

ANNUAL REPORT **2016**

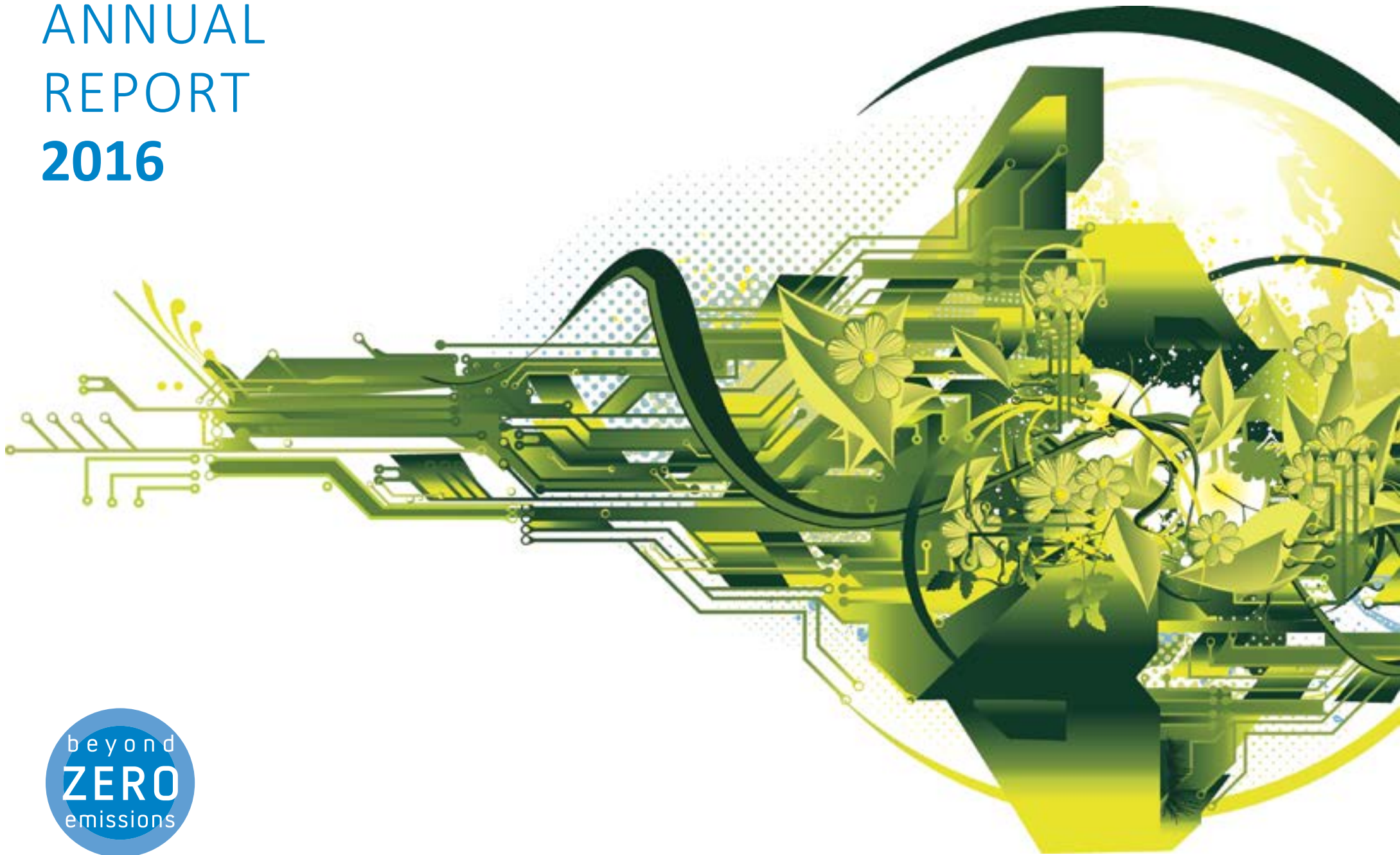


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From the Chair

15/16 has been a milestone year for BZE. Under the leadership of Stephen Bygrave, this was a year of delivery. We released a number of important research reports at sold-out launch events to great acclaim.

Every research report or plan that BZE puts out is a serious piece of work with a quality of research better than that produced by organisations many times our size. They are a testament to our staff and many volunteers who contribute a huge amount of time, passion and expertise to ensure that we have solutions in place for the climate crisis.

Our Zero Carbon Communities program is up and running with Byron and Noosa both on board to transition in a rapid timeframe using BZE's plans as a guide. We hope to roll this program out to many more communities across Australia.

Our radio, discussion groups and public talks all continue to inform thousands of people through the efforts of our amazing volunteers.

We should all be proud that the influence of our work was recognised by the University of Pennsylvania, who ranked BZE in the top 10 of global think tanks to watch in 2016.

Stephen has left BZE in great shape, with decent finances and a pipeline of new projects

and funding. We wish him the best of luck in his new role at the ACT government.

I'd also like to extend my gratitude to Michael Lord, who has balanced the twin roles of interim-CEO and lead-researcher over the last few months.

The Board is extremely positive about the future of BZE. We are currently conducting a recruitment process for a new CEO to work with the Board on a strategic plan for the next couple of years. I'd like to thank my fellow volunteers on the Board for the large effort they have all put in this year.

We all know that the climate crisis is not going away. The work that BZE performs is more relevant than ever. We are one of only a very few organisations in the world that is actually producing detailed solutions and proposing concrete plans of how we can transition our economy. The influence of our work is far larger than the size of our organisation, we punch way above our weight. We should all be extremely proud of our organisation.



Beyond Zero Emissions CEO 2013-2016 Dr Stephen Bygrave. Photo: Jack Tran Courier Mail, BZE thanks Australia Post Heathwood and SunEdison Australia – Energy Matters for the location – a 99kW PV array.



About us

The Board

Eytan Lenko (Chair)

David Hood AM

William Sandover

Tom Quinn

Phillip Vernon

Christina McPhail

Heidi Lee

From the Acting CEO

This year BZE turned 10. When we began ten years ago the idea of 100 per cent renewable energy in a zero emissions economy was seen as radical at best, extreme at worst. By showing how we can make this economy a reality we have helped this idea to become mainstream, and policy makers are starting to acknowledge that to achieve the international commitments made in Paris we must transition to zero emissions.

