FRONTIER IMPACT GROUP

Community Renewable Energy Funding Toolkit - Summary Report

-

Key Recommendations for Mobilising Community Energy Projects

Jennifer Lauber Patterson
Malcolm Campbell

Released January 2019

FRONTIER IMPACT GROUP

Table of Contents

FRONTIER IMPACT GROUP

1 Executive Summary

In recent years there has been a steady growth in the number of community energy projects in development across Australia. Community energy projects have the potential to reduce Australian energy costs and provide increase energy security and reliability.

Frontier Impact Group (FIG) has developed a Community Renewable Energy (CRE) Funding Toolkit for Behind the Meter Solar Projects that provides resources that guide community projects throughout the development process.

The launch of this toolkit was supported by a series of workshops that were run by FIG in 15 towns and cities across Australia. The workshops brought together a large number of practitioners in the community energy sector involved in a variety of different community projects. The workshop participants were provided with advice, mentoring and direct experience (through the use of localised case studies) to refine their own project plans and build capacity in project implementation. The workshops were enabled through the support of a large number of community and government organisations and funding provided by the Australian Renewable Energy Agency (ARENA) and the NSW Government.

The feedback received been very positively feedback from participants with over 50% extremely satisfied and 99% very or extremely satisfied Many participants indicated that the format of the workshops, and particularly the real case pre-feasibility modelling and training support, was useful and relevant for their own project development.

The development of the toolkit and the subsequent workshops revealed that there exists a knowledge gap among practitioners regarding how to effectively execute and finance these projects. Continued guidance and training in the early stages of community energy development will ensure projects have the best chance of success and appropriate mitigation of key risks.

This report provides an overview of the workshops' outcomes and provide recommendations regarding the future direction for work in this area. The report also identified several key recommendations following the feedback at the workshop to further develop the capacity of community energy projects for which FIG can provide active support:

1. Develop a community energy fund in collaboration with the community energy sector. This may include the sharing of the fund's equity between key groups in the sector.

2. Further develop FIGs capability building support role through an accreditation system. The system will incorporate a leadership development program in which key members of the community will be provided with training on the community project development process. This program will be aimed at capacity-building within the broader community and ongoing skill transfer among community members.

3. An investment in education regarding the community energy sector and the involvement of a key economic group such as Climate Works who can advocate on behalf of the sector. This advocate organisation could provide additional support through the modelling of economic outcomes and highlighting the return potential for investment into these types of projects.

4. FIG will provide due diligence services through the development of its accreditation program. This will reduce the costs of due diligence adherence for investors and banks and increase the capacity of small scale projects to access financial resources.

5. Similar support can be applied to micro-grids and other renewable projects to be able to accelerate development of emerging projects in the community energy sector

6. The support of larger community energy projects renewable projects in the 1 – 30 MW range that are emerging.

2 Introduction

Frontier Carbon Pty Ltd, trading as Frontier Impact Group (FIG), has entered into a Funding Agreement with the Australian Renewable Energy Agency (ARENA) to produce a Community Renewable Energy (CRE) Funding Toolkit.

The purpose of the toolkit was to provide a centralised repository to assist community energy project developers to build their own community energy owned assets. The toolkit provides information, case studies and a financial template for community groups to use to develop a project. When the project commenced in 2016, there were less than 30 projects that had been developed but since this time there are many hundreds of community energy projects that have either been developed or are in development.

The objectives of the toolkit were to:

(a) reduce costs associated with obtaining external advice, particularly at the early stages of the project development lifecycle;
(b) increase the understanding of community energy developers of the requirements of financiers; and
(c) reduce duplication of effort, subsequently leading to a reduction in costs.

The interest in the toolkit has gone beyond the community energy sector and the model has been requested by banks, private renewable energy developers, accounting firms and advisory bodies interested in the model's broader application.

At the guidebook launch of the toolkit in early 2017, there was a strong message advocating 'spreading the gospel' nationwide as the toolkit was considered valuable in building capacity in community energy projects. Since that time, FIG has been delivering this message through 15 workshops across Australia. This report will provide a review of the CRE funding toolkit in line with the outcomes from this workshop series.

Overall the response to the workshops, received through post-event surveys, was very positive.

- 99% were either extremely satisfied or satisfied with the course

- There was positive responses regarding the ability to undertake real live pre-feasibility modelling of projects at the workshop sessions and the provision of mentoring support in follow-up to the training.

- There was significant positive feedback regarding the *Behind the Meter Solar PV* guidebook's detail, practicability and simplicity. There was also an expressed demand for further guidebooks with similar detail.
- The knowledge, experience and the delivery of the presenters of the course was considered as one of the key strengths of the toolkit rollout.
- There was strong demand to continue to work with FIG on the Private and Community Partnership model and to assist in larger projects (i.e. above 1 MW to 20 MW) that are generally more difficult to finance
- The demand for similar support in the development and funding of projects for micro-grids and other types of renewable energy and energy efficiency projects.
- Feedback from the workshops indicated that whilst the building of capacity had been successful, there is still further support mechanism needed to be accessing investment and becoming more efficient.

FIG has considered this feedback and has updated the model to reflect the needs of communities and private developers in building capacity for those projects in the <20 MW range.

FRONTIER IMPACT GROUP

3 Acknowledgement

Frontier Impact Group (FIG) would like to thank several key supporters including ARENA, for their help in coordinating the workshops, and Community Power Agency, for their marketing support including developing two webinars for the toolkit.[1]

FIG would also like to thank the various state governments that provided support for the workshops. In particular, we would like to acknowledge the financial contribution made by the NSW Government that enabled an additional three more workshops to be run across NSW.

Many different groups and organisations provided support in identifying venues, promoting the events and assisted in on-the-day coordination. FIG would like to thank all of the following groups (in the table below) that partnered with us to host the workshops.

Event Partners

Ballina, NSW	NSW Office of Heritage & Environment Mullumbimby Community Owned Renewable Energy Mullumbimby Regional Development Australia - Northern Rivers	8 – 9th Sept 2017 29th Jan 2018
Yarra Ranges, Victoria	Yarra Ranges Council	13 – 14 Sept 2017
Wagga Wagga, NSW	NSW Office of Heritage & Environment Regional Development Australia (RDA) - Riverina	18 Oct 2017
Latrobe Valley, Victoria	Gippsland Climate Change Network Latrobe Valley Community Hubs Latrobe Shire	26 Oct 2017
Busselton, WA	Naturaliste Renewable Energy Group	14 Nov 2017
Queanbeyan, NSW	NSW Office of Heritage & Environment	21 Nov 2017
Adelaide, SA	Climate Change Services, Australia Changing Weather, SA	24 Nov 2017
Sydney, NSW	C4CE and Community Power Agency University of Sydney	4 – 5 Dec 2017
Maitland, NSW	NSW Office of Heritage & Environment Community Power Agency	6 – 7 Dec 2017
Bathurst, NSW	NSW Office of Heritage & Environment Skill Set Australia	23 – 24th Mar 2018
Tasmania, Hobart	Sustainable Living Tasmania Tasman Peninsula Power	5 Mar 2017
Melbourne, Victoria	Sustainability Victoria Victorian Solar Alliance Moreland Energy Foundation / Yarra Energy Foundation	18 May 2018
Sunshine Coast	Energetic Communities Association Inc. Sunshine Coast Regional Council	19 June 2018

[1] Topics included finance basics and small scale solar. See: http://c4ce.net.au/webinars/

Daylesford, Victoria	Ballarat Community Energy Hub Geelong Sustainability Group Bendigo Sustainability Group Bendigo Community Energy Hub	21 May 2018
Cairns, Qld	Community Energy Agency community@cafnec.org.au Energetic Communities Association Inc. Cairns Regional Council	25 June 2018

4 Highlights

Key highlights of the workshop series were:

- The 15 workshops delivered across Australia had higher levels of participation than the 22 people originally planned for (24 people on average attended)
- Very positive feedback received from participants – over 50% extremely satisfied and 99% very or extremely satisfied
- Significant community and agency support (from state governments, councils and community groups, etc).
- FIG was able to assist with live projects at the workshops and provided follow-up assistance in the development of projects.
- 80% of participants completing the questionnaire expressed an interest to participate in the public private partnership model currently being developed by FIG.
- Through the workshops FIG was able to identify the barriers to smaller to medium scale community energy projects and mechanisms to address these barriers.
- The toolkit is seen as an important resource for the development of community energy projects. There was also a demand expressed by several participants for the development of other toolkits (such as for bioenergy, wind, larger scale solar PV, battery storage, micro-grids) as well as toolkits that are tailored for low income and indigenous groups.

5 Workshop Methodology

The objective of the workshops was to increase the capacity of local councils and communities for the efficient and speedy delivery of solar projects through use of the FIG toolkit. The workshop also obtained feedback on key barriers that were facing the CRE developers.

The process undertaken by FIG to develop and deliver these workshops is illustrated below. FIG designed this process to ensure optimal outcomes for the delivery of projects.

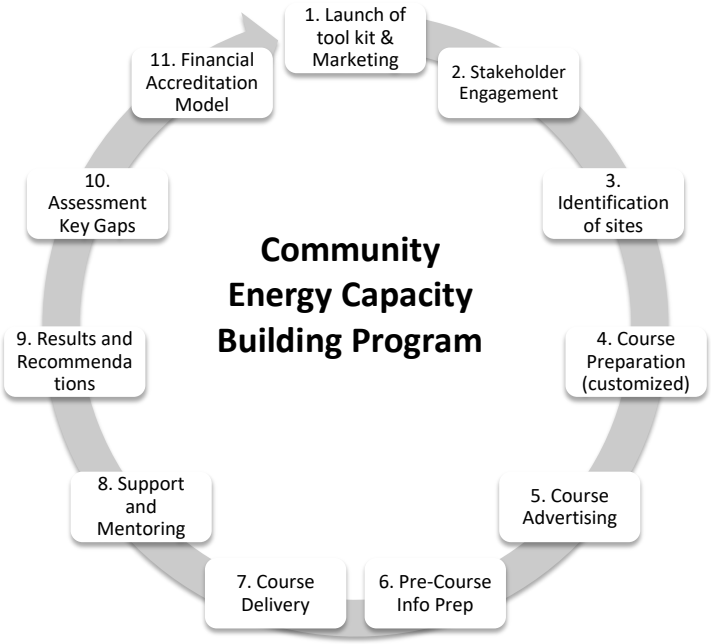


Diagram 1: Frontier Impact Group Community Energy Capacity Building Program

An important factor in the success of the workshops was the engagement of key stakeholders such as state governments, local councils and relevant community organisations. Ensuring the participation of the right stakeholders meant that the organisation of the toolkit workshops took longer than originally planned.

