environment and sustainability groups.

**More information:**

AEMO 2010, An Introduction to Australia's National Electricity Market

<http://www.aemo.com.au/corporate/0000-0262.pdf>

Edis 2012, Gamed in the power price fight, Tristan Edis, Climate Spectator, 26 September 2012

<http://www.climatespectator.com.au/commentary/gamed-power-price-fight>

The NSW Total Environment Centre campaign Green Energy Action

<http://www.tec.org.au/green-energy-action>

Alternative Technology Association, Campaigns and Advocacy

<http://www.ata.org.au/projects-and-advocacy/>

The National Electricity Consumers Advocacy Panel

<http://www.advocacypanel.com.au/>

## **8.2 REGULATORY AND POLICY PROCESSES**

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This section identifies and describes current processes which are of most relevance to the CRE sector and for which some mechanism or avenue exists for input from the sector.

### **8.2.1 AEMC MARKET REVIEW – POWER OF CHOICE**

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#### **What is it?**

This AEMC Review proposes wide ranging changes to the national electricity market with the intention of giving both small and large consumers a greater ability to manage their use of electricity with the ultimate aim of making the electricity system more responsive and reducing the need for new investment in generation and distribution of electricity. Examples of major proposed changes to come out of this review include:

- enabling large consumers or third parties, acting on behalf of consumers, to participate in the wholesale electricity market and receive the spot price for changing their demand; and
- providing a greater range of pricing options to residential and small business consumers including the use of electricity tariffs that vary at different times of day and possibly in different locations.

The review also covers improved access to consumption information for consumers and encouragement for network service providers to consider demand management as an alternative to investment in increased distribution capacity.

A draft report has been released and submissions on the draft report were due by 11 October 2012. The review's final report will go to the Standing Council on Energy and Resources (SCER) on 16 November 2012.

#### **What is its relevance to community energy projects?**

One potentially significant change is the proposal that consumers who generate electricity should be able to have a financial relationship with two different energy market organisations, one that they buy electricity from and one that they sell electricity to (technically: able to have more than one Financially Responsible Market Participant at a connection point). This may give community renewable projects more options on how they sell their electricity, especially when combined with the proposed small generator aggregator changes.

It is also important how the proposed changes are implemented which will be part of the final AEMC recommendation. Changes that are implemented as rule changes have more options for community and consumer input than changes that are implemented through changes to AEMO internal processes.

#### **What can the community energy sector do about it?**

It is likely that many specific rules changes and other initiatives will result from consideration of the Review by SCER. The sector needs to be informed about and participate in these processes.

#### **More information**

<http://www.aemc.gov.au/market-reviews/open/power-of-choice-update-page.html>

## 8.2.2 AEMC RULE CHANGE – CONNECTING EMBEDDED GENERATORS

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### What is it?

This rule change was proposed by ClimateWorks Australia, Seed Advisory and the Property Council of Australia. The rule change request seeks to make changes to the process for connecting to the distribution network:

- set clearer and more prescriptive rules for processing applications to connect
- provide a single technical standard that applies to all distributors
- require that distributors be required to publish information on how they calculate connection charges
- that embedded generators should not have to pay shared network augmentation cost.

The proposed rule as drafted is not restricted to embedded generators and distributors, impacting connection applicants and network service providers in general.

A consultation paper was published to facilitate the first round of consultation. Submissions on the first round of consultation closed on 9 August 2012. Submissions were made by a number of community based organisations including the ATA, the TEC and VCOSS (as well as many organisations in the electricity industry). As a result of the level of engagement in this process, the AEMC has extended the deadline for its draft rule determination to 27 June 2013.

### What is its relevance to community energy projects?

The proposed change was originally motivated primarily by concerns by building owners who wanted to install onsite facilities, for example gas-fired cogeneration equipment. However the proposed changes would also simplify and potentially speed up the connection process for CRE projects connected to the distribution network.

### What can the community energy sector do about it?

Engagement in the process of determining the final rule change should be a priority for the sector in the first half of 2013. Given the importance of grid connection for community energy projects, the sector should also monitor the eventual implementation process and review whether these changes meet the needs of the sector or whether further changes are needed to facilitate grid connection for small renewable energy projects.

### More information

<http://www.aemc.gov.au/Electricity/Rule-changes/Open/connecting-embedded-generators.html>

### 8.2.3 AEMC RULE CHANGE – SMALL GENERATOR AGGREGATOR FRAMEWORK

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#### **What is it?**

A rule change that would allow small generators (less than 5MW nameplate capacity or in the range of 5-30MW with annual sales less than 20GWh) to participate in the NEM through a proposed new category of Market Participant called a “Market Small Generation Aggregator” (MSGA).

