

AUGUSTA MARGARET RIVER CLEAN COMMUNITY ENERGY

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IMAGINE...
preventing run-off and making
energy from dairy effluent



Capital Pro...

wind energy



ANNUAL REPORT 2018/19



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Chairperson's Report

It is my great pleasure to present our second Annual Report detailing the work undertaken in 2018/19 by the Augusta Margaret River Clean Community Energy (AMRCCE) Management Committee and our members.

AMRCCE is currently working on two projects. The first is to undertake a feasibility study for a 10 MW wind farm and, if a bankable business case is shown to exist, obtain the necessary approvals to feed energy into the grid at the Beenup substation at Scott River. The second is to determine the viability of using dairy effluent from the Scott River dairy industry to provide biogas and a soil enriching fertiliser.

The second project came from our first steps in the first, the wind project, in Scott River. The Scott River area is the site of WA's largest dairy farms and our meetings with the local land care group, the Lower blackwood LCDC, led to investigating the viability of integrating a biogas plant into the venture. And so, we now have a MOU with LBLCDC and are progressing the viability of using dairy effluent to produce biogas as dispatchable/base load energy and prevent dairy effluent from polluting rivers and the estuary.

Once these projects are complete, we will find suitable partner(s) to develop the projects

with AMRCCE retaining a community shareholding which would be used to further reduce emissions in our shire with a focus on those excluded for socio-economic reasons. This is the Stage 2 of our activities.

Both current projects are ambitious for a not for profit group and our last year has again been very busy, at times frustrating but overall, we achieved large steps forward. We are grateful for the support we have received from the shire, our members, state government and our many pro bono volunteers.

Progress on the wind farm

As I indicated last year, we installed a wind monitor at one of our selected sites close to the Beenup substation. Fourteen (14) months of wind data from this monitoring, together with 8 years of wind data from a nearby property have been analysed and the results confirm potential financial viability. We have selected the most suitable turbine supplier who will be analysing the wind data and will advise on turbine options for the site. A representative visited the site in July this year and is assisting us with further advice. We are currently looking at three Enercon E-138 EP3 turbines each with a 116m high steel tower, 138m diameter turbine blades, a total height of 185m and a combined generation capacity of 9.95 MW.



Chairperson's Report

At our last AGM, I outlined that there were proposed changes to access to the south west grid (SWIS) and we were waiting to hear how it would affect our project. We now know that effectively this means a delay of the grid connection date as, under current guidelines, connection requires upgrades that impose prohibitive costs. Under the current rules our project would need to pay to alleviate up to 10.3% of congestion in this part of the SWIS, and not just the 0.3% caused by the project.

The implementation of a “constrained” access system, planned by the State Government to be in place by the October 2022, would avoid these costs.

In the meantime we are progressing our connection application with Western Power. In view of the longer timeframe we have also decided to prepare to apply for formal Planning Approval for the Wind Farm rather than seeking approval in principle from our Shire Council.

Dairy effluent biogas project

This project led by Ian Williams is highly innovative as it is tackling problems that have not been attempted previously. It has made enormous progress thanks to Ian's dedication and thorough management.

Our first step on this project was to survey dairy farmers to collect information on current waste management; infrastructure and concerns; and gauge their interest in supplying waste to a biogas facility. This survey was

funded by a grant of \$20,000 from Department of Water and Environmental Regulation (DWER) and results showed high -level interest among farmers, subject to a practical, low cost and reliable solution. An obvious problem in the project was that the effluent contains large quantities of water compared to the amount of solid cow manure for possible energy extraction and transport costs would make aggregation to one site unviable.

Collaboration with scientists from UWA and the University of Southern Queensland, the Lower Blackwood LCDC and several large dairy farmers has identified an innovative process to separate dairy waste solids that may allow economic aggregation to an anaerobic digester facility to produce energy from methane biogas. In addition, the process has the potential to eliminate nutrient run-off from dairy effluent into the waterways and AMRCCE has received a \$135,000 grant from the Regional Estuaries Initiative through the Department of Water and Environmental Regulation (DWER) to conduct a six month on-farm trial to evaluate the potential to reduce or eliminate nutrient run-off. This Initiative is part of a \$20 million State Government program to improve the health of six estuaries in the South West.

Further energy related research is required outside the scope of the DWER/REI grant. This includes analysis of the methane bio gas potential of the solid fraction of the effluent, assisted by a donation (\$4,500) from the Foundation for Regional & Rural Renewal (FRRR)



Chairperson's Report

and assessment of mixing dairy with other waste stocks as this could boost biogas yield. It can also improve the nutrient content of the by-product, which can be used to improve soils for agriculture. The project could provide a model for other catchments.