The stakeholder categories included:

1. State Governments
2. Federal Government
3. Local Councils
4. Financiers/investors
5. Community Energy Groups

6. Not for Profit Groups
7. Universities

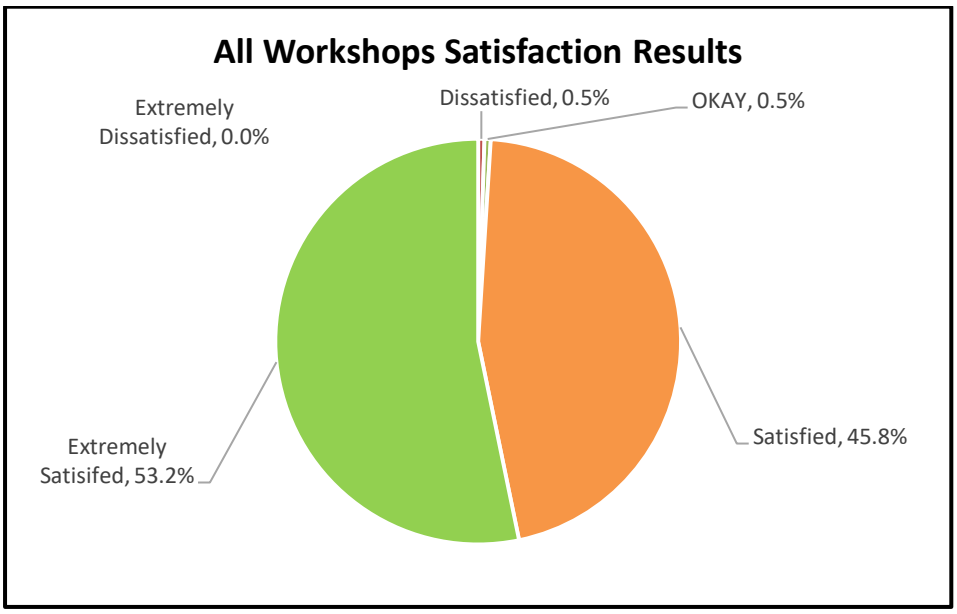
The workshops undertaken and their contributors are set out in the acknowledgements earlier in the report.

6 Overall Participant Feedback

The overall feedback from participants was exceptionally positive as evidenced by 99% of participants providing either “satisfied” or “extremely satisfied” ratings for the workshops.

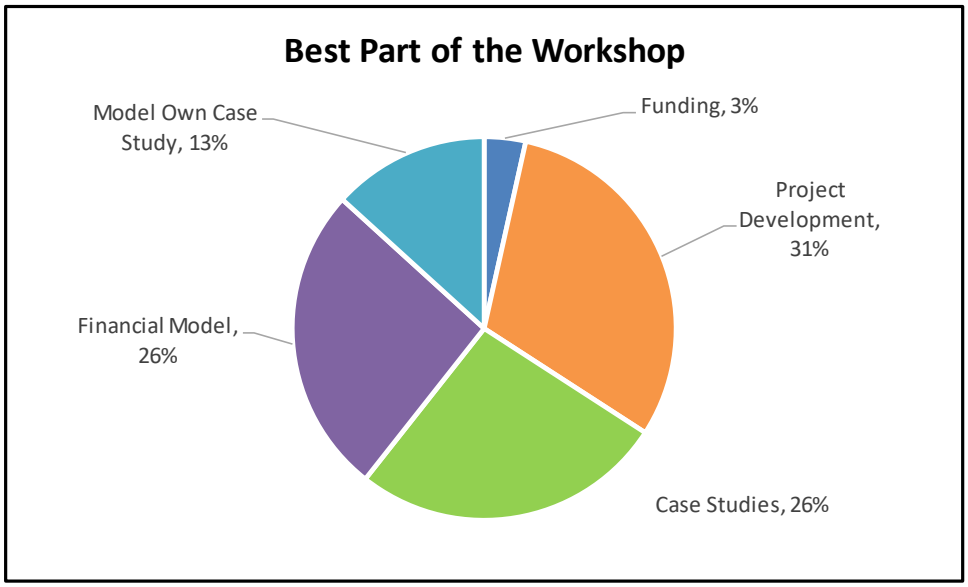
A common comment received at the workshops was that the earlier availability of such a toolkit would have been invaluable and would have saved community energy groups that had attempted to develop behind-the-meter solar PV projects a significant amount of time and effort.

The level of satisfaction across each workshop is evidenced in the summary chart below:



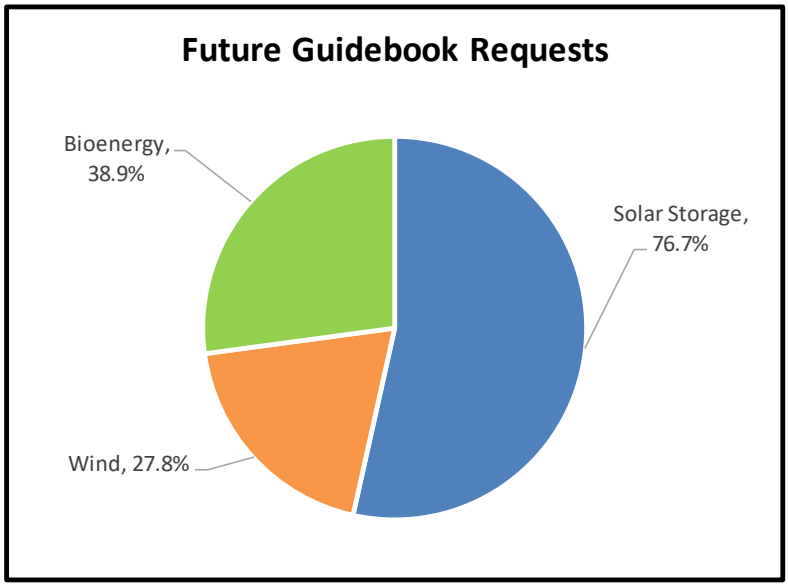
Part of the feedback questionnaire completed by participants sought to understand the parts of the program that were of most interest to attendees.

The chart over the page summarises the technical elements of the workshop that participants felt offered them the most value. Meeting the needs of the diverse range of stakeholders that attended required that the workshops were well-structured and targeted.



The commentary from the questionnaires emphasised FIG's knowledge across these areas and the Q&A sessions offered at the workshop as particularly important to participants.

Another element of the questionnaire sought participant's interest for potential future renewable energy guidebook subjects.



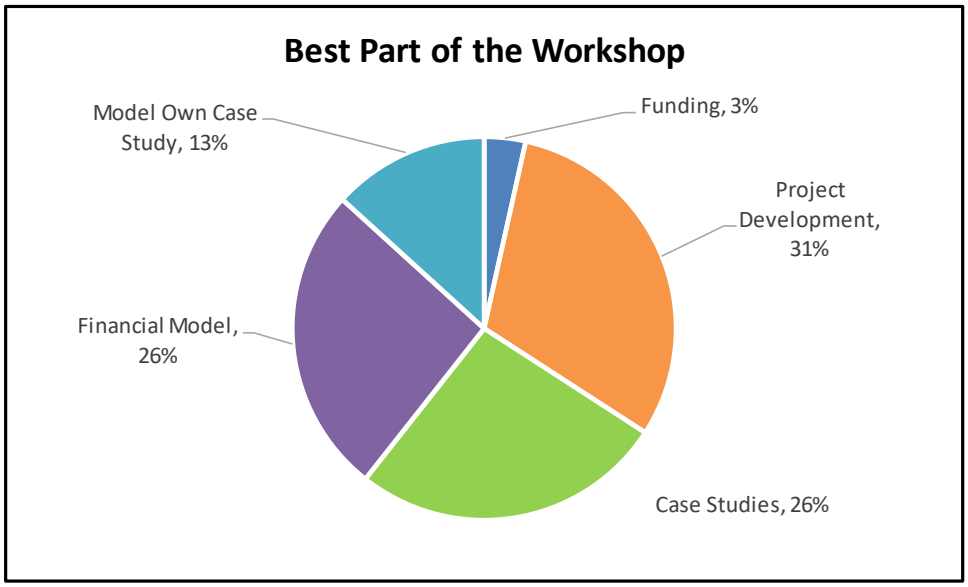
The result indicate that participants see value in the development of similar guidebooks focusing on other energy areas. A frequent response from participants was that these sorts of toolkits do not usually provide the level of detail offered in FIG's publication and that this was of particular value for organisations developing community energy projects. Requests for additional information on micro-grids, hydroelectricity, hydrogen, bioenergy and biofuels were also reflected in the questionnaire responses.

The workshop content was seen to be relevant to the needs of attendees. The project development process and financial model was seen to add the highest value with funding

advice of least interest to participants. However, while the funding discussion was not considered to be the most interesting part of the workshop, the overall feedback was that it was still a valuable inclusion.

The Q&A approach FIG added to the workshop structure provided further benefit to participants and was one of the areas that was highlighted as a positive of the program.

Where possible FIG used the real-life projects of participants as case studies in explaining the toolkit model. The feedback from the workshops (seen in the chart below) indicated that this was an effective approach that gave practical application to the information provided.



6.1 Capacity Building and Public Private Partnerships

FIG was asked by several parties early on in the workshop series if it could help with capacity building for CE groups. Consequently, an additional question was added to our feedback questionnaire for later workshops:

Are you interested to develop larger projects? FIG is creating a Private and Community Partnership model to be able to link in with communities on larger projects. Are you interested to look at this with us?

Responses to this question are summarised below and it demonstrates the interest of the groups to develop larger projects and the recognition that a community and private partnership model will work.[2]

Workshop Location	YES	NO	YES%	NO%
Busselton	3	0	100%	0%
Queanbeyan	3	0	100%	0%
Adelaide	0	0	0%	0%
Sydney	7	1	88%	13%
Maitland	10	2	83%	17%
Bathurst	5	2	71%	29%
Hobart	6	1	86%	14%
Melbourne	5	0	100%	0%
Sunshine Coast	2	2	50%	50%
Daylesford	5	1	83%	17%
Cairns	3	1	75%	25%
TOTAL	**49**	**10**	**83%**	**17%**

[2] The answers in the table are based only on the participants that answered this question.