The Zero Carbon Communities initiative is growing and has achieved recognition around Australia and internationally. Zero Emissions Byron is now well-established and in the process of developing its 10-year zero emission strategy. We are now working with Noosa and several Victorian councils to develop emissions reduction projects. We're also producing a blueprint so that any Australian community can replicate the ZCC model.

The Zero Carbon Australia program continues to be a success. We held a series of well-attended launches of the Renewable Energy Superpower and the Electric Vehicles report. We also made a great start on research for the Industrial Processes Plan. The production of materials like steel and cement is a huge source of emissions that many assume are unavoidable. Our plan will bust this myth.

Shortly after the end of the financial year our CEO Stephen Bygrave left us for a post in the ACT Government. When Stephen joined us he steered BZE through a difficult period, from which the organisation emerged more stable and productive. Stephen led BZE to produce five major reports as well as starting successful new programs such as Zero Carbon Communities and Energy Freedom Home. We thank Stephen for his three years of energy and dedication and wish him well in his new role.

Thank you to everyone, particularly our incredible volunteers, for making the past year a success.



Who we are

Beyond Zero Emissions (BZE) is an independent think tank focused on climate solutions. We are based in Melbourne and Canberra with members and volunteers located across Australia, with an active presence in Sydney, Brisbane and Newcastle.

The organisation's role is to provide and promote innovative solutions on how to move to a zero carbon economy in the next decade. We have a focus on thinking beyond the horizon and highlighting what is technically and economically feasible to make the rapid shift necessary to avoid catastrophic climate change.

We are independent and receive the majority of our funding from philanthropic organisations alongside a large group of dedicated individuals and supporters. We have an active and skilled group of volunteers who contribute to our research and engage with the public and community groups around Australia.

What we do

BZE's primary activities are research, education and public engagement. We are able to draw on the expertise of a range of researchers, academics and industry experts across the country to provide evidence-based solutions to address climate change.

BZE is unique in providing detailed analysis on how individual sectors can decarbonise. BZE's Zero Carbon Australia project aims to provide decarbonisation pathways using existing technologies, with the plans combining to form an overall decarbonisation blueprint for Australia. To date, BZE has produced Zero Carbon Australia (ZCA) reports on stationary energy, buildings, high speed rail, electric vehicles, land use (agriculture and forestry), fossil fuel exports and Australia as a Renewable Energy Superpower.

BZE provides climate solutions that are feasible technically and could be implemented in Australia today. By showing the challenge we face is not technical, we give confidence to policy makers and the wider community that there are real, practical and affordable solutions to climate change that can be implemented now. Our research provides a resource to all those working to protect the climate for our present and future generations, as well as all other species on Earth.

Zero Carbon Australia research plans

Renewable Energy Superpower

This year we launched our Renewable Energy Superpower report, the final report in the Zero Carbon Australia Export Plan series and which shows that the size of Australia's renewable energy resource far outweighs that of our fossil fuel reserves and should be used to power industry and manufacturing in the low carbon future.

This report was launched in Melbourne and subsequently toured nationally including Sydney, Adelaide, Canberra, Brisbane, Noosa and Newcastle with Perth in the next year. Keynote speakers at these launches have included Senator Larissa Waters, The Hon Sharon Claydon MP Federal Member for Newcastle, Shadow Minister for the Environment, Climate Change and Water, Mark Butler MP, ACT Deputy Chief Minister Simon Corbell MLA, Queensland Government Minister for Environment and Heritage Protection Hon Dr Steven Miles MP and Fergus Green from the Grantham Institute.

The research influenced the Australian Labor Party's Climate Change Action Plan, the Home Grown Power Plan by GetUp! and Solar Citizens and continues to add weight to the now-consistent calls by NGOs for 100% renewable energy. In addition, the phrase "renewable energy superpower" is increasingly used by parliamentarians and renewable energy advocates to describe Australia's potential place in the emerging low carbon global economy.

Thank you to our event panellists MCs and event sponsors for enabling such a successful tour of this report:

Gerard Drew BZE, Emma Herd IGCC, Nicky Ison Community Power Agency, Rev Dr Margaret Mayman Pitt St Uniting Church, Ketan Joshi, Lisa Lumsden Repower Port Augusta, Professor Ross Garnaut, Professor David Hood AM, Jennifer Bates, Tim Buckley IEEFA, Tim de Grauw Engineers Australia, Dr Bonnie McBain, Maryanne Cantwell, Dr Paul Dastoor The Centre for Organic Electronics, Dr John MacKenzie, Newcastle Town Hall & Newcastle City Council, The Tom Farrell Institute University of Newcastle, HCB Solar, Climate Action Newcastle, Australian Solar

Council, The Conservation Council South Australia, Professor Karen Hussey Global Change Institute University of Queensland and Dr Paul Bell University of Queensland, Professor Susan Becken Griffith University, Queensland University of Technology, Senator Rob Simms, Professor Hugh Saddler, Darrin Spinks HeliostatSA, Andrew Bray Australian Wind Alliance, Roman Orszanski FOE Adelaide, Philippa Rowland, University of South Australia, Liz Veitch SERREE, Mark Spain SEE-Change, Professor Andrew Blakers ANU, Associate Professor Frank Jotzo ANU, Professor Barbara Norman University of Canberra, Dr Stephanie Moroz, Peter Fries, Dr Tim Smith, Noosa Council & The J.



Part of the Brisbane Renewable Energy Superpower launch team. Photo: Bob Poplett.



Electric Vehicles Report

This year we completed our BZE Electric Vehicle report, the second part of the ZCA Transport Plan, and began to prepare for its launch.

This report's headline finding is that we can transition Australia's entire urban car fleet to an electric vehicle fleet powered with 100% renewable energy at little or no cost to the economy. The study also found that there are immediate financial benefits to replacing Australia's bus fleet with electric vehicles.

Since the end of the financial year we have launched the report in Brisbane and Newcastle, and are planning further launches in Melbourne and Canberra. The report received good media coverage with major articles in the Australian Financial Review, The Courier Mail and The Guardian as well as The Newcastle Herald.