The energy produced by the biogas facility could be used in several ways. The output could serve as baseload and/or stored energy and made available as dispatchable energy for our proposed wind farm. Alternatively, it could provide behind the meter heat and electricity to neighbouring farms.

There is still further research to be carried out but this year's work by Ian has moved the dairy biogas viability study towards feasibility status.

Finances

The estimated total value of the Feasibility Study project is \$1,800,000 of which over \$500,000 has been completed. We have achieved charitable status and have obtained a Fundraising Licence. We have applied for Deductible Gift Recipient status and eagerly await confirmation of success as it will mean donations will be tax deductible for our supporters. Our work this year has moved us closer to being ready to apply to ARENA or other parties for major funding.

Membership in the 2018/19 year was 163 and although this is down from our previous year, I feel we face the difficulties of all groups in ensuring that members renew membership. Your membership is important to us and we will

continue to attempt to retain and acquire new members as an expression of the support for the project and evidence to governments and potential investors of the strength of our community backing. Membership fees also help cover the basic expenses of insurance, website, and day to day expenses.

We are most grateful to our Shire and Council for the continuing support. We received \$25,000 in the 2018/19 year and \$20,000 has been pledged to assist with our work in the 19/20 budget. The Shire has also been invaluable in providing information assistance.

We are very grateful to Brad Boley, on whose dairy farm the effluent trial is taking place, his significant support which is essential to a successful completion of the research project. We are also most grateful of personal donations made by many of our members. Thanks also to members who have helped in fundraising events.

The pro-bono support from so many members and supporters has continued and volunteers have provided hundreds of hours of valuable support.

Climate Action Summit

AMRCCE supported the Shire Climate Action Summit and our projects were identified as the first priority project to be incorporated in the Shire's Climate Action plan which is currently being developed.



Chairperson's Report

There are a number of community energy projects emerging and AMRCCE has commenced to investigate other possible options to assist the community to reduce emissions and energy costs. One option involves a local community Virtual Power Plant. We have met with Rod Littlejohn of Tersum Energy who is working with Geraldton Community Energy and we are currently assessing that initiative and other competing offerings as suitable for endorsement to our members or adoption in our area.

Energise Margaret River

As indicated in our previous Annual Report, AMRCCE together with Transition Margaret River received funding of \$5,200 from the Augusta-Margaret River Shire to conduct a year long program to improve energy conservation and promote renewable energy. Most of the activities of the program were conducted during this reporting year and I am particularly indebted to Karen Major of Transition Margaret River for the success of the project which reflects so much on her skills, efforts, energy and commitment.

My Appreciation

I thank all our committee members for their work and support this past year. Particular thanks to our past Treasurer Brian Middleton whose support has been invaluable. I also want to thank Ted Coulter who served as a Committee Member until the end of last year. Steve McGill has continued to provide us with his technical expertise despite the pressures of his work for BHP which has taken him on projects worldwide.

Ian Williams has been responsible for the majority of our progress and he has worked continuously and been meticulous in his professional approach. Paula Cristoffanini has continued to fulfil the role of Executive Officer and has provided the basis of ensuring that our projects are developed in an organised and thorough manner. Thank you both for your amazing efforts.

It is difficult to thank all the people who have given hours of their time, but I would particularly like to thank Ken Clarke, Siobhan Tucci, Simon Tucci, Lyn Hellier, Jamie McCall, Bill James, Julian Kruger, Crispin Underwood, Michael Carr, Sue Juniper, Tim Crimp, Neroli Carlton, Torben Grell, Claudia Harry, Joanna Wren and the many volunteers and members who have contributed.

If re-elected, this will be my last year as Chairperson but I look forward to working in some role to bring our goals to fruition. The recent evidence of the magnitude of climate change has shaken us all and renewed our efforts to achieve what change we can to improve the future for our world and our grandchildren.

lyn serventy

CHAIR



About Us

VISION

To reduce carbon emissions by:

- producing renewable energy equivalent to at least 20% of the energy our community consumes through the grid, and
- reducing energy consumption through the grid by another 20%.

MISSION

To protect the natural environment by reducing carbon emissions by facilitating the use and provision of renewable energy installations and devices, especially for those who would otherwise not have access to them; by conducting research on the options for reducing carbon emissions in the Augusta Margaret River shire; by encouraging renewable and energy efficient energy facilities to set up in the shire by undertaking feasibility studies for operating renewable energy facilities including an anaerobic digester to produce energy and other co-products from dairy waste; and by providing education on renewable energy and reduction of carbon emissions.