At the moment small generators have to sell their electricity to either

- a customer at the same connection point, (severely limiting project options)
- a retailer, (who is likely to offer far less than actual market value for energy from small to medium scale renewable energy projects), or
- the spot market, while incurring prohibitive costs and compliance obligations to trade on the energy wholesale market.

Aggregation through an MSGA would address these issues, chiefly by removing the need to sell to energy to a retailer and reducing the registration and other costs of participating in the market compared with having to register each generation unit separately.

#### **What is its relevance to community energy projects?**

This change may make it viable for a number of CRE projects to collectively participate in the NEM, rather than having to sell their output at a set price to a retailer. As a result they may be able to get a better price than having to sell to a retailer. Aggregation would also reduce the cost of participating in the NEM.

Because some types of demand management are treated by AEMC’s Power of Choice Review as a type of generator (even though they actually reduce demand rather than increase supply) it is likely that this rule change may also facilitate the aggregation of community based demand management initiatives.

#### **What can the community energy sector do about it?**

A draft determination was released on 5 July 2012, a final determination is scheduled for 29 November 2012. The CRE sector should review the final determination and the way it is implemented in internal AEMO processes and identify any opportunities that arise for the sector.

#### **More information**

<http://www.aemc.gov.au/electricity/rule-changes/open/small-generation-aggregator-framework.html>



## 8.2.4 RENEWABLE ENERGY TARGET REVIEW

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### What is it?

The Renewable Energy target consists of two mechanisms to encourage additional generation of electricity from renewable sources, the Large-scale Renewable Energy Target (LRET) and the Small-scale Renewable Energy Scheme (SRES). The RET was first established in 2000 as the Mandatory Renewable Energy Target (MRET). Under the legislation that established the RET, a review was required to be held by 31 December 2012. This review is currently being conducted by the Climate Change Authority (CCA). A discussion paper was released on 26 October 2012.

Although often described as a target of 20% of electricity being generated from renewable sources by 2020, in fact the RET is legislated as a series of targets in GWh p.a. ramping up to what was estimated at the time to be 20% of electricity use in 2020. Because electricity consumption has not grown at the anticipated rate the legislated target of 41 000 gigawatt hours (GWh) per annum for the period 2020 to 2030 is now higher than 20% of anticipated consumption. As a result there was lobbying from generators and some retailers that the target should be lowered.

The Discussion Paper released in October proposes no change to the 2020 target and suggests that future reviews should be carried out every 4 years rather than every two years. Following comments and feedback on the discussion paper the CCA will release a final report in December 2012.

### What is its relevance to community energy projects?

The LRET creates the market for Large-scale Generation Certificates (LGCs) (previously and sometimes called Renewable Energy Certificates (RECs)) for new renewable energy projects. Sale of LGCs are a significant source of income for community energy projects — sale of LGCs can generate as much income as wholesale sale of electricity. LGCs are issued to generators of renewable energy and are traded on a market. While the price fluctuates due to many factors, in general, a higher RET will cause LGCs to be more valuable and this will provide financial support for additional renewable energy projects, including community renewable energy projects. Conversely, a reduced RET would cause the price of LGCs to drop, making both existing and proposed CRE projects less viable.

Numerous changes to the SRES proposed in the Discussion Paper may impact community solar bulk buy schemes. These changes and their impact should be analysed further in future research.

### **What can the community energy sector do about it?**

Any changes to the RET will need to be legislated which will provide an avenue for community input.

#### **More information**

<http://climatechangeauthority.gov.au/ret>

<http://peoplesretreview.org.au/>

## **8.2.5 NSW RENEWABLE ENERGY POLICY**

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### **What is it?**

The NSW state government has released a draft NSW Renewable Energy Action Plan which contains actions which aim to:

- Attract renewable energy investment and projects
- Build community support for renewable energy
- Attract and grow expertise in renewable energy technology
- Contain costs for energy customers through increased energy efficiency.

The draft plan was open for comment until 26 October 2012.

### **What is its relevance to community energy projects?**

Under the aim of building community support the draft plan proposes to:

- Review and expand the role of the existing Renewable Energy Precincts Program
- Provide funding for local feasibility studies for up to five community renewable energy projects.

### **What can the community energy sector do about it?**

Comments on the draft plan have closed. When the final plan is released the sector should monitor the implementation of the proposed funding for feasibility studies and promote the expansion of this scheme and the adoption of similar support in other jurisdictions.

#### **More information**

<http://haveyoursay.nsw.gov.au/renewableenergy>

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