Thank you to Jenny Riesz, Clare Sotiriadis, Stuart Donovan and Daisy Ambach for their work on the modelling for the report, and congratulations on publication of their paper in the journal *Applied Energy*. We would also like to acknowledge the support of consultancy MRCagney in developing and designing the report.

Industrial Processes

We have made significant progress on the next major installment of the Zero Carbon Australia series: the Industrial Processes Plan. The importance of industry as a source of global emissions is under-appreciated (cement alone is the source of 8 per cent of global emissions) and potential solutions rarely feature in public debate. The Industrial Processes Plan aims to change that and to catalyse a discussion about how Australia can use our abundant renewable energy sources to power a zero carbon industry.

Research on the project has been carried out by a group of around 25 volunteers, mostly qualified engineers. It has been great to see the enthusiasm for creating a zero carbon industry among these volunteer researchers, many of whom are new to BZE. We are beginning to involve universities and industry, and are negotiating formal academic partnerships for the project.





Engagement and impact

Energy Freedom

BZE's Energy Freedom Home book was officially launched on Sustainable House Day 2015 in Melbourne by Adam Bandt MP and author Tanya Ha. Launches also took place in Sydney, Canberra, Brisbane, Newcastle and Northern Rivers NSW.

Energy Freedom Home shows how households can wipe out electricity and gas bills in nine easy steps. The book is based on Zero Carbon Australia Buildings Plan research and is part of the Energy Freedom program. It has received substantial media attention (e.g. ABC Newcastle, ABC Adelaide, The Fifth Estate, ABC Brisbane) and it is available for sale through Scribe, Penguin and other retailers.

Thank you to the following Energy Freedom founding partners for being involved in the successful establishment of the whole Energy Freedom initiative: Apricus Australia,

Cherry LED, Daikin Australia, Energy Matters, Knauf Insulation and Torus Group and to all contributors to the research and book projects.

The Energy Freedom initiative is now progressing to full implementation and inviting expressions of interest in the Energy Freedom Alliance stage of the program. This would be of interest to energy professionals, accredited trainers, equipment providers, commercial builders developers and councils.

With the research now thoroughly road-tested,

the Energy Freedom program and Energy Freedom Home book is set to play a valuable role in giving individuals, local governments and businesses confidence with purchasing decisions about energy upgrade services and equipment.



Richard Keech, Hon Adam Bandt MP, Tanya Ha and Dr Stephen Bygrave launching The Energy Freedom Home book on Sustainable House Day 2015. Photo: Claire Havens.



Zero Carbon Communities

Last year BZE launched the Zero Carbon Communities (ZCC) program to help local governments and communities implement BZE's research, and develop strategies to become zero carbon.

This program has since flourished under the management of Justine Holmes, and more communities are seeking to become involved.

The first ZCC project, Zero Emissions Byron, has now completed its first stage. BZE has supported the council and community working groups in Byron Shire in their development of emissions baselines covering energy, waste, transport, buildings and land use. The project is now moving to its second stage – developing a strategy to achieve zero emissions in all sectors. Zero Emissions Byron has also started the processes of becoming a formal legal entity with charitable status.

We have since launched our second ZCC project with Noosa Council. We have provided the council with a profile of their current emissions and are hoping to work with them on developing a zero carbon strategy. We have also been in talks with a community

group, Zero Emissions Noosa, which is aiming to replicate the successes of Zero Emissions Byron.

The next step is to set up more ZCC pilot projects, and BZE has received a grant to work with three Victorian communities including Seymour and Nillumbik. We have been approached by many other councils in Australia seeking our technical advice on scoping and implementing a high-ambition transition. We are developing materials, such as a ZCC blueprint, so we can provide support as widely as possible.

ZCC has received national and international recognition- we are now part of World Future Council's Global 100% RE Campaign, a global network of communities aiming to achieving 100 per cent renewable energy and in June 2016 BZE co-hosted a forum dedicated to climate mitigation at the National General

Assembly of the Australian Local Government Association. In December 2015 BZE attended the COP21 event in Paris with Zero Emissions Byron, presenting at six COP21 side events.

BZE carried out a national review of emissions reduction initiatives led by Australian communities. A team of researchers conducted interviews, desktop research and an online survey to document the activities of 152 local government areas, which account for more than half of Australia's population. The research found that more than half of communities have a long-term strategy to reduce emissions, although generally the level of ambition is insufficient to meet the goals set in Paris. The most ambitious councils are leading the way on climate action in Australia, but too often policy uncertainty at state and federal levels has slowed progress.



BZE presenters Martin Powell and Hugh Venables at the 2016 Sustainable Living Festival, Melbourne. Photo: John Gare.



BZE Discussion and Youtube

This year the BZE Discussion Group has hosted speakers from the Alternative Technology Association (ATA), The Australia Institute (TAI), Prosper Australia, and Tim Forcey from MEI presented the cost savings on converting from gas to energy efficient electric heat pumps. We've also heard from Australian start-ups such as MagEfekt batteries and Sunvertec solar optimisers, and leading tech experts like Dr Scott Watkins and Yasmina Dkhissi from Monash talking about Perovskite solar cells. Being an election year, we also had a political action session with Ellen Sandell, Adrian Whitehead and BZE's own Stephen Bygrave.

The Discussion Group video recordings on Youtube at the BZE YouTube channel - <https://www.youtube.com/channel/UCp7dgLVRVgYbuAriZkipdig> - continue to be popular. Thank you to all our wonderful guest speakers and to the production team for such great resource.

BZE Radio

BZE Radio broadcasts to a large drive-time audience in the thousands every Monday and Friday and then adds value by making podcasts for sharing globally via facebook and our international network of influential and connected followers on twitter at @beyondzeronews.

Guests of the 60 minute Monday BZE community radio show this year have included international and national figures ranging across the globe from Antarctica - with Dr David Etheridge, Dr Sue Cook and Prof Tony Worby- all the way to Norway- with author Per Espen Stocknes in conversation with Melbourne psychologists Lyn Bender and Susie Burke. As calls for a just transition mount and as plans to transition begin to form, the BZE community radio team also get out to the literal coalface, whether that is Hazelwood, Gloucester or Newcastle, and connects with communities leading the change.