Our People



MANAGEMENT COMMITTEE

Chairperson	Lyn Serventy
Deputy Chair	Ian Williams
Secretary	Laura Stocker
Treasurer	Brian Middleton
Members	
	Ted Coulter (Part Year)
	Bruce Hamilton
	David Hargreaves
	Suzanne Hicks
	Steve McGill

The organisation is managed by a nine (9) person Management Committee consisting of Chair; Deputy Chair; Secretary, Treasurer and five (5) Management Committee Members. From time to time sub-committees co-opt additional persons to assist its activities as required. Current Management Committee Members are listed above. AMRCCE would like to thank retiring Treasurer Brian Middleton for his contribution and Ted Coulter for his services as a member of the Management Committee. We would also like to acknowledge the invaluable contribution of our Electrical Engineer Ken Clarke who is a key contributor to our activities.

The organisation is entirely staffed by volunteers. However, as is usual in organisations such as ours, many people have volunteered to make our activities possible throughout the year. We thank each and everyone of our valued volunteers.

Our Key Partners



**TRANSITION
Margaret River**



Lower Blackwood Catchment
Land Conservation District Committee

KEY PARTNERS

We are very grateful for the support and assistance we receive from our key partners in achieving our vision and would like to acknowledge the assistance received from:

The Shire of Augusta Margaret River
Margaret River Rotary Club
Lower Blackwood Land Conservation District Committee
Transition Margaret River
Department of Water & Environmental Regulation
Regional Estuaries Initiative
University of Southern Queensland
University of Western Australia
Enercon

Our Major Achievements



- ✓ Wind Monitoring on site with Fulcrum3D almost complete and agreement reached with Fulcrum and turbine manufacturer Enercon for its analysis
- ✓ Progressed Western Power Access Application and commissioned a Load System Analysis to determine whether the proposed generation would cause grid congestion
- ✓ Conducted a Farmers' Survey with funding from DWER to ascertain information on dairy effluent management practices in the Scott and Blackwood Rivers catchments and farmer interest in participating in AMRCCE's project
- ✓ Collaborated with scientists from UWA and USQ, the Lower Blackwood LCDC and several larger dairy farmers to identify an innovative process to separate dairy effluent with the potential to eliminate nutrient run-off
- ✓ Received funding for a six month on-farm trial for the Z-Filter from REI to establish if it is possible to separate dairy effluent in an efficient and economic manner while eliminating nutrient and organic run-off into the waterways
- ✓ Conducted together with Transition Margaret River a year long project to improve energy conservation and promote renewable energy
- ✓ Commenced investigations of Virtual Power Plants to assist the community reduce emissions and consumption from the grid
- ✓ Completed application for Gift Deductible status, registered as a Charity and obtained a Fund Raising Licence
- ✓ Participated in a range of community activities and events including the AMR Climate Summit where AMRCCE's project was given the highest priority
- ✓ Met and briefed Ministers and the Shire, applied for funding from numerous sources and continued to liaise with industry and community contacts to progress our work

Our Projects:

Wind



PROGRESS TO DATE

- Identified optional locations within 3 km of Beenup substation
- Obtained Access Agreements
- Modelled publicly available and gifted wind data
- Onsite wind monitoring confirms wind data
- Western Power Connection Application commenced
- Explored potential finance opportunities
- Conceptual Development Application underway
- Obtained preliminary advice on turbine options

Augusta Margaret River Clean Community Energy is currently working on two projects. The first is a feasibility study for a grid connected 10 MW wind farm and, if a bankable business case is shown to exist, obtain an 'Access Offer' from Western Power to feed energy into the grid at the Beenup substation at Scott River. However, as with most proposed new generation, connection is not economic until the legislative, commercial and technical rule changes required to address the Transmission Network Congestion issue are implemented by the WA Government (expected to be in 2022).



Our Projects: Biogas

FEASIBILITY STUDY UNDERWAY

Dairy Farmers Farmers willing to give up effluent providing the process is low-cost, practical and likely to continue

Funding for on-farm effluent separation trial has been secured

Z-Filter Trial to run between August 2019 and February 2020

AMRCCE's future plans include sourcing funding for:

- research on optimisation and co-digestion with other wastes
- on-farm testing to determine the optimal use of the solid fraction of the effluent
- OPEX/CAPEX

Augusta Margaret River Clean Community Energy's second project is a feasibility study of including a biogas from dairy effluent as an additional source of energy to wind at the renewable plant proposed for Scott River. Initially commenced as a viability study, the project has now progressed to the feasibility stage. This would be a world first and in addition to using dairy effluent to produce biogas as dispatchable/base load energy, it would also provide a management strategy for dairy waste while also providing benefits for the health of waterways, farm efficiencies, new forms of employment and addressing emission challenges in the Agricultural sector.