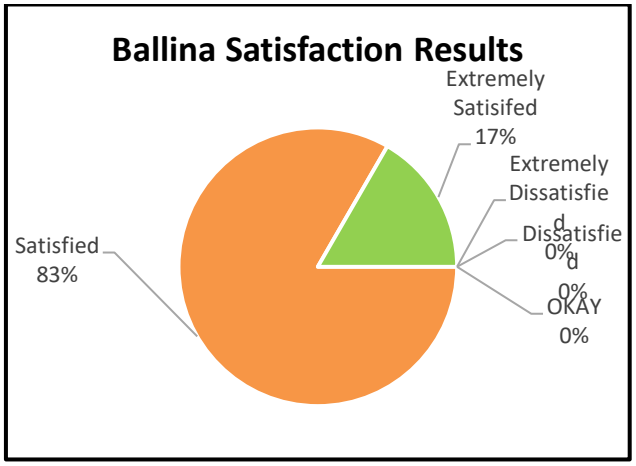
6.2 Ballina

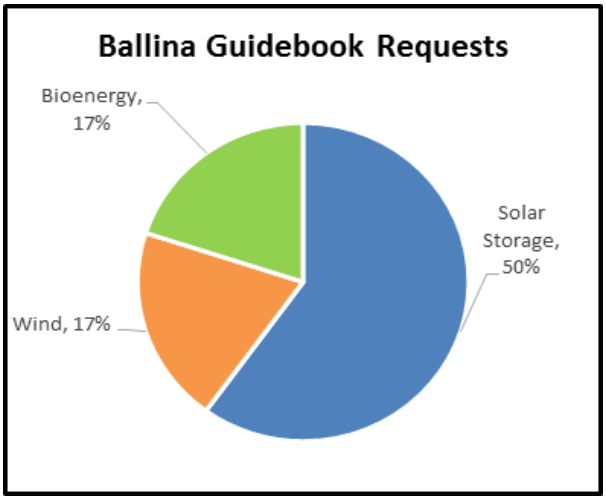
Dates: 8th to 9th September 2017

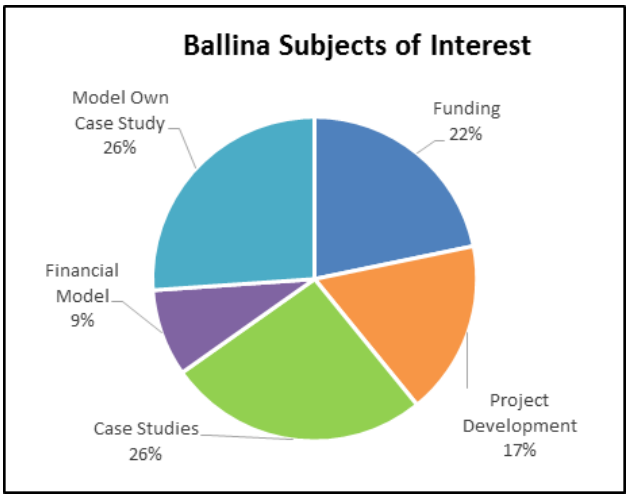
Participants: 25

Course Design: The workshop occurred over two days including a half day tailored as a strategy session for the Northern Rivers region. Different participants attended different components with a majority attending throughout.

Case Study: Participants had insufficient meter data to do a case study. As a result, the financial modelling was done against generic meter data sourced with input from the Community Energy group.







100% of participants reported feeling satisfied or extremely satisfied with the workshop and there was interest among the group for information across all technologies discussed. Participants included an advanced group of Community Energy Project Developers who expressed regret that the toolkit has not been available at an earlier date. The group benefited from identification of project gaps and the development of appropriate solutions through the workshop. The group found particular use in the Q&A session and the regional strategy capacity building section of the program.

FIG also attended an additional workshop in Mullumbimby with one of the CORE groups to assist in the scoping out of the development of a 10 MW solar PV Plant

This was the first workshop undertaken and following feedback from this course, a generic case study document was prepared and used in subsequent workshops.

6.3 Yarra Ranges

Dates: 13th to 14th October 2017

Participants: 35

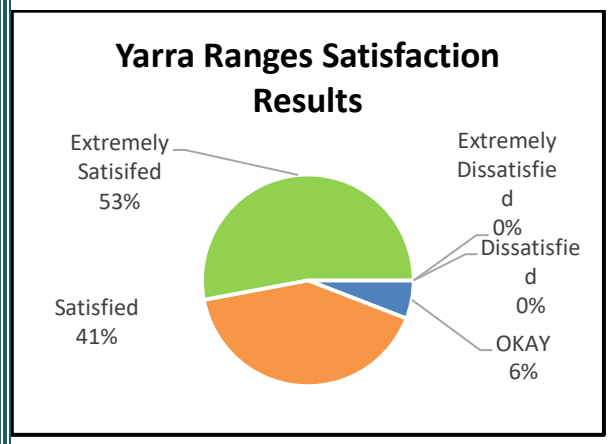
Course Design: The event ran over two days with two different workshops (accommodating for both day and evening sessions).

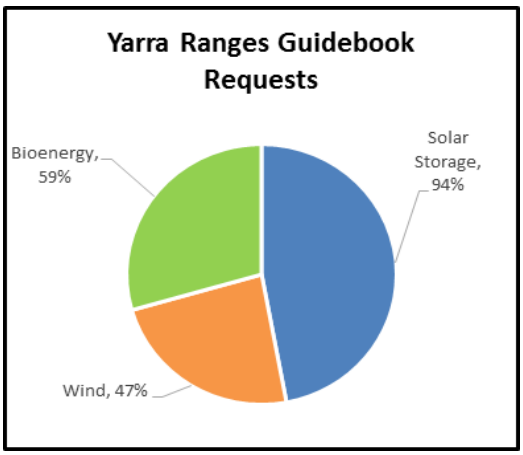
Case Study: A case study was undertaken on a local primary school installation with several different sizes of installations modelled to assess the best PPA price to charge in ensuring financial savings and a reasonable return on the funds deployed to install a solar PV system at the school.

Feedback: "I found the subject material engaging and useful to my day to day tasks", Peter Mercouriuo, Yarra Energy Foundation

"A very useful tool", Raj Manohar, Baw Baw shire council

"The guidebooks are really easy to read and have great information", Heidi Hamm, South Gippsland Shire

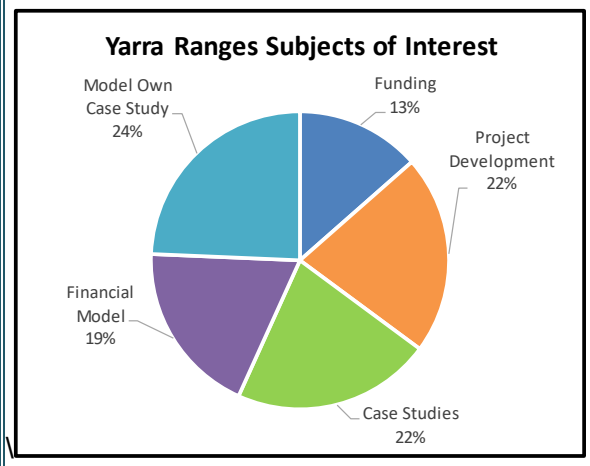




There were two people that found the course only okay (6%) with the rest rating themselves extremely satisfied or satisfied (94%). One the participants enjoyed the course so much he also attended the Latrobe Valley event.

This was the second workshop undertaken and following feedback from this course the generic case study document was modified to one based on Yarra Ranges Primary School to be used in subsequent workshops.

Yarra Ranges 1 – Day sessions



Yarra Ranges 2 – Evening sessions

6.4 Wagga Wagga

Dates: 18th October 2017

Participants: 19

Course Design: This was a one day course with cross section of stakeholders and follow-up mentoring provided to organisations such as Kurrajong.

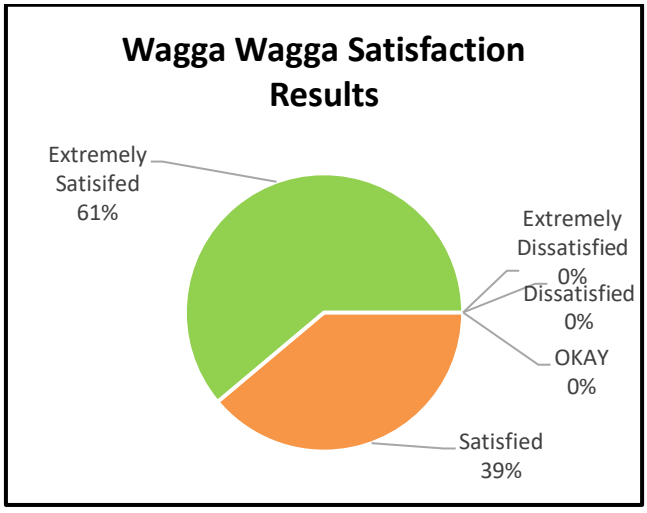
Case Study: Financial modelling was done against a case study using the Yarra Ranges Primary school meter data but with Wagga Wagga weather data.

Feedback: "Very good and informative workshop, great presenters, very knowledgeable", David Webb, Lockard Shire *Council*

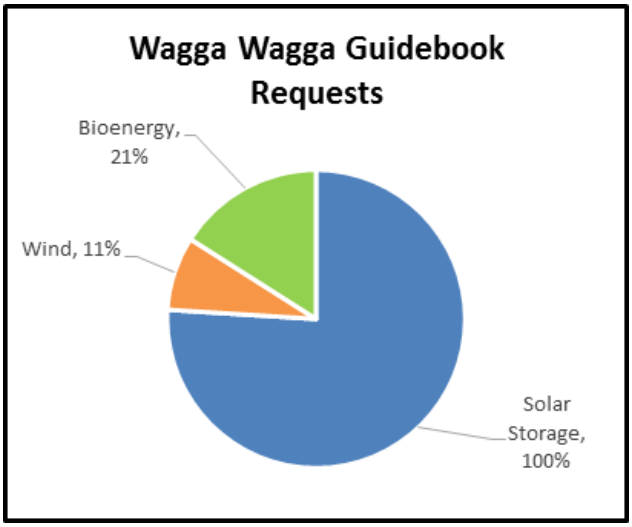
"Comprehensive coverage of table and very knowledgeable presenters", Fiona De Wit, Griffith City Council

"My knowledge of the subject is at early entry level and I felt that the information received on the day helped me immensely. I am more confident and comfortable to move to the next level", Martin Holmes, Junee Community Power Inc.

"All good – answering questions from the floor was the best part", Gary Belton, Talbingo Progress & rate payers



The course had a great diversity of stakeholders with a high concentration of councils/shires. The councils were particularly well represented and even though they came from different parts of council they felt that they all got something valuable from the day.



There was interest in FIG developing similar guidebooks including the above and as well as micro grids and social impact residential programs that could be rolled out (including indigenous communities). Also interest to provide support around PPAs.