Friday's 30 minute BZE technology (science and solutions) radio show has featured interviews with leading edge researchers and businesses- think Climate Analytics and Australia's Cooperative Research Centre (CRC) for Low Carbon Living (CRCLCL) and think Thermoshield and Suncrowd just to name a few. Thank you to everybody on both the BZE radio research and production teams and to 3CR for hosting us.

Presenters and presenter training

BZE is frequently invited to provide both speakers and information booths for community and business events all around Australia. BZE is able to fulfil almost all of these requests because a trained and accredited group of presenters- BZE Baseload Supporters- continue to meet in teams in every city and do the work of maintaining both their 'BZE Presenter' credentials and a standby BZE information booth. Groups comprising some of BZE's most experienced presenters along with a few enthusiastic newer faces meet monthly to receive training and help develop the more recent ZCA report presentations. A huge thank you to the many people taking the time to do this development work, training, presenting and organising on behalf of BZE and doing so professionally, accurately and enthusiastically.

Conferences and Roundtables

BZE is regularly invited to speak on the program at a range of climate and energy events. Science Week, a range of forums for renewable energy and efficiency, Newcastle Smart Futures Cities, the Australian Green Development Forum Main Event, the IGCC Investment Forum, the All Energy Conference, Solar Supercharge (Solar Citizens), Sustainable Living Festival, the ALP Climate Change Action plan consultation forums and the Climate Law Forum at the Australian National University just to name a few.

BZE launches are a key part of BZE engagement and this year have included renewable energy superpower launches in Brisbane, Sydney, Melbourne, Adelaide, Newcastle, Canberra and Noosa. Thank you to all of our great panellists and VIPs, launch teams and venue support partners for making these events possible.



Techie Tuesday

A team of BZE's technical experts meet regularly throughout the year to enable BZE to deliver the Zero Carbon Australia vision to a variety of roundtables and briefings, ranging from national to local to international forums such as COP21. This is the team responsible for producing fact sheets and policy briefings for all BZE ZCA plans. The group has recently turned its focus to the Industrial Processes report. A big thanks to all the volunteers who have been part of the techie Tuesday team this year! Techie Tuesdays is based in Melbourne and is open to all BZE teams via Skype.

Think Tank ranking

Early in 2016 Beyond Zero Emissions received an 'influence ranking' in the annual "Global Go To Think Tank Index" that ranks the world's leading think tanks in a variety of categories. Rankings are achieved with the help of a panel of over 1,900 peer institutions and experts from the print and electronic media, academia, public and private donor institutions, and governments around the world.

As a result, BZE is ranked 6th globally by the Lauder Institute as a "Think Tank to Watch" in 2016, 13th regionally and in the unranked global top Independent Think Tanks category.





BZE in the media

Over the past year, Beyond Zero Emissions has been featured in various mainstream media outlets including ABC and The Courier Mail. With the growing awareness of the role of communities and cities in mitigating climate change it is evident that BZE's work has over the year appeared more and more in local news outlets, a trend which will continue. In addition BZE has regularly written articles for Guardian Sustainable Business and Renew Economy. Below are some of the BZE stories featured over the course of the year.

2015

August

The Fifth Estate – “How to wipe out household energy bills in 9 steps” – August 26 2015 – The Energy Freedom Home <http://www.thefifthestate.com.au/arts-and-letters/how-to-wipe-out-household-energy-bills-in-9-steps/76854>

612 ABC Radio Brisbane- “How to get your energy bills down to \$0 “– August 27 2015 – The Energy Freedom Home http://blogs.abc.net.au/queensland/2015/08/how-to-get-your-energy-bills-down-to-0.html?site=brisbane&program=612_morning

September

ABC RN- “Creating a carbon-neutral Australia in a decade” – September 22nd 2015- Stationary Energy Plan, Renewable Energy Superpower <http://www.abc.net.au/radionational/programs/rnafternoons/carbon-neutral-world/6795670>

October

Guardian Sustainable Business – “Sønderborg: the little-known Danish town with a zero carbon master plan” – October 22nd 2015 – Zero Emissions Byron <https://www.theguardian.com/sustainable-business/2015/oct/22/denmark-sonderborg-danish-town-trying-to-be-carbon-neutral>

ReNew Economy – “How Australia can become a renewable energy superpower” – October 19th 2015 – Renewable Energy Superpower <http://reneweconomy.com.au/2015/how-australia-can-become-a-renewable-energy-superpower-35215>

Labor Herald - “High speed rail: it's gotta happen:- October 12th 2015- High Speed Rail <https://www.laborherald.com.au/environment/transport/high-speed-rail-its-gotta-happen/>

2016

January

Business Environment Network- “Zero Carbon Communities initiative helps communities ‘get on with it’ “ – January 15th 2016 <http://www.insidewaste.com.au/general/news/1007966/zero-carbon-communities-initiative-helps-communities>

February

The Transcontinental – “Premier Jay Weatherill backs clean energy plans for Port Augusta” – February 26th <http://www.transcontinental.com.au/story/3754169/weatherill-yes-to-clean-energy/?cs=1286>

Nine News and Repower Pt Augusta – <http://repowerportaugusta.org/takeaction> <https://www.facebook.com/RepowerPortAugsta/videos/950377281724724/>

March

Guardian Sustainable Business- Port Augusta: embracing solar thermal a vital first step on the path to 100% renewable energy- March 24th 2016 – RePower Port Augusta report, Zero Carbon Communities, Stationary Energy Plan <https://www.theguardian.com/sustainable-business/2016/mar/24/port-augusta-embracing-solar-thermal-a-vital-first-step-on-the-path-to-100-renewable-energy>

NEWS.com – “New push for Australia to adopt high-speed rail”- March 2016- High Speed Rail report <http://www.news.com.au/travel/australian-holidays/new-push-for-australia-to-adopt-highspeed-rail/news-story/d1497f8814999d0d5fb64b1e885d81f>

April

Guardian – Opinion- “Australia’s ‘future’ fund should not consider financing the energy projects of the past” – April 1st 2016 <https://www.theguardian.com/commentisfree/2016/apr/01/australias-future-fund-should-not-consider-financing-the-energy-projects-of-the-past>



Canberra Times ‘Canberra at the centre of a renewable energy superpower’ – April 23rd 2016
<http://www.canberratimes.com.au/act-news/canberra-at-the-centre-of-a-renewable-energy-superpower-20160422-god1w9.html>

Canberra Times ‘ACT a leader in renewable energy pursuit’ – April 23rd 2016
<http://www.canberratimes.com.au/comment/ct-editorial/act-a-leader-in-renewable-energy-pursuit-20160423-godjime.html>

ABC Radio National – ‘The ALP wants to ride the wave of the new renewable energy economy, ensuring at least 50 per cent of the nation’s electricity is sourced from renewable energy by 2030.’ – 27th April 2016
<https://radio.abc.net.au/programitem/pgDPGNOJg6?play=true> <http://www.abc.net.au/radionational/programs/breakfast/mark-butler-on-labor-s-climate-change-policy/7361706>, <https://au.news.yahoo.com/a/31442198/labor-pledges-emissions-trading-scheme/>

Business Environment Network – “Energy superpowers of tomorrow will need ambitious actions today” – April 8th 2016 – Renewable Energy Superpower report
<http://www.insidewaste.com.au/general/news/1008097/energy-superpowers-tomorrow-ambitious-actions>

Courier Mail – “Queensland section of national high-speed rail network should be fast-tracked” – April 23rd 2016
<http://www.couriermail.com.au/goqld/queensland-section-of-national-highspeed-rail-network-should-be-fasttracked/news-story/5a2376a9fe1f194a39fecc4a9d85367a>

The Courier Mail – “The \$20billion boom to boost Qld employment – A BOOM in renewable energy investments will create thousands of new jobs in Queensland, a report to be released tonight predicts” – April 15th 2016
<http://www.couriermail.com.au/goqld/the-20-billion-boom-to-boost-queensland-employment/news-story/3f3c4bb941b8e11449f914b8448d50e4>

May

ABC Online – ‘Election 2016: What are our leaders really thinking about climate change?’ – May 18th 2016 – <http://www.abc.net.au/news/2016-05-18/what-are-our-leaders-really-thinking-about-climate-change/7420112>

June

Radio Adelaide – “Renewable Energy Superpower event DR STEPHEN BYGRAVE AND PROFESSOR HUGH SADDLER” – June 3rd 2016 – <https://radio.adelaide.edu.au/renewable-energy-superpower-event-dr-stephen-bygrave-and-professor-hugh-saddler/>

ABC Radio Adelaide Drive – “What is Beyond Zero?”- June 3rd – Renewable Energy Superpower report
http://podcast.bze.org.au/storage/adelaide-launch_steve-bygrave_ian-henschke-interview.mp3 <https://radio.adelaide.edu.au/renewable-energy-superpower-event-dr-stephen-bygrave-and-professor-hugh-saddler/>

Local Government Focus – “Australian councils are addressing climate change at a grassroots level” – June 2016
<http://www.lgfocus.com.au/editions/2016-06/action-on-emissions.php>

Business Environment Network – Local government leading with zero emissions targets: report – June 27 2016
<http://www.insidewaste.com.au/general/news/1008190/local-government-leading-zero-emissions-targets-report>

Noosa News – Powering on with ZEN (Zero Emissions Noosa) – June 2nd 2016
<http://www.noosanews.com.au/news/powering-on-with-zen-zero-emissions-noosa/3037734/>

Transcontinental – “Repower Port Augusta features at Beyond Zero Emissions launch event in Adelaide” – June 6th 2016 – <http://www.transcontinental.com.au/story/3951022/repowers-national-spotlight/>

ABC NEWS – ‘Election 2016: Prominent Australians join open letter calling for strong action on climate change’ – June 23rd 2016
<http://mobile.abc.net.au/news/2016-06-23/business-leaders-join-open-letter-calling-for-climate-policy/7534620>

Eco_Business News – “Energy storage key to a 100 per cent renewable Australia” – June 7th – <http://www.eco-business.com/news/energy-storage-key-to-a-100-per-cent-renewable-australia/>





Teams, collaborators and partners



BZE Teams

A large part of BZE's success is thanks to our large and passionate volunteer base. Our volunteer teams in different cities enable us to have a presence across Australia. BZE volunteers are engineers, scientists, students, planners, authors, producers and other professionals who carry out and support much of BZE's research and public engagement. Donating time, energy and resources, volunteers organize and run launch events, liaise with media, run BZE's Board, assist with fundraising, run monthly discussion groups, do research, produce two BZE radio shows every week, provide speaker training, run information booths at conferences and community events, and speak at schools, roundtables, rotary clubs and other events on behalf of BZE.

We'd like to thank all the people listed on page 17 for their many and generous contributions to the BZE teams and events over the last year.

Partnerships and collaborations

Last year BZE's research and engagement programs benefitted enormously from generous collaborations and event support relationships offered to us.

- Working with Byron Shire Mayor Cr Simon Richardson representing Zero Emissions Byron BZE was able to present at six COP21 side events leading to the promotion of Zero Carbon Communities and the development of strong ongoing international relationships.
- BZE formally joined the World Future Council's Global 100% RE Campaign, which links a growing global network of communities aiming to achieving 100 per cent renewable energy.
- The Australian Local Government Association invited BZE to present a forum dedicated to a climate mitigation discussion at the 2016 National General Assembly of councils, an annual event held in Canberra. The forum was run in collaboration with ALGA, WFC, Totally Renewable Yackandandah, Zero Emissions Byron's Byron Shire Council and presented to council representatives from all over Australia.
- BZE joined a coalition of Australian organisations working on local campaigns to achieve 100% renewables and a just transition away from fossil fuels. BZE is sharing lessons from Zero Carbon Communities with this coalition, which includes organizations such as GetUp!, 350.org Australian Marine Conservation Society.
- BZE's Dr Stephen Bygrave publicly joined with other prominent Australians calling for the declaration in the Australian Parliament of a climate emergency – climateemergencydeclaration.org.
- BZE joined the Advisory Council of Guardian Sustainable Business Australia.
- 3CR generously continued to host the BZE Radio teams 'Community' and 'Technology – Science and Solutions' radio shows which air every Monday and Friday.
- In 2015 BZE visited Sri Lanka to present on strategies to transition from coal to 100% renewable energy. Stephen presented to the Sri Lankan Chamber of Commerce and Industry, environmental NGOs and the Minister for Planning. Thank you to Kanchana Weerakoon, Thushara Ranasinghe, (SL) Eco-Friendly Volunteers, (SL) Federation of Environmental Organisations, (SL) Colombo Chamber of Commerce, Jim Crosthwaite, Helen Dobbyn, Jack Schmidt, Carol Ride and (AU) Journeys for Climate Justice.
- BZE remains supportive of RePower Port Augusta, the campaign to build concentrated solar power in Port Augusta that was catalysed by the Repower Port Augusta and Stationary Energy plan reports. Thank you Lisa Lumsden of RePower Port Augusta who was a guest panelist at the Adelaide Renewable Energy Superpower launch.
- Talks with Energy Freedom partners moved towards a wider national and potentially global active Energy Freedom Alliance.
- The University of Melbourne generously continued to host the very popular monthly BZE public technical forum aka "BZE Discussion Group".



The year in review

2015

August

- Panel member for Academy of Science Science Week event “Can Science Save Humanity”.
- Published The Energy Freedom Home book with Scribe and available through Penguin.

September

- Zero Emissions Byron project appeared in Track 0 & Zero Carbon Britain publication “Who’s Getting Ready for ZERO?”.
- Sri Lanka tour with Journeys for Climate Justice. BZE met the Sri Lankan Chamber of Commerce and Industry, environmental NGOs and the Minister for Planning.
- Parliamentary Inquiry- BZE appeared at the Melbourne public hearing before the House of Representatives Standing Committee on the Environment- Inquiry into the Register of Environmental Organisations.
- National launch of The Energy Freedom home book through Sustainable House Day and the Smart Future Cities conference.

October

- BZE was a panelist at the Climate Change and Investor Summit Investor Group on Climate Change, Melbourne.
- BZE presented “The Energy-Freedom Home: How to wipe out your electricity and gas bills in nine steps” at Smart Future Cities Conference, Newcastle.
- BZE presented at AGDF forum “Communities Going Beyond Zero” Australian Green Development Forum, Brisbane.
- National Launch of Renewable Energy Superpower Report, Melbourne.

November

- Briefing at Australian Parliament House of the Renewable Energy Superpower Report.
- Taking Zero Emissions Global- BZE and Zero Emissions Byron presented at six COP21 side events in Paris.

December

- Conclusion of the COP21 Paris Agreement based on staying well below 2 degrees and a zero emissions by 2050 technical consensus.
- Taking Zero Emissions Global- BZE North America tour- Bloomberg Philanthropies, McGill University Montreal, Clean Energy Canada, Sustainability Group City of Vancouver, Sustainability Group City of Vancouver, David Suzuki Foundation.

2016

January

- Councils review survey commenced- Zero Carbon Communities.

February

- BZE received Lauder Institute global ranking of 6th for “Think Tank to Watch in 2016”, 13th in Australasia and in the top 144 of all (global) independent think tanks.

March

- Industrial Processes plan research commenced.

April

- Canberra, Sydney, Newcastle launches of Renewable Energy Superpower Report.

May

- Brisbane launch of Renewable Energy Superpower Report.
- Conclusion of Councils Review- Zero Carbon Communities.

June

- Adelaide launch of Renewable Energy Superpower Report.
- Byron Shire Mayor and BZE conduct Zero Carbon Communities forum at Australian Local Government Association National General Assembly, Canberra.
- Release and launch of councils review findings via Zero Carbon Communities website and brochure.

- Presented Zero Carbon Communities project to Noosa Council and Noosa Community in Noosa and Brisbane.
- BZE’s Dr Stephen Bygrave joins prominent Australians’ call for Emergency Declaration on climate change.
- Queensland Renewable Energy Panel submission”

July

- Electric Vehicles report finalised for August 2016 publishing date- Zero Carbon Australia Transport Plan.



Hon Simon Corbell MLA, Professor Andrew Blakers, Dr Stephen Bygrave at Canberra Renewable Energy Superpower launch. April 2016 Photo by Rod Taylor



Looking ahead

In 2016–17 a new CEO will be starting at BZE. At the time of writing we don't know who this will be but we do know the position will attract interest from many able applicants and the Board will choose a candidate who brings new ideas and is able to lead BZE to even greater successes.

We will also be releasing the ZCA Industrial Processes Plan – aiming to kick start a much needed debate on industrial emissions. The plan will bust some persistent myths, such as the necessity of coal to make steel, and demonstrate how Australia can have a thriving industry with zero emissions.

With the Industrial Processes Plan BZE will have completed detailed plans for all emitting sectors. The Zero Carbon Australia series is the most comprehensive strategy for what Australia needs to do to play its part in avoiding catastrophic climate change. In 2016-17 we will be returning to each part of the ZCA research to ensure that the entire vision is well-communicated to policy-makers and the public.

Zero Carbon Communities will continue to develop and grow. This year we will work with three Victorian communities to help them develop 100% renewable energy strategies. From this work we will develop technical and governance 'blueprints' - materials enabling communities to deliver a coordinated message to governments at all levels on what they need to do to support the efforts and desires of ordinary people to reach zero emissions.

Even at the current level of warming we are starting to see widespread catastrophes affecting people and nature. Unfortunately the world has left it too late for zero emissions to be enough, however quickly we get there.

That is why BZE plans to start researching how Australia can go beyond zero emissions at top speed. We have opened discussions with think tank Research and Strategy for Transition Initiation about exploring rapid carbon drawdown, involving technologies which reduce the greenhouse gas emissions already in the atmosphere.

Finally, we urge you and your community to consider joining with Beyond Zero Emissions in calling on the Australian Parliament to declare a Climate Emergency: <http://climateemergencydeclaration.org>.



Auditor's report

Year ending 30 June 2016





beyond
ZERO
emissions

Beyond Zero Emissions Inc.
Balance Sheet
As at 30 June 2016

	2016	2015
	\$	\$
Equity		
Retained Profits	351,203	497,131
Total Equity	351,203	497,131
Represented by:		
Current Assets		
Deposits	-	24
Cash at Bank	356,711	488,024
Trade Debtors	6,440	6,253
	363,151	494,301
Non-Current Assets		
Office Furniture & Equipment	31,408	31,240
Less Accumulated Depreciation & Impairment	22,299	19,319
	9,109	11,921
Total Assets	372,260	506,222
Current Liabilities		
Sundry Creditors	5,390	200
Trade Creditors	(263)	403
Provision for Holiday Pay	13,981	5,433
Provision for GST	1,949	3,055
	21,057	9,091
Total Liabilities	21,057	9,091
Net Assets	351,203	497,131

*The accompanying notes form part of these financial statements.
These financial statements have been subject to audit or review and should be read in
conjunction with the attached Audit Report.*

Beyond Zero Emissions Inc.
Profit and Loss Statement
For the Year ended 30 June 2016

	2016	2015
	\$	\$
Income		
Donations	144,508	403,326
Grants	75,000	-
Memberships/Subscription	33	1,367
Consulting Fees	1,770	181
EFI Joining Fee & Commission	7,216	56,364
Interest Received	3,495	5,806
Other Revenue	17,139	19,374
	<u>249,161</u>	<u>486,418</u>
Expenditure		
Bank Charges	206	140
Collection Costs	1,334	1,820
Compliance Costs	981	1,082
Depreciation	2,980	3,974
Donations - Refund	400	200
Equipement-non capital	467	-
Event Expenses	4,468	831
Fees & Permits	59	-
Fundraising Expenses	350	-
Insurance	6,987	4,064
I.T. Expenses	6,234	12,797
Postage and Stationery	53	437
Printing Costs	10,469	12,714
Radio Fees	4,686	6,490
Recruitment	110	-
Rent	9,548	-
Research	14,454	55
Salaries & Wages	255,288	335,107
Staff Training & Welfare	77	-
Subcontractors	16,735	34,577
Subscriptions	2,223	-
Sundry Expenses	719	1,170
Superannuation Contributions	30,038	31,449
Telephone	2,337	1,144
Travelling Expenses	25,246	17,212
	<u>396,449</u>	<u>465,263</u>
Surplus/ (Loss) for Year	<u>(147,288)</u>	<u>21,155</u>

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conjunction with the attached Audit Report.*

Beyond Zero Emissions Inc.
Statement of Appropriations
For the Year ended 30 June 2016

	2016	2015
	\$	\$
Retained Profits - Beginning of Year	497,131	475,976
Surplus/ (Loss) for Year	(147,288)	21,155
Retained Profits – Before Extraordinary item	349,843	497,131
Extraordinary Items		
Retrospective Adjustments	1,360	-
Retained Profits at 30 June 2016	351,203	497,131

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conjunction with the attached Audit Report.*

Beyond Zero Emissions Inc.
Statement of Cash Flows
For the Year ended 30 June 2016

	Note	2016 \$	2015 \$
Cash Flows from Operating Activities			
Receipts from Customers		245,537	487,889
Payments to Suppliers and Employees		(380,369)	(483,067)
Interest Received		3,495	5,806
Net Cash Outflow from Operating Activities		<u>(131,337)</u>	<u>10,628</u>
Net Decrease in Cash Held		<u>(131,337)</u>	<u>10,628</u>
Cash and Cash Equivalents as at 1 July 2015		488,048	477,420
Cash and Cash Equivalents as at 30 June 2016		<u><u>356,711</u></u>	<u><u>488,048</u></u>

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conjunction with the attached Audit Report.*

Beyond Zero Emissions Inc.
Subsidiary Report for Notes
For the Year ended 30 June 2016

	2016	2015
	\$	\$
Reconciliation of Cash Flow from Operations with Profit after Income Tax		
Loss after Income Tax	(147,288)	21,155
Adjustments for Non-Cash Components in Profit:		
Depreciation	2,980	3,974
Changes in Assets and Liabilities		
Increase in Trade and Other Receivables	(102)	(703)
Increase in Trade and Other Payables	4,525	(5,250)
Increase in Provisions	8,548	(8,548)
Net Cash Decrease in Cash Held	(131,337)	10,628

Beyond Zero Emissions Inc.
Notes to the Financial Statements
For the Year ended 30 June 2016

1. Summary of Significant Accounting Policies

(a) Basis of Preparation

The financial statements are special purpose financial statements prepared in order to satisfy the financial reporting requirements of the Associations Incorporation Reform Act (Vic) *. The committee has determined that the association is not a reporting entity.

The financial statements have been prepared on an accruals basis and are based on historic costs and do not take into account changing money values or, except where specifically stated, current valuations of non-current assets.

(b) Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, deposits held at call with banks, other short term highly liquid investments with original maturities of three months or less.

(c) Provisions

Provisions are recognised when the association has a legal or constructive obligation, as a result of past events, for which it is probable that an outflow of economic benefits will result and that outflow can be reliably measured.

(d) Employee Benefits

Provision is made for the association's liability for employee benefits arising from services rendered by employees to the end of the reporting period. Employee benefits that are expected to be settled within one year have been measured at the amounts expected to be paid when the liability is settled.

Employee benefits expected to be settled more than twelve months after the end of the reporting period have been measured at the present value of the estimated future cash outflows to be made for those benefits. In determining the liability, consideration is given to employee wage increases and the probability that the employee may satisfy vesting requirements. Cash flows are discounted using market yields on national government bonds with terms to maturity that match the expected timing of cash flows. Changes in the measurement of the liability are recognised in profit or loss.

Employee benefits are presented as current liabilities in the asset and liabilities statement if the association does not have an unconditional right to defer settlement of the liability for at least 12 months after the reporting date regardless of the classification of the liability for measurement purposes under AASB 119.

(e) Property, Plant and Equipment

Property, plant and equipment are carried at cost, independent or committees' valuation. All assets excluding freehold land, are depreciated over their useful lives to the association.

Leasehold improvements and office equipment are carried at cost less, where applicable, any accumulated depreciation.

*The accompanying notes form part of these financial statements.
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conjunction with the attached Audit Report.*

Beyond Zero Emissions Inc.
Notes to the Financial Statements
For the Year ended 30 June 2016

(f) **Revenue and Other Income**

Revenue is recognised when the amount of the revenue can be measured reliably, it is probable that economic benefits associated with the transaction will flow to the entity and specific criteria relating to the type of revenue as noted below, has been satisfied. Revenue is measured at the fair value of the consideration received or receivable and is presented net of returns, discounts and rebates.
All revenue is stated net of the amount of goods and services tax (GST).

Sale of Goods

Revenue is recognised on transfer of goods to the customer as this is deemed to be the point in time when risks and rewards are transferred and there is no longer any ownership or effective control over the goods.

Interest Revenue

Interest is recognised using the effective interest method.

Rendering of Services

Revenue in relation to rendering of services is recognised depends on whether the outcome of the services can be measured reliably. If this is the case then the stage of completion of the services is used to determine the appropriate level of revenue to be recognised in the period.

If the outcome cannot be reliably measured then revenue is recognised to the extent of expenses recognised that are recoverable.

Subscriptions

Revenue from the provision of membership subscriptions is recognised on a straight line basis over the financial year.

Other Revenue

Other revenue is recognised when the association is entitled to the funds.

(g) **Goods and Services Tax (GST)**

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO). In these circumstances, the GST is recognised as part of the cost of acquisition of the asset or as part of an item of the expense.
Receivables and payables are stated inclusive of the amount of GST receivable or payable. The net amount of GST recoverable from, or payable to, the ATO is included with other receivables or payables in the statement of financial position.

*The accompanying notes form part of these financial statements.
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conjunction with the attached Audit Report.*

Beyond Zero Emissions Inc.
Notes to the Financial Statements
For the Year ended 30 June 2016

	2016	2015
	\$	\$
2. Profit		
Expenses		
Employee Benefits Expense	285,326	366,556
Depreciation and Amortisation Expenses	2,980	3,974
Bank Charges	206	140
Insurance	6,987	4,064
Postage and Stationery	53	437
Printing Costs	10,469	12,714
Rent	9,548	-
Telephone	2,337	1,144
Other Expenses	78,543	76,234
	396,449	465,263
3. Profit for the Year		
Profit before income tax expense from continuing operations includes the following specific expenses:		
Charging as Expense		
Movements in Provisions		
Depreciation		
- Depreciation of Property, Plant and Equipment	2,980	3,974
Net Expenses Resulting from Movement in Provisions	2,980	3,974
Bad & Doubtful Debts:-		
- Movement in provision for doubtful debts	400	200
	400	200
4. Cash and Cash Equivalents		
Deposits	-	24
Cash at Bank	356,711	488,024
	356,711	488,048
Reconciliation of Cash		
Cash and Cash Equivalents	356,711	488,048

*The accompanying notes form part of these financial statements.
These financial statements have been subject to audit or review and should be read in conjunction with the attached Audit Report.*

Beyond Zero Emissions Inc.
Notes to the Financial Statements
For the Year ended 30 June 2016

	2016	2015
	\$	\$
5. Trade and Other Receivables		
Current		
Trade Debtors	6,440	6,253
	<u>6,440</u>	<u>6,253</u>
Total Trade and Other Receivables	<u><u>6,440</u></u>	<u><u>6,253</u></u>
6. Property, Plant and Equipment		
Plant and Equipment		
Office Furniture & Equipment	31,408	31,240
Less Accumulated Depreciation & Impairment	<u>22,299</u>	<u>19,319</u>
	9,109	11,921
Total Plant and Equipment	<u>9,109</u>	<u>11,921</u>
Total Property, Plant and Equipment	<u><u>9,109</u></u>	<u><u>11,921</u></u>
7. Trade and Other Payables		
Current		
Sundry Creditors	5,390	200
Trade Creditors	(263)	403
Provision for GST	<u>1,949</u>	<u>3,055</u>
	7,076	3,658
Total Trade and Other Payables	<u><u>7,076</u></u>	<u><u>3,658</u></u>
8. Provisions		
Current		
Provision for Holiday Pay	13,981	5,433
	<u>13,981</u>	<u>5,433</u>

*The accompanying notes form part of these financial statements.
These financial statements have been subject to audit or review and should be read in
conjunction with the attached Audit Report.*

Beyond Zero Emissions Inc.
Statement by Members of the Committee

The committee has determined that the association is not a reporting entity and that this special purpose financial report should be prepared in accordance with the accounting policies outlined in Note 1 to the financial statements.

In the opinion of the committee the financial statements:

1. Presents fairly the financial position of Beyond Zero Emissions Inc. as at 30 June 2016 and its performance for the year ended on that date.
2. At the date of this statement, there are reasonable grounds to believe that Beyond Zero Emissions Inc. will be able to pay its debts as and when they fall due.

This statement is made in accordance with a resolution of the committee and is signed for and on behalf of the committee by:

.....
President:

.....
Treasurer:

Dated

**Beyond Zero Emissions Inc.
Independent Auditor's Report
to the Members of
Beyond Zero Emissions Inc.**

Report on the Financial Report

We have audited the accompanying special purpose financial report of Beyond Zero Emissions Inc. (the association), which comprises the committee's report, the assets and liabilities statement as at 30 June 2016, the income and expenditure statement for the year then ended, notes comprising a summary of significant accounting policies and other explanatory information, and the statement by members of the committee.

Committee's Responsibility for the Financial Report

The committee of Beyond Zero Emissions Inc. is responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards and the Associations Incorporation Reform Act 2012 and for such internal control as the committee determines is necessary to enable the preparation of the financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In Note 1, the committee also state, in accordance with Accounting Standard AASB 101 Presentation of Financial Statements, that the financial statements comply with International Financial Reporting Standards.

Auditor's Responsibility

Our responsibility is to express an opinion on the financial report based on our audit. We conducted our audit in accordance with Australian Auditing Standards. Those standards require that we comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance about whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the association's preparation of the financial report that gives a true and fair view, 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 association's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the committee, as well as evaluating the overall presentation of the financial report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independence

In conducting our audit, we have complied with the independence requirements of Australian professional ethical pronouncements.

**Beyond Zero Emissions Inc.
Independent Auditor's Report
to the Members of
Beyond Zero Emissions Inc.**

Opinion

In our opinion:

- a. the financial report of Beyond Zero Emissions Inc.
is in accordance with the Associations Incorporation Reform Act 2012 , including:
 - i. giving a true and fair view of the Association's financial position
as at 30 June 2016 and of its performance for the year ended on that date;

and

 - ii. complying with Australian Accounting Standards and the Associations
Incorporation Reform Act 2012

- b. the financial report also complies with International Financial Reporting Standards as
disclosed in Note 1.

Dated this 4th day of November 2016

Lionel Arnold
Director

J L Collyer & Partners



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