Community Energy



AMRCCE has commenced to investigate options to bring forward its work to assist the community reduce emissions. One such option involves the concept of Virtual Power Plants. We feel that this is an area which could offer future benefit to communities.

In discussions with state government, we were made aware of Geraldton Community Energy (GCE) who is working with Tersum Energy on such a project. Locally, Plico has been advertising a project involving Redback Technologies.

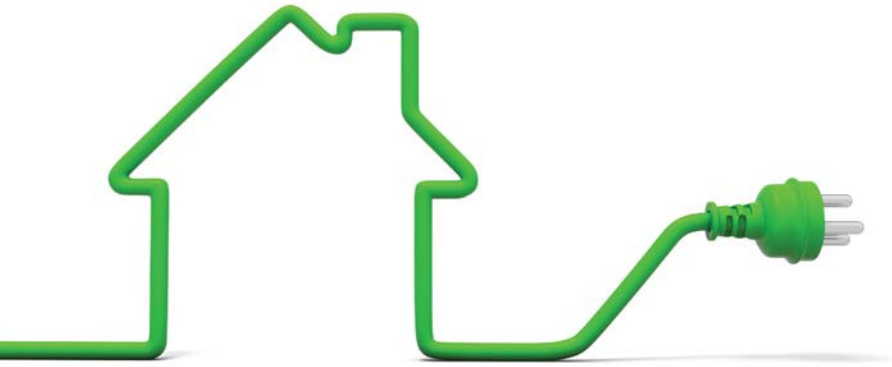
AMRCCE has started an evaluation of such offers so that we can establish the relative benefits to our community and their compatibility with our objectives.

We have met with Rod Littlejohn of Tersum Energy who is working with GCE and we are currently assessing their offering. Their community model has been developed to work for Geraldton, but it may be that it can service other communities such as ours.

In any case, it is vital that we conduct a thorough due diligence before we can lend our support to this or other initiatives and we gauge community interest.

AMRCCE facilitated the participation of Alison Crook of Enova and Rod Littlejohn of Tersum Energy at the Climate Summit to hear how a community centred Virtual Power Plant may assist our community to increase renewable energy use, decrease greenhouse emissions and generate community interest in virtual power plants.

Energise MR



FACT

The Shire's population increased by 21.2% between 2011 and 2016 yet our consumption of power from the grid increased by only 5.3% in the same period.

As indicated in our previous Annual Report AMRCCE together with Transition Margaret River received funding of \$5,200 from the Augusta Margaret River Shire to conduct a year long program “to improve energy conservation and promote renewable energy” through community education and training. Most of the activities of the program were conducted during this reporting year and included:

- A comprehensive community survey of energy use
- A community seminar
- A school workshop on home solar PV design & business case
- a community workshop on home solar PV design & business case
- 3 community energy saving workshops
- energy audit equipment workshop & display at the Library
- participation in a low impact living event
- display & activity at the Sustainability Pavilion at the Margaret River Show
- display & activity at 'Catch and Store Energy' Festival at Fair Harvest
- display & activity at the Augusta River Festival.



Community & Public Events

Besides participation in the activities listed earlier, AMRCCE continues to maintain a public presence through:

Participation in the Augusta Margaret River Shire's Climate Action Summit workshops and the Summit

Augusta Easter Raffle

Presentation to Probus Margaret River

Accelerate Movie

Presentation to the Project Reference Group of the Regional Estuary Initiative of the Department of Water and Environmental Regulation



Our Finances



AUGUSTA MARGARET RIVER CLEAN COMMUNITY ENERGY INC

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED JUNE 2019

	2018/19	2017/18
	\$	\$
RECEIPTS		
Contributions towards expenses	-	1,630
Donations	30,160	9,067
Fundraising	989	2,707
Grants		
- Augusta Margaret River Shire Council	25,000	12,000
- CANA	-	3,250
- Energise Margaret River - AMRSC	2,659	2,600
- Farmer survey - DWER	-	20,000
- Wind monitor equipment - AMRSC	-	22,000
- Z-Filter - DWER	135,000	-
Memberships	2,619	4,716
1.	<u>196,427</u>	<u>77,970</u>
PAYMENTS		
Advertising & promotion	71	2,079
Biodigester workshop	3,264	-
Computer software	546	233
Grant expenditure		
- CANA	-	3,231
- Energise Margaret River	4,823	584
- Farmer survey deposit - AgGrow Energy Resources	8,200	10,000
- Wind monitor equipment lease - Fulcrum 3D	-	33,000
Insurance	2,391	2,610
Miscellaneous	129	239
Postage and stationery	120	179
Travel expenses	1,502	432
Website expenses	68	388
Western Power enquiry/report	10,718	3,850
Western Power - connection application fee	-	5,000
GST movement	(12,756)	(698)
	<u>19,076</u>	<u>61,127</u>
SURPLUS (DEFICIT) FOR THE PERIOD	177,351	16,843
OPENING FUNDS 1 JULY 2018	<u>17,343</u>	<u>500</u>
CLOSING FUNDS 30 JUNE 2019	<u>194,694</u>	<u>17,343</u>
REPRESENTED BY:		
Cash on hand	47	47
Cheque account	194,647	17,296
	<u>194,694</u>	<u>17,343</u>