6.5 Latrobe Valley

Dates: 26th October 2017

Participants: 34

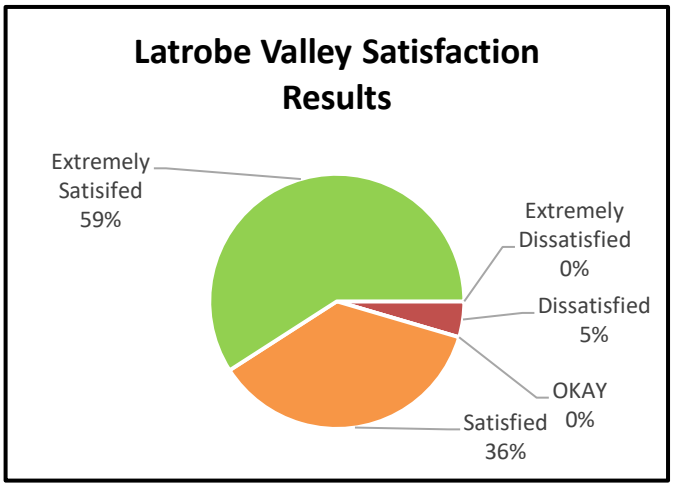
Course Design: A one day workshop with follow-up mentoring in spreadsheet preparation and a smart grid for a retirement/respite facility.

Case Study: Financial modelling was done against a case study using the Yarra Ranges Primary school meter data but with local weather data

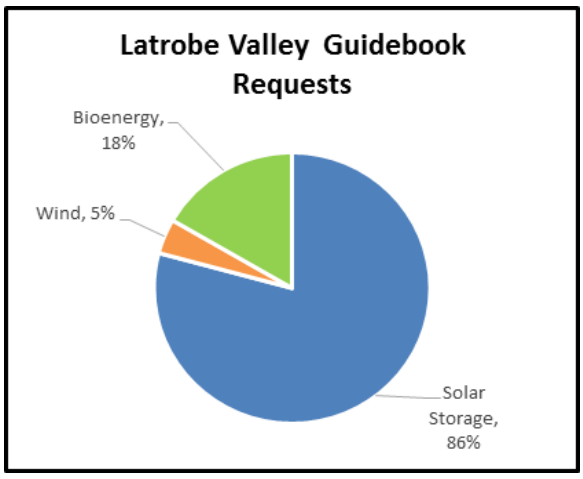
Feedback: "So much information was made available in a well structured format", Inge Mitchell Baw Baw Sust Network

"Covers all topics in a detailed yet simple engouh method", Danian Richmond, Bank Australia

"Most was easy to understand but also the offer of being able to stay in contact for 2 months assistance is helpful", Wendy Farmer



Most were extremely satisfied (59%), with 36% satisfied and one person rating themselves as dissatisfied (5%).



Solar storage was by far the toolkit that was perceived as most useful by workshop participants.

Latrobe Valley Sponsors:
Latrobe Valley Hub,
Gippsland Sustainabiltiy Group,
LatrobeValley Council

6.6 Busselton

Dates: 14th November 2017

Participants: 21

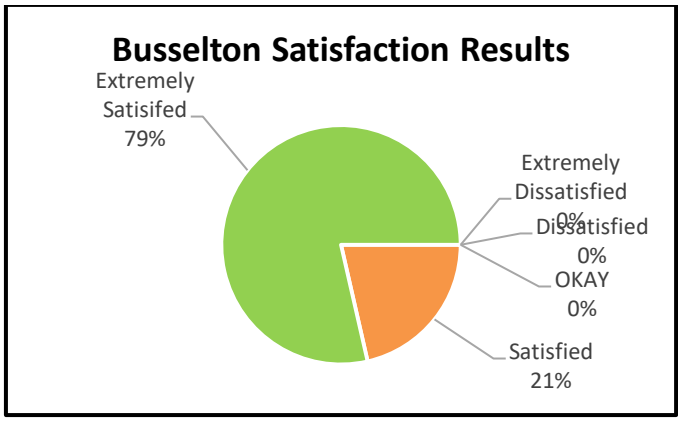
Course Design: A one day workshop with follow-up project support.

Case Study: Financial modelling was done against a case study using the Yarra Ranges Primary school meter data but with Margaret River weather data

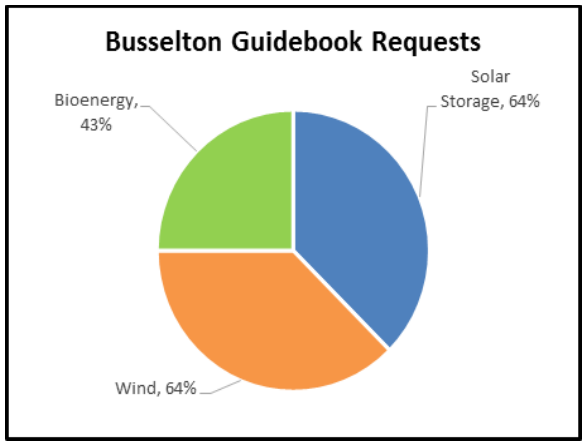
Feedback: "It was overall very good. Enough to get started with lots of great insights", Emilia Lewinski, Fremantle Community Wind

"Resource material and presenters are 1st class", Councillor John McCallum, City of Busselton

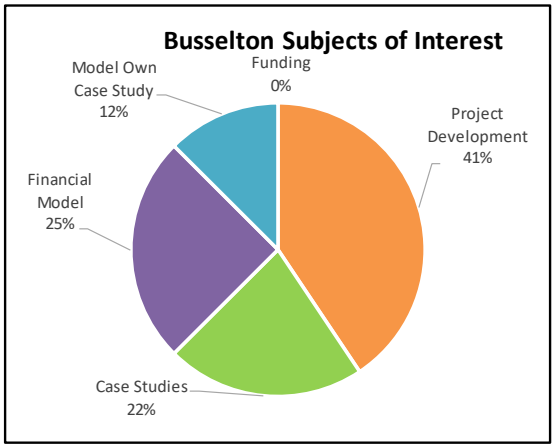
"Great Initiative - excellent mandate to bring this information to the broader community", Glyn Ellis, Redback Energy



Very engaged group that enjoyed the variety of information and support provided with most rating themselves extremely satisfied.



Interest in a large range of guidebooks was reported including for geothermal energy projects.



Busselton sponsors:
Naturaliste Renewable Energy Group
"100% Renewables by 2025"

6.7 Queanbeyan

Dates: 21st November 2017

Participants: 16

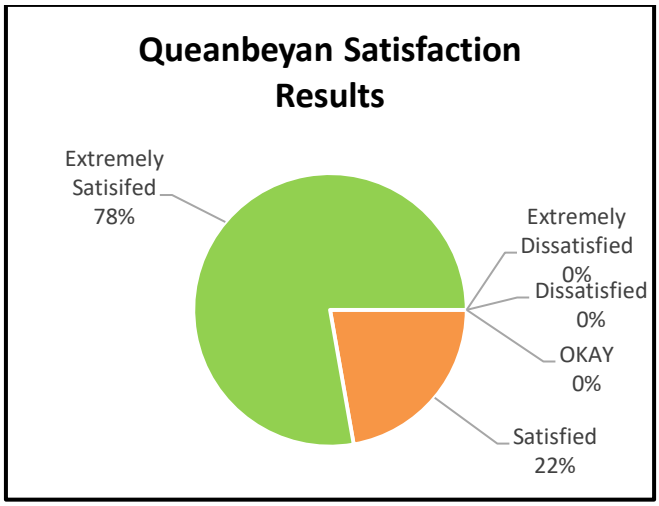
Course Design: A one day workshop.

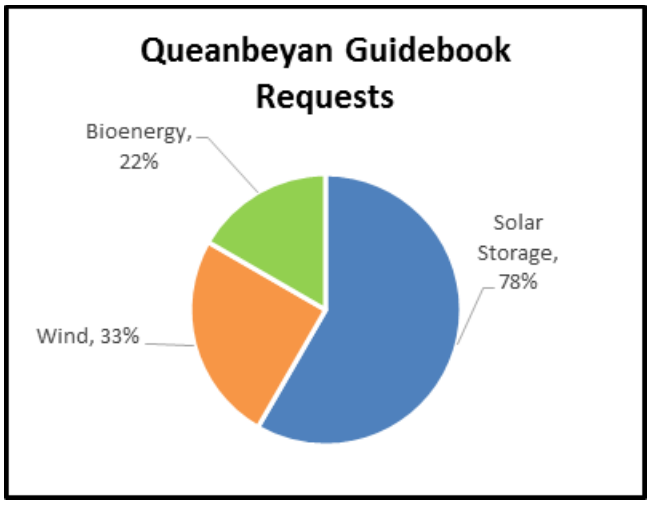
Case Study: Financial modelling was done against a case study using the Yarra Ranges Primary school meter data but with Canberra weather data

Feedback: "Excellent presenters and presentations & resources", Maree Crisp, Hilltop Council

"Very good facilitation and information was relevant, concise and useful", Peter Holding, Hilltop,

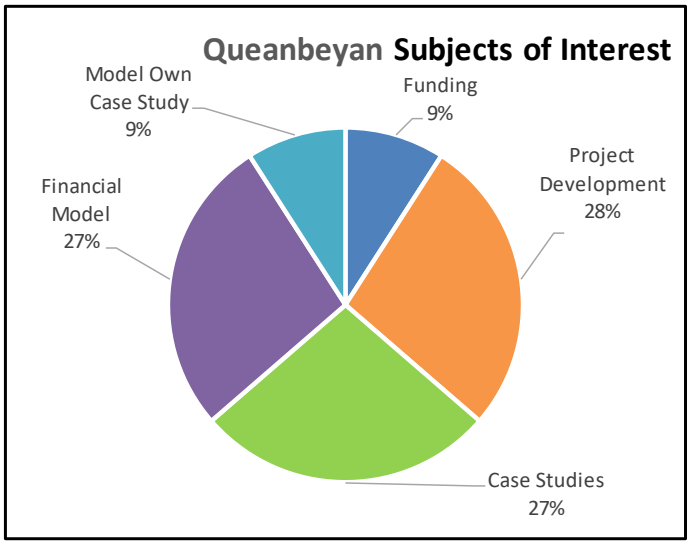
"Friendliness and welcoming nature of the hosts", Gaytan, Hilltop





The group were generally extremely satisfied with the workshop. The networking across the group was valued as well as our friendly approach in facilitating the session.

There is an interest in new guidebooks for all technologies particularly solar storage!



