

Blueprint For A Zero Emissions Future

BEYOND ZERO EMISSIONS STRATEGY 2014 – 2016



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Introduction

Beyond Zero Emissions Inc. (BZE) is a not-for-profit research and education organisation known for its work researching, designing and implementing a zero emissions economy for Australia. Its goal is to transform Australia from a 19th century fossil fuel-based, emissions intensive economy to a 21st-century renewable-energy-powered clean-tech economy.

We accept the findings of the most current science, which shows that we have already allowed climate change to go too far without serious mitigation, and must act immediately to reduce our levels of greenhouse gas emissions to zero and below.

Through the Zero Carbon Australia (ZCA) research project, BZE is encouraging climate change policy that is in line with the latest science. By sharing this research with thousands of Australians via its public engagement program, BZE is engaging, educating and inspiring the community with real solutions to climate change.

In partnership with the University of Melbourne's Energy Institute, BZE has published the ZCA Stationary Energy Plan (2010), a fully costed transition plan for getting Australia to zero emissions in ten years using commercially available technology. BZE has also published the Zero Carbon Australia Buildings Plan (2013), which shows how we can dramatically reduce the emissions generated from our existing building stock. BZE also produced the Laggard to Leader report and the Repowering Port Augusta plan in 2012. 2014 releases include the High Speed Rail Report, the Land Use



Plan and Electric Vehicles report. Research in progress includes Australia as a renewable energy superpower.

BZE's vision is ambitious and achievable.

We are involved in the following activities:

- research
- education
- transition planning
- implementation of research findings through movement building
- corporate education
- solutions development
- network building



Our vision, mission and values

Vision

A zero emissions Australia in ten years.

Mission

To demonstrate through research and modelling that technical solutions to climate change already exist, are practical and feasible, and can be implemented immediately.



Values

Beyond Zero Emissions is a vibrant and ambitious organisation that recognises the need for urgent and far-reaching action on climate change. Our values reflect the reality of the world we live in and our belief in the people who support our work.

Courage of conviction

Our work requires us to be bold and innovative in pursuit of making the greatest possible impact on climate change. BZE has the courage to propose the necessary climate actions to address the serious issues we face.

Independence

Our research is independent and free from political affiliation.

Honesty, respect and openness

We are accountable and open in our communications with others. We value diversity and are committed to an open and inclusive work culture.

Sustaining our people

Working to address climate change is demanding and requires a high level of personal strength and energy. We are resilient and compassionate, and recognise the importance of our people's wellbeing.

Who we are

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

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 also in engaging with the public and community groups around Australia.



What we do

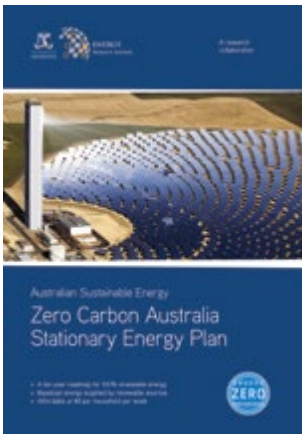
BZE's primary activities are research, education and public engagement. We have non-exclusive partnerships with the University of Melbourne and University of New South Wales and are able to draw on the expertise of a range of researchers across the country to provide evidence-based solutions to address climate change.

Whilst some organisations around the world are focusing on the decarbonisation of the economy as a whole, BZE is unique in that it is providing detailed analysis on the decarbonisation of individual sectors. BZE's Zero Carbon Australia project aims to provide decarbonisation pathways to individual sectors 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 and high speed rail. BZE is currently in the process of producing ZCA reports on electric vehicles, land use (agriculture and forestry) and transport.

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 this and future generations.

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The Stationary Energy Plan details how Australia can be powered with an electricity grid based on 100% renewable energy.



The Laggard to Leader report highlights how Australia can lead the world in rapidly transitioning to zero emissions.



The Zero Carbon Australia (ZCA) Buildings Plan demonstrates that there are no technical barriers to zero emissions buildings in Australia. This is achieved through a planned energy efficiency retrofit of the existing building stock, onsite renewable energy generation, and electrifying current gas appliances.



The High Speed Rail report shows that this is a viable zero emissions form of transport that can halve transport emissions. It is the first of a series of transport studies and is being complemented by the Electric Vehicles report to be released in the second half of 2014.



The Energy Freedom initiative is building a movement of households implementing the Zero Carbon Australia Buildings Plan, through a range of energy efficiency measures as well as rooftop solar. We are partnering with energy efficiency and solar companies aligned with the objectives of Energy Freedom to assist householders to go to zero emissions in their homes.

How we make change happen

We undertake evidence-based research demonstrating the technical solutions to addressing climate change that are practical and feasible using currently available methods and technologies. We are audacious, bold and not afraid of criticism. The solutions we produce in this way are leading-edge, visionary and show the direction in which we should proceed on climate solutions, providing hope to individuals, groups and the broader community about what can be done. Through an effective public engagement model, we disseminate the results of that research to a wide variety of audiences. We also engage with stakeholders on relevant projects, including renewable energy, energy efficiency and transport as well as working with farmers and landholders.

Evidenced-based and highly credible research involves engaging with, and drawing on, Australia's and the world's best information to highlight what is technically and practically possible to address climate change. It requires integrating the information into a "story" and vision that is digestible and easy to understand for a general audience. A BZE report will provide readers with solutions with a clear explanation of how they can be implemented. Our research relies heavily on volunteers who come from all walks of life, and who are experienced, sometimes current students or graduates, professionals, retired experts or passionate supporters who just want to experience life with an NGO. Our research is reviewed and endorsed by respected academics and eminent Australian leaders.