middletons
BUSINESS ADVISORY

focus on your future

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**AUDITOR'S REPORT
FOR MEMBERS OF
AUGUSTA MARGARET RIVER CLEAN COMMUNITY ENERGY (INC)**

Qualified Opinion

I have audited the accompanying statement of receipts and payments of the Augusta Margaret River Clean Community Energy (Inc) for the period 1 July 2018 to 30 June 2019.

In my opinion, except for the effects of the matters described in the *Basis for Qualified Opinion* section, the accompanying statement of receipts and payments presents fairly, in all material respects, the receipts and payments of the Augusta Margaret River Clean Community Energy (Inc) for the period 1 July 2018 to 30 June 2019 in accordance with the cash basis of accounting.

Basis for Qualified Opinion

It is not practical for the Augusta Margaret River Clean Community Energy (Inc) to maintain absolute control over all donations and fundraising activities until their initial entry in the accounting records. Accordingly, the audit in relation to fundraising activities and donations was limited to amounts recorded.

The audit was conducted in accordance with Australian Auditing Standards. Responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Statement of Receipts and Payments* section of the report. I am independent of the Augusta Margaret River Clean Community Energy (Inc) in accordance with the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants* (the Code) relevant to the audit of the statement of receipts and payments in Australia. Other ethical responsibilities have been fulfilled in accordance with that Code. The audit evidence obtained is sufficient and appropriate to provide a basis for my qualified opinion.

Emphasis of Matter – Basis of Accounting

Attention is drawn to the basis of accounting under which the statement of receipts and payments has been prepared. The statement of receipts and payments is prepared to provide information to members of the Augusta Margaret River Clean Community Energy (Inc). As a result, the statement may not be suitable for another purpose.

Augusta Margaret River Clean Community Energy (Inc) Responsibilities for the Statement of Receipts and Payments

The Augusta Margaret River Clean Community Energy (Inc) is responsible for preparation and fair presentation of the statement of receipts and payments in accordance with the cash basis of accounting; this includes determining that the cash basis of accounting is an acceptable basis for the preparation of the statement of receipts and payments in the circumstances, and for such internal control as management determines is necessary to enable the preparation of the statement of receipts and payments that is free from material misstatement, whether due to fraud or error.

In preparing the statement of receipts and payments, the Augusta Margaret River Clean Community Energy (Inc) is responsible for assessing the ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting unless the Augusta Margaret River Clean Community Energy (Inc) either intends to liquidate or to cease operations, or has no realistic alternative but to do so.



Auditor's Responsibilities for the Audit of the Statement of Receipts and Payments

The objectives are to obtain reasonable assurance about whether the statement of receipts and payments as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes an opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this statement of receipts and payments.

As part of an audit in accordance with Australian Auditing Standards, professional judgement and professional scepticism are maintained throughout the audit. In addition the audit seeks to:

- Identify and assess the risks of material misstatement of the statement of receipts and payments, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for the opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control.
- Conclude on the ¹appropriateness of the Augusta Margaret River Clean Community Energy (Inc) use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Augusta Margaret River Clean Community Energy (Inc) ability to continue as a going concern. If it is concluded that a material uncertainty exists, it is a requirement to draw attention in the auditor's report to the related disclosures in the statement of receipts and payments or, if such disclosures are inadequate, to modify the opinion. Conclusions are based on the audit evidence obtained up to the date of the auditor's report. However, future events or conditions may cause the Augusta Margaret River Clean Community Energy (Inc) to cease to continue as a going concern.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates, if any, and related disclosures made by the Augusta Margaret River Clean Community Energy (Inc).
- Evaluate the overall presentation, structure and content of the statement of receipts and payments, including the disclosures, and whether the statement of receipts and payments represents the underlying transactions and events in a manner that achieves fair presentation.

I would communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control identified during the audit.

Lance Jones CPA

23 July 2019

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