Queanbeyan Workshop
Sponsored by NSW Office of Environment and Heritage

6.8 Adelaide

Dates: 24th November 2017

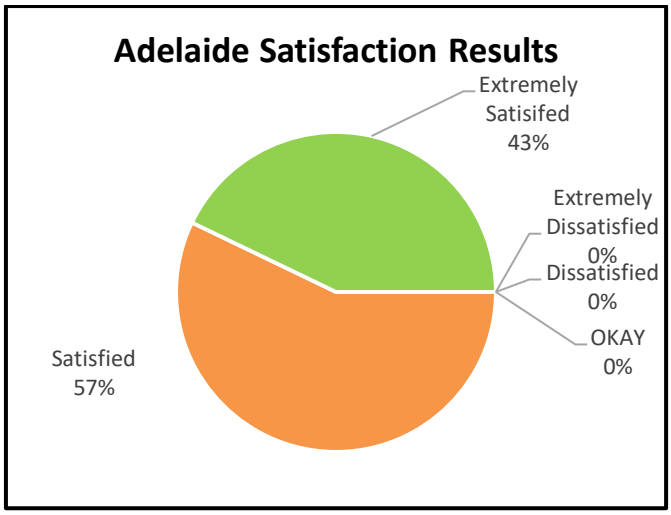
Participants: 36

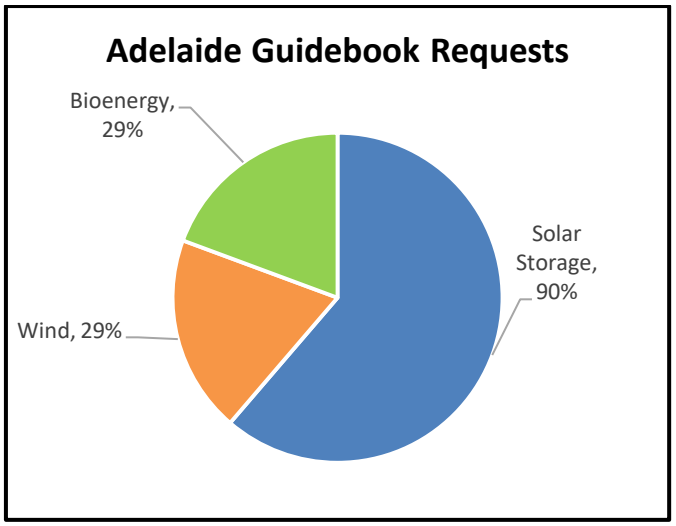
Course Design: A one day workshop.

Case Study: Financial modelling was done against a case study using the Yarra Ranges Primary school meter data but with Canberra weather data

Feedback: "Great Content for the early explorer into the space", Craig Cowing, Unity

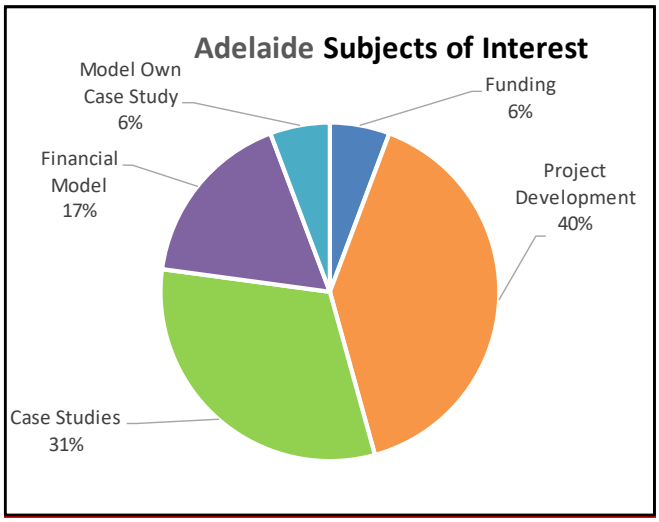
"Comprehensive industry knowledge from both presenters", James Zemindaris, University of Adelaide





A diverse group that enjoyed all aspects of the workshop.

The interest is wide but solar storage was the guidebook that got most of the attention.



6.9 Sydney

Dates: 4th to 5th December 2017

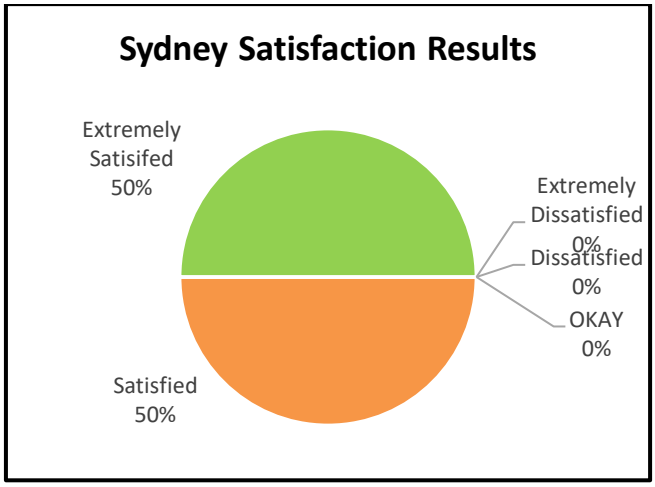
Participants: 31

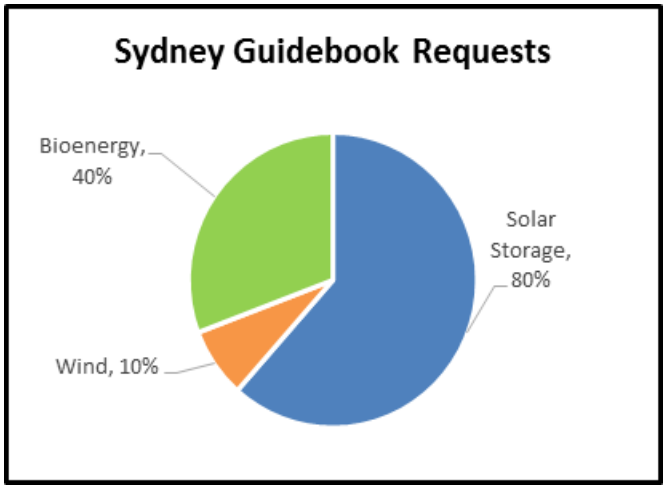
Course Design: A two-day workshop supported by UTS (through CPA involvement).

Case Study: Financial modelling was done against a case study using the Yarra Ranges Primary school meter data but with Sydney weather data

Feedback: "Covered a range of very relevant information" Lawrence, Canterbury Bankstown Council

"Extremely satisfied … particularly liked open discussions" George Phani, Kyocera





The group was evenly split between viewing the workshop as extremely satisfied or satisfied with no on rating the workshop lower than that.

There was a lot of value in the knowledge sharing and FIG is providing the opportunity for some of the community energy project developers based in Sydney to share their story. FIG had a panel that included Community Power Agency, Pingala, ClearSky Investments.

A key area of discussion was on how to support projects through a funding model. The group agreed the access to capital existed but how to structure this to satisfy community groups was still a challenging area and one that FIG has been concentrating on given the interest.

There was interest in a wide range of technologies, which you would expect given there were some attendees from UTS that had an interest in the technology side.

Apart from the technologies above there was an interest in a range of technologies including solar PV micro-grids, hydrogen, renewable fuels and others.

Sydney had a higher proportion interested to collaborate with FIG on a private and community partnership model to help facilitate larger scale in the sector (78%)

6.10 Maitland

Dates: 6th to 7th December 2017

Participants: 20

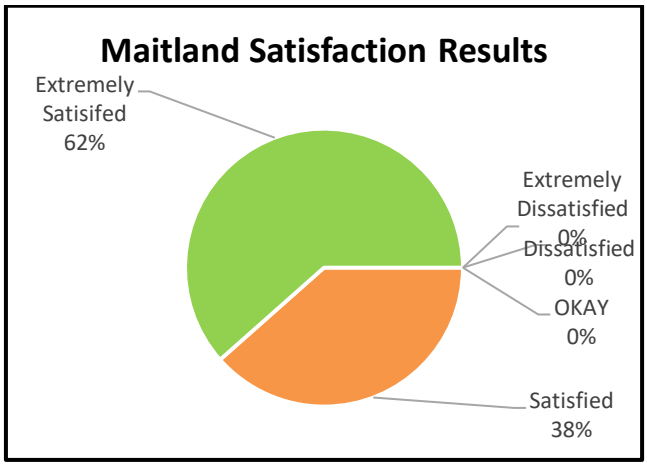
Course Design: A two-day workshop.

Case Study: Financial modelling was done against a case study using the Yarra Ranges Primary school meter data but with Maitland weather data

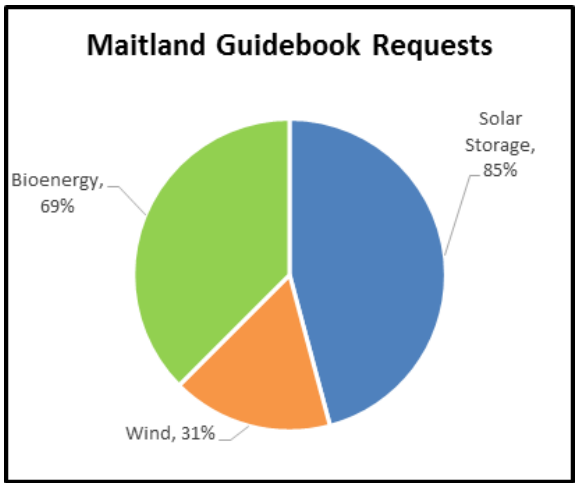
Feedback: "Great presentation of an excellent manual", Gregory John Olsen, Central Gant

"Structure, program and speakers very engaging. Topics [were] covered extensively. Excellent, thank you", Christina Hertlkovic, Bulga

"Provided a lot of information that CLEANCO's are struggling to acquire", Peter O'Shannyessy, CLEANAS



Very satisfied group of participants with many reporting that the two-day workshop provided much of the information they have been trying to find for many years.



The group were actively interested in a variety of technologies with a focus on Solar PV storage. The group was very keen to obtain an updated manual on this topic.

Maitland Workshop
Sponsored by NSW Office of Environment and Heritage

6.11 Hobart

Dates: 5th March 2018

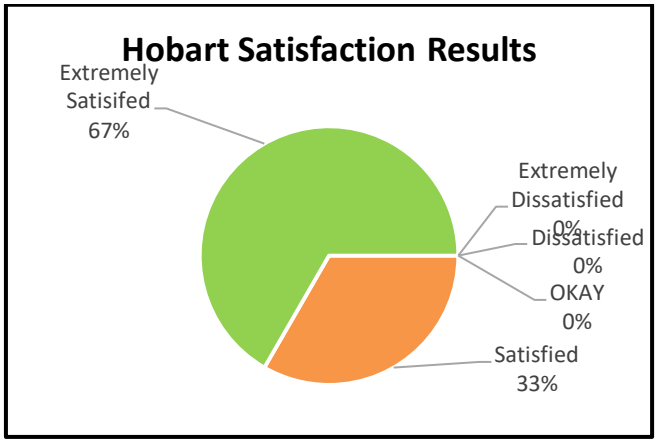
Participants: 12

Course Design: A one day workshop with engagement on specific projects prior and after the workshop.

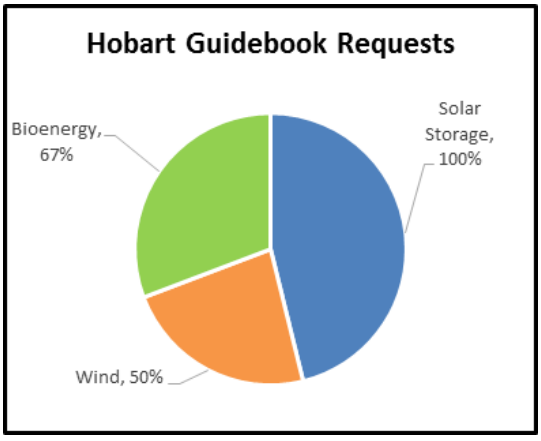
Case Study: A case study was done on a generic meter data source with input from the group to develop a project specific model

Feedback: "Very informative and excellent for our current community renewable energy project", Paul Sutton, Peninsular Community Power

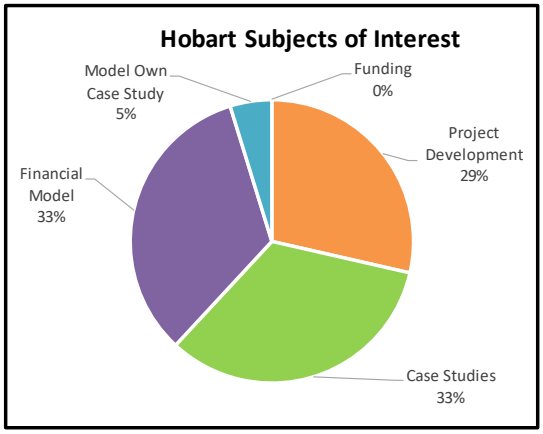
"The FIG team were very well prepared, and they engaged everyone in the group and their knowledge base and communication skills were excellent", Graham Whitehead, Tasmania Peninsula Power



A high level of satisfaction regarding the broad range of resources and expert information.



There are large opportunities for renewable energy in Tasmania and this is reflected in the fields of interest to this group. Smart grids were also a high priority.

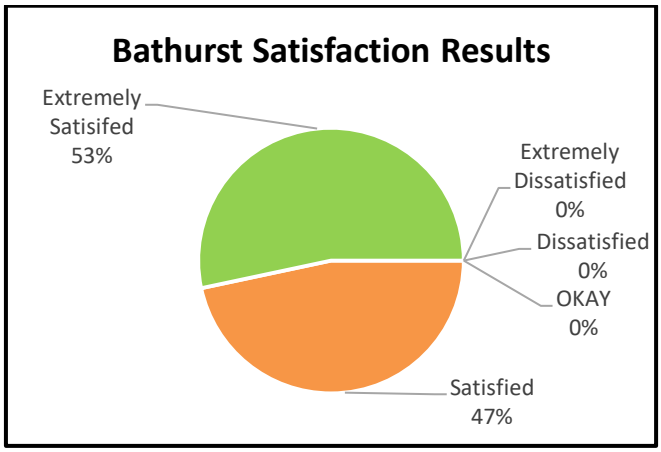


Project Development, financial templates & case studies all important as early stage of CE in the State

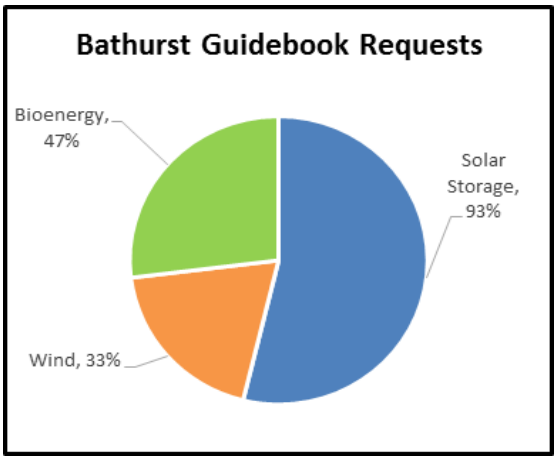
Tasmania Sponsor, Sustainable Living Tasmania SLT, Participants at the SLT office

6.12 Bathurst

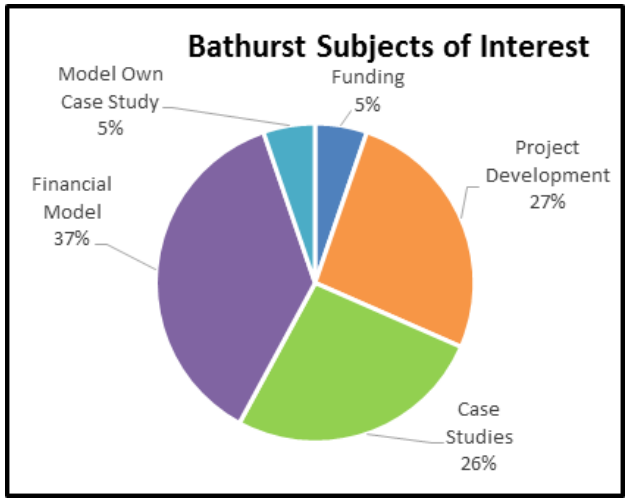
Dates:	23rd to 24th March 2018
Participants:	21
Course Design:	A one day workshop and then the attendance of the local sustainability festival the next day.
Case Study:	Participants had insufficient meter data to do a case study. As a result the financial modelling was done against a generic meter data source with input from the Community Energy group.
Feedback:	"Well run, good information, presenters knowledgeable and handled questions well", Kerry Guerin, Littrow SAF Museum



High satisfaction rates from participants with the Q&A and knowledge particularly valued.



Solar storage had a high level of interest and discussion, but the group had a broad range of interest across technologies. Support on PPA development was of interest.



All aspects of the course were valued but there were some participants that particularly like the financial modelling.

Bathurst Sponsors, Skillset Environment Bathurst NSW Office of Environment and Heritage

6.13 Melbourne

Dates: 18th May 2018

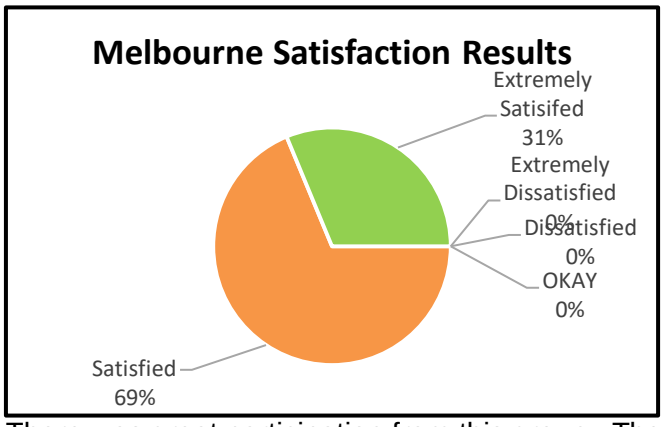
Participants: 43

Course Design: A one day course with mentoring support provided following workshop.

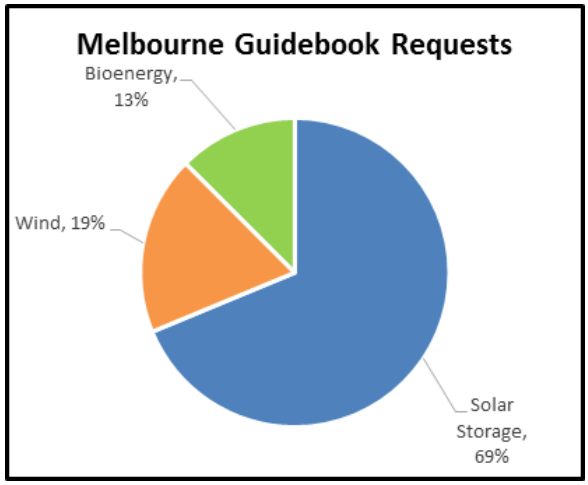
Case Study: Participants had insufficient meter data to do a case study, so the financial modelling was done against a generic meter data source with input from the Community Energy group.

Feedback: "Well done! Lots of great resources to learn from later. Very knowledgeable and responsive presenters", Sean Frost, Energy Resilience

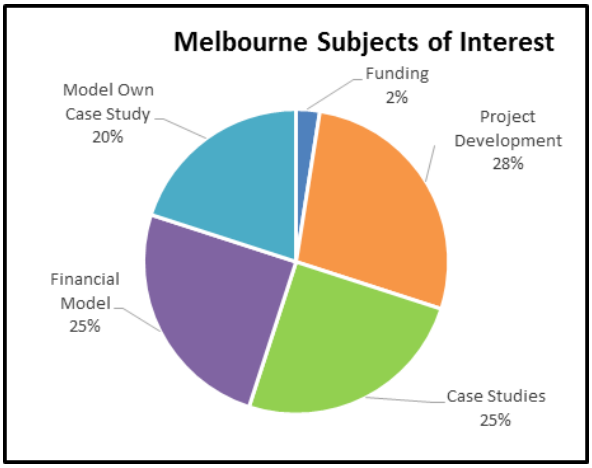
"Good, clear presentation presenting some excellent resources", Anthony Williams, Green Energy Trading



There was great participation from this group. They enjoyed the guest visit from Moreland Energy Foundation & Yarra Energy Foundation.



A high priority for solar storage but smart grids also important.



All areas of the course were considered valuable with the funding of least interest as most participants are at the project development phase

6.14 Daylesford

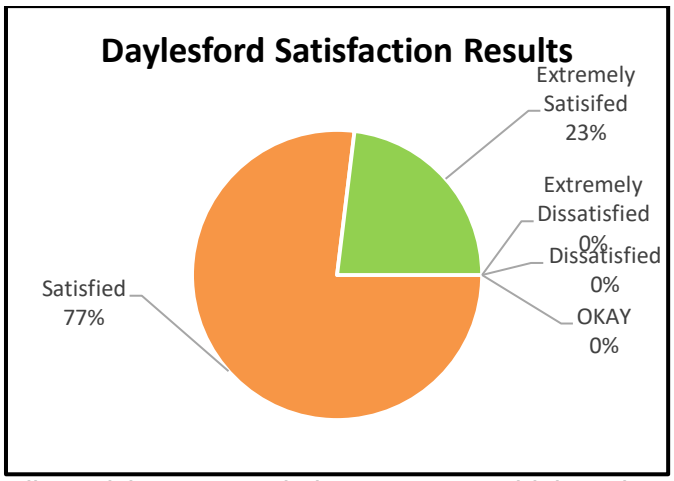
Dates: 21st May 2018

Participants: 16

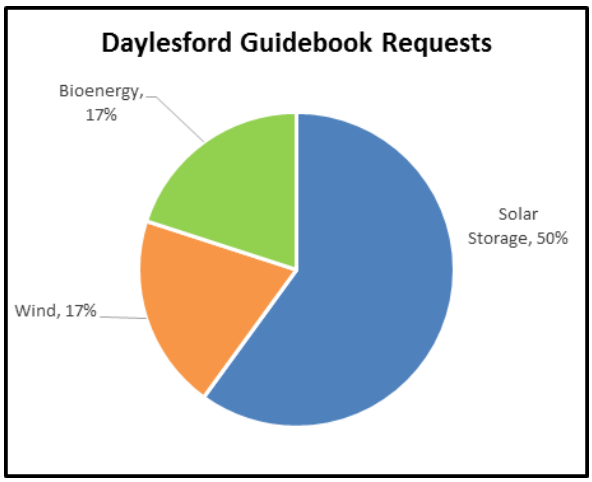
Course Design: A one day workshop focused on real-life case studies.

Case Study: Financial modelling was done for two case studies - Ballarat Cemeteries and Bendigo College. FIG has provided further ongoing support for Bendigo Sustainability group following the workshop (on their large scale Solar PV project).

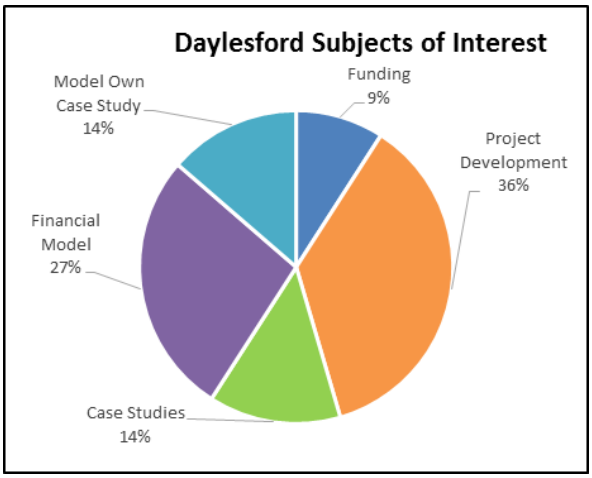
Feedback: "This was very relevant to the projects I am working on and the presenters were every knowledgeable in their field and good communicators" John Van Rooden, Breeze (Ballarat Community Energy Hub)



All participants rated the course as higher than okay.



There is a lot of innovation in community energy and all types of technologies were sought



At the workshop it was identified that one of the currently being considered projects was not feasible. However, it provided the necessary information to understand that the project could not be invested under normal investment criteria in its current form.

There was additional support provided to Bendigo Sustainability group who are developing a larger scale project. FIG developed our financial template further to accommodate their requirements and providing training.

6.15 Sunshine Coast

Dates: 19th June 2018

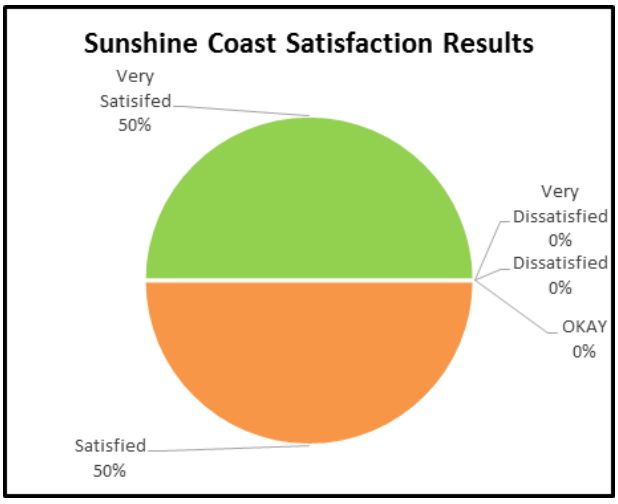
Participants: 14

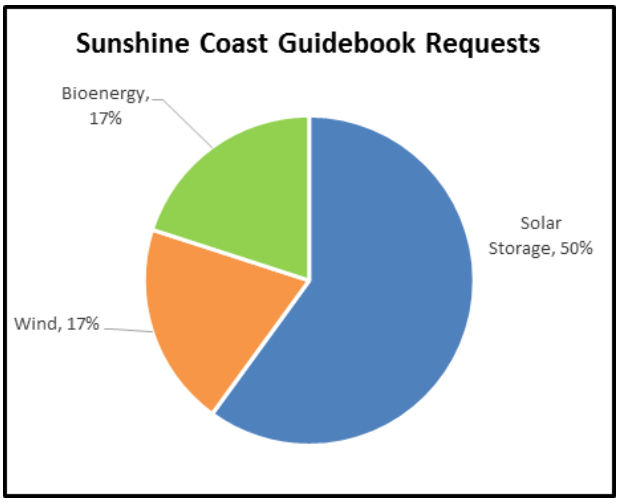
Course Design: A one day workshop.

Case Study: Financial modelling was done against a Brisbane supermarket case study (data provided by course participant).

Feedback: **"**I wish I could have done this 2 years ago", Liz Harris (CE developer)

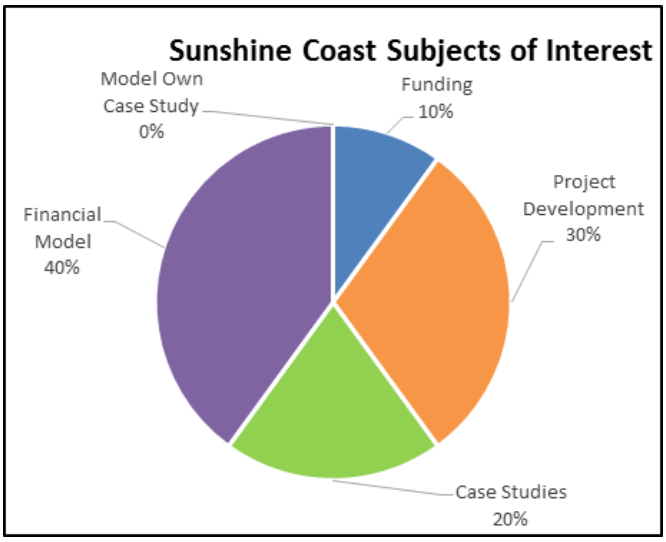
"Subject knowledge was great" Dean Hoer, Mudjimba Unsustainability





The rating was excellent with everyone assessing the course as satisfactory or very satisfactory.

Very interested in all technologies but presently focused on storage. Big demand for a solar storage guidebook to complement our existing guides.



They were very interested in the financial model and going through that in detail. However, they enjoyed all aspects of the workshop! The modelling of their own project wasn't as valuable as the other aspects (which was different to every other workshop). This may have been as the real case study was developed toward the end of the session.

6.16 Cairns

Dates: 25th June 2018

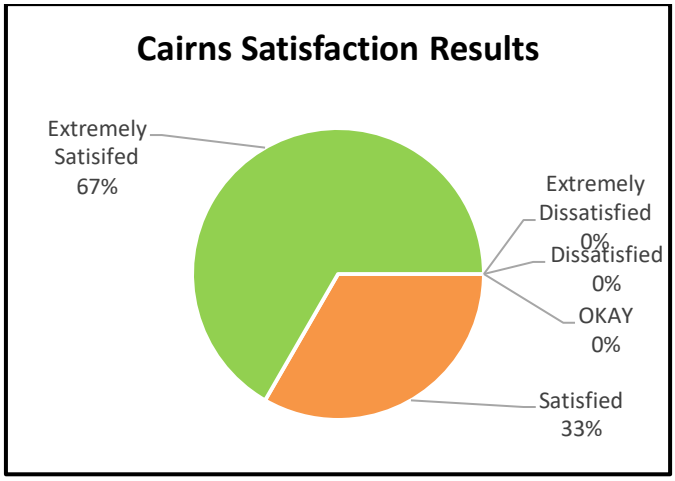
Participants: 18

Course Design: A one day workshop which was perfect for the diverse participants. Was designed to complement an Energetic Communities workshop.

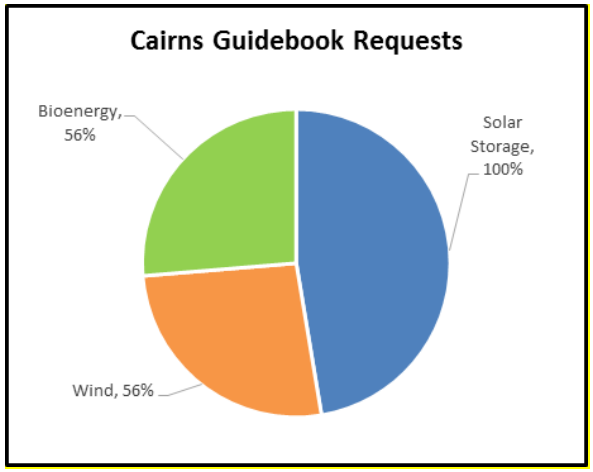
Case Study: Financial modelling was done against the supermarket used for the Sunshine Coast workshop but with Cooktown weather data.

Feedback: "Vital capacity building program for accelerated renewables" Simon O'Brien, Sustainable Solutions Global

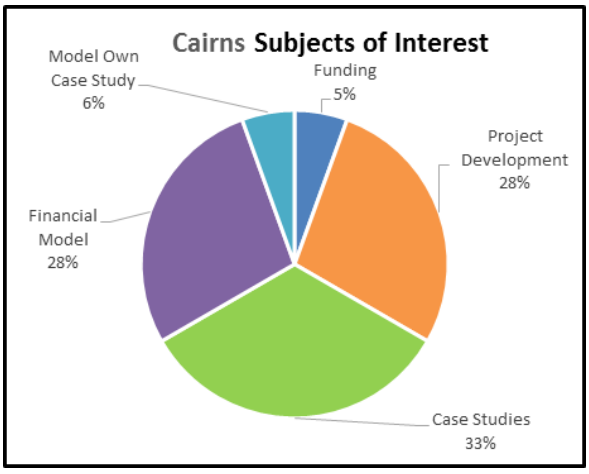
"Informative – traction & action based", Johanna Kloot, Green KPI



All starting the journey, so the timing of the toolkit was perfect



Participants loved the resource and would like other technologies developed in the same detail/language.



They enjoyed the project development and case studies as the funding is not so important at the moment (except for early stage funding)

Cairns Sponsors
Roz Walden, Cairns and Far North Environment Centre
Daniel Stronggrove, Cairns Regional Council

6.17 Project Prefeasibility Undertaken

The following prefeasibility case studies and activities were undertaken during and post the workshop with the participants:

Event	At the workshop	After the workshop
Ballina, NSW	FIG sample case study	-
Yarra Ranges, Victoria	Primary school case study	A more detailed primary school case study
Wagga Wagga, NSW	Primary school case study applied to Wagga Wagga climate data	Museum and library case studies
Latrobe Valley, Victoria	Primary school case study applied to Melbourne weather data	Hotel case study Kindergarten case study
Busselton, WA	Primary school case study applied to Margaret River weather data	Large wind project case study
Queanbeyan, NSW	Primary school case study applied to Canberra weather data	-
Adelaide, SA	Primary school case study applied to Adelaide weather data	Rolling out of solar PV (small scale)
Sydney, NSW	Primary school case study applied to Sydney weather data	Follow up meeting to discuss scale up of funding
Maitland, NSW	Primary school case study applied to Newcastle weather data	-
Bathurst, NSW	Primary school case study applied to Bathurst weather data	PPA structuring
Tasmania, Hobart	Case study on community power project based on default residential profile load scaled to community level	Extension of workshop case study
Melbourne, Victoria	Primary school case study applied to Melbourne weather data	Assist Moreland Energy Foundation with a specific case study that they had previously modelled
Sunshine Coast	Case study on 30 to 99kW supermarket installation	Further discussions with community energy proponent
Daylesford, Victoria	Case study on Ballarat cemetery buildings and Bendigo school	More detailed Ballarat Cemetery case study More detailed Bendigo College case study Ballarat laundry case study (solar and bioenergy)
Cairns, Qld	Case study on 30 to 99kW supermarket installation (same as for Sunshine Coast) with supermarket installation using Cairns weather data	Meeting with various stakeholders particularly Cairns regional council to build momentum

6.18 Additional Value-Added Outcomes

Workshop	Post Workshop Assistance
Ballina	One day think tank in Mullumbimby for capacity building for a large scale project.
Wagga Wagga	Financial prefeasibility for a museum and a school. Currently assisting a large community services provider with the rollout of 250kW plus of solar across 15 sites.
Yarra Ranges	Financial prefeasibility for a primary school and procurement advice on a solar farm
Daylesford	Bendigo Sustainability Group – 1 day of remodelling financial template to model a larger scale project. 1 MW solar PV. Provided a session for a Bendigo Bank Subsidiary on developing a 1 MW project and the viability of such a project (they are working in association with Bendigo Sustainability Group). Modelling for Ballarat BREAZE - Ballarat Cemeteries. Bendigo Community Hub for a Bendigo School. Currently assisting BREAZE with assessments at Ballarat Laundry and Ararat Hospital.
Melbourne	Financial prefeasibility modelling for Moreland Community Solar. Currently assisting a group of Council's in South Eastern Melbourne in assessing over 50 sites for solar potential.
Latrobe Valley	Assistance to convert meter data into form needed for spreadsheet, Hotel case study, Kindergarten case study. The referral of Yarra Energy Foundation for bulk buy programmes that has led to four councils in Gippsland involved in solar bulk buy programs in Gippsland.
Sydney	Clear Sky solar – meeting after the workshop to share ideas on a financing model that would assist with capacity building in community energy
Busselton	Augusta wind and solar plant 10 MW review of prefeasibility modelling. Assisting in connecting with wind turbine supplier (VESTAS). Met and discussed key actions needed to get project to investment ready status.
Cairns	There is a capacity building model being developed between FIG and key community members including councils, indigenous groups and Northern Gulf Resource Management Group Meeting with Rajinder Singh from the Cane Growing Association and preliminary discussion on a community funding model (cooperative) Discussion with Cairns Council representative regarding opportunity to partner with Community Energy groups for specific Behind-the-Meter projects.
Adelaide	Initial discussion on a retail fund for community renewables starting with solar
Bathurst	Continuing assistance for Graham Stirling from Skillset Environment on PPAs for solar and managing meter data Attended Bathurst Sustainability Festival and supported NSW government stand.
Hobart	Assisted Peninsular Power on application of model

Workshop	Post Workshop Assistance
Daylesford	Extended work on case studies for Ballarat Cemeteries and Bendigo College. Assisted BREAZE with evaluation of bioenergy and solar applied to a laundry.

7 Key Challenges for the Community Energy Sector

The toolkit has successfully concentrated on building the capacity of participating groups in developing Behind-the-Meter projects. This focus reflects the fact that more than 95% of the projects that were being developed in the community energy sector are Behind-the-Meter projects. Over the last year there has been an increase in community groups focusing on the roll out of these type of projects (for example, Bendigo Sustainability Group, Yarra Energy Foundation, Pingala, Clear Sky Solar among others).

The community energy sector is now focusing on other technology types and larger scale projects. This has made the development of projects much more complex and there is further capacity building required. Some of these challenges are listed below:

7.1 The Project Sizes

The workshops highlighted several <100kW projects under development. While there are still a significant amount of small scale Behind-the-Meter projects being developed, there are also an increasing number of projects aiming at larger scales (from 1 – 30 MW capacity) that are substantially more complex to develop. The project development requirements and the funding of these projects is both complicated and of higher risk. FIG assisted the Bendigo Sustainability Group to model a 1 MW plus project and FIG is seeing a growing demand for this larger scale project.

7.2 Financing larger scale projects

FIG's discussions with financial institutions and community groups identified that projects at 1 MW and up to 10 MW in capacity were the most difficult to develop and fund for CRE groups. There is an increasing interest in these medium size projects as the large-scale projects already under development have identified and cornered the best network opportunities and newcomers to the large-scale market would face significant barriers to entry in developing a 'foot in the door'. These more middle range projects are difficult for banks to finance due to their lower rates of return and the requirement to still undertake the same level of due diligence as a larger project. The support for our toolkit has come from those in the community and the private sector pursuing smaller project sizes. Therefore, developing models relevant to these types of project have the capacity to assist a large number of community stakeholders.

7.3 Improving Project Credibility

Despite the passion in the community sector towards these type of projects, there is still uncertainty among local councils and financiers about their involvement. This reflects the perception that some community energy groups may not have the expertise to develop a project and the degree of financial risk involved. The workshops have increased the financial literacy of the community groups and their ability to develop the financial side of a project. An independent accreditation scheme proposed by FIG would further strengthen the skills in the community sector, reduce costs, increase the success of the projects and provide greater confidence to financiers and government agencies.

7.4 New Guidebooks

The workshops highlighted the lack of comprehensive guidebooks available to community groups developing energy projects. The FIG guidebook is limited to “Behind the Meter” solar projects and there is significant demand for a number of additional technology guidebooks including bioenergy, solar storage, wind, large scale solar, hydroelectricity and smart grid solutions. The participants like the style and simplicity of FIG’s content and would like further guidebooks developed.

7.5 Funding Model

The community sector is able to access funds, but it is time consuming and requires fundraising knowledge that may not be easy for every community group to undertake. In some cases, this has a substantial impact on a community energy group’s ability to move forward on a project. A centralised fund would provide a more efficient solution for community energy participants and enable them to focus on project delivery and community engagement. Such a fund would need a strong governance framework and experienced personnel that would also be likely to attract further investors that would like to have a more structured governance approach.

7.6 Funding for all renewable project types

A challenge for community energy participants is that there are many technology types needed to get funded and the ability to find sources of funds for all types of project which requires identifying different parties makes the funding process more complicated.

8 Development of Solutions to Overcome Barriers

The following represent FIG's proposed solutions to assist in overcoming the challenges raised during the workshops. They aim to assist not only community energy groups, but more broadly targeting projects of up to 10MW in capacity as referenced in the previous section of this report.

The key stakeholders needed to push forward with these type of projects that have certain challenges and FIG believe the solutions below will assist in addressing these challenges. The key stakeholders that are considered include:

1. Bankers, financiers and investors
2. Renewable project developers (not limited to community projects)
3. Councils and other levels of government

Stakeholder - Key Challenges	FIG Solutions
Bankers, Financiers and Investors	
Accessibility for a funding solution for small to medium size projects due to cost of due diligence.	The FIG Accreditation model will seek to undertake the due diligence which will reduce/streamline the requirement of the banks to undertake this task. Developed a program to reduce the cost of due diligence so that smaller size projects can be aggregated.
Some fund managers do not have adequate knowledge of the renewable energy sector or the cost associated with due diligence is too high.	See the discussion of the FIG Accreditation model above.
Project developers	
Access to a funding solution in the retail sector (the 20/12 rule is too limiting for gaining investment).	Funding model with capacity building being developed by FIG (subject to funding). The proposal is for a master fund that will enable funds to be raised on a project by project basis.
Access to adequate mentors and guidance by specialists. Too many challenges and having to access too many separate specialists in specific skills areas.	FIG has the comprehensive capacity to provide this mentoring service and has developed two models that can assist in providing this capacity (roll out subject to funding).
The skill set and experience to develop key projects to get it to investable status.	FIG Capacity Building Model will help to overcome this problem.
Councils / State Government	
Councils are reluctant to support projects as they are concerned the project developers may not be able to deliver and create risks for the Council	FIG's Capacity Building Model and Accreditation Model reduces the risk for councils and other stakeholders The accreditation model will ensure there is a higher likelihood of degree of delivery of projects that have been given grants and to ensure that they are delivered within a reasonable timeframe (many smaller scale projects are taking too long to deliver)

The key solutions that will provide the capacity to aggregate the smaller scale market are set out below:

1. Ongoing support for maintenance of toolkit as well as new guidebooks and financial templates for other technology types

2. A due diligence service comprised of an independent accreditation model. This would particularly help the projects that are in the 1 MW – 10 MW range. FIG could be appointed by an external organisation such as a council, state government, university, investor to undertake an accreditation of the project which will reduce the risk of non-delivery of the project. Where there are gaps found in the accreditation, FIG can provide solutions to address these gaps.

3. A specialist fund developed – such a fund would include impact investors, financers and retailer customers interested in participating and will streamline the investment process for community energy groups. The fund could have access to government funds and through a mix of government and private sector funding could achieve more positive investment outcomes than either sector could achieve individually. The key for government involvement is to take the highest risk capital to enable private sector funds to flow into the sector. Funds contributed by government could be a loan rather than a grant and support an extensive pipeline of renewable energy projects for investment.

4. Centralised community energy information hub and delivery groups. FIG's accreditation model and fund would support these groups as part of a capacity building model.

8.1 Key actions

- Present to and discuss the report with ARENA as per the Funding Agreement as well as State Governments and other project stakeholders

- Review collective learnings and consider the development of new toolkits as requested by Workshop participants and other participants of the Guidebook

- Discuss the roll out of FIG's Capacity Building and Accreditation Model. These are due diligence models that can be consistently applied across projects. This will support the community energy interest in Private/Community Partnership models

- Develop a funding model with a pilot project (e.g. a 10 MW wind project) under a community and private partnership model and confirm a pipeline of projects. This would be supported by a master retail fund that will enable fund raising in the retail market for each project that is created.

- Develop a community energy fund in collaboration with the community energy sector. This may include the sharing of the fund's equity between key groups in the sector.

- Market research would be undertaken to demonstrate the size of the community energy market (e.g. in conjunction with ClimateWorks) and key opportunities.