Public engagement involves training our volunteers on the technical details of our reports, whether they are about renewable energy, building energy efficiency or high speed rail. Our volunteers undergo intensive training on the content and on how to deliver the key messages in our reports, so that they can communicate those messages succinctly and credibly. They then speak to a diverse range of audiences at festivals, rotary clubs, community groups and schools. BZE volunteers also run stalls at various events where they speak one-on-one with interested persons and spread the importance of our work.



Our experienced researchers and volunteers are also involved in education across a range of events. We speak at expert conferences and are asked to participate in workshops providing our technical input. Our services are also sought after by other NGOs and researchers on climate change issues.

Research gives us the facts to make compelling arguments, and public engagement programs gives BZE uniquely skilled volunteers.

To drive change, we work to inject our research into the public debate. Where appropriate, this will involve working with other NGOs to amplify our message through utilisation of their networks and campaign strategies. We will seek opportunities to set up programs which partner BZE's credibility and vision with organisations offering practical tools and processes for engaging Australians and implementing change. These programs can partner BZE with NGOs, companies, government groups, university programs and others.

Energy Freedom is the first of many initiatives BZE will be pursuing to implement the outcomes of our research. We are partnering with aligned energy efficiency and solar businesses to provide better information to households and other stakeholders on how to transition to zero emissions, as well as have higher performing, more comfortable homes. Through Energy Freedom we are building a grassroots movement of householders taking climate action in their homes and reducing greenhouse gas emissions, and creating a political voice for energy efficiency and solar. This movement is literally putting power back into our own hands, as well as creating autonomy and independence in terms of energy production.

Challenges and opportunities in a changing world

Since BZE formed in 2006, climate scientists from Australia and around the world have released further reports that tell us climate change is rapidly getting worse. The consistent message is that we have only a decade to deal seriously with climate change and avert a world with at least a 4-degree increase in average temperatures. Temperatures have already risen by 0.8 degrees over the past 30 years and there is now a higher incidence of floods, droughts and extreme weather events in Australia. This means BZE's mission is all the more urgent. Our challenge is to provide timely, well-researched and informed analysis that highlights the technical solutions to address climate change, and to work with a range of individuals and organisations to supply crucial information to the community to support and influence change on the ground.

There are real opportunities to work with a vast array of qualified experts across Australia and the world to

bring the required information together into a more transparent and accessible form that illustrates what is possible if the social, community and political will is present. Much of the hard work has already been done to develop the technical solutions. The challenge and the opportunity remains to present these solutions and recommendations in a way that is meaningful, understandable and can be adopted by government, industry and the general community.

The solutions we are highlighting are not "new age" or radical - indeed many are already being implemented either in Australia or elsewhere in the world. What we are recommending is that these solutions be considered in a holistic way. The ongoing challenge is to hasten the uptake and adoption and on the large scale required to avert catastrophic climate change.



Mission objectives

Mission Objective One:

Blueprint for a Zero Carbon Australia

Complete research outlining a Blueprint for a Zero Carbon Australia.

Beyond Zero Emissions is currently working on a range of sectoral reports that demonstrate technical solutions to rapidly decarbonise those sectors. In early 2014 we are currently just over half way in completing those 6 reports. These reports are the foundational pieces for our work and together highlight the macro “story” of how Australia can rapidly decarbonise its economy and transition away from fossil fuels. BZE is able to undertake this research as it has effective research partnerships with key universities and research organisations in Australia, such as the University of Melbourne Energy Institute, Sustainable Societies Institute and the University of New South Wales Institute for Environmental Studies. These partnerships help ensure that our research is credible, robust, evidence-based, scientifically and technically rigorous.



The ZCA project positions Beyond Zero Emissions as a trusted organisation with the credibility to lead the debate on the implementation of climate solutions in Australia.

While completing the ZCA research projects, BZE will be actively producing sharper and narrow-focused pieces of research. This sharpening of scope will allow the research to cut into the short-term public and political debate and be picked up by campaign groups and media. We will also continually circle back to our foundational

pieces, updating and providing supplements where needed. This will enable us to undertake more focused and shorter research projects, accessing updated research and information as it comes to hand and responding to priorities as they arise.



We also want to produce research that supports other NGOs to deliver specific climate change campaigns. We will partner, collaborate and work with other environment and climate NGO's and groups, including through roundtables, seminars and film nights.

Outcome 1a: by end 2016, complete the Zero Carbon Australia project, comprising reports on stationary energy, buildings, transport, high speed rail, electric vehicles, land use, industrial processes and Australia as a renewable energy superpower.

Outcome 1b: by end 2016, have developed research partnerships with one key university or research institution in each state/territory in Australia.

Outcome 1c: by end 2016, have undertaken at least three projects targeted at short term climate change research priorities.

Mission objectives (cont.)

Mission Objective Two:

More action to address climate change

To effectively drive the social and political change from its research

Beyond Zero Emissions needs to harness the power and energy of its supporters and volunteer base to effectively communicate its research to people across all sections of the Australian community. Beyond Zero Emissions already has some 500 volunteers, many of whom have been trained on the stationary energy plan and the buildings plan. We will need to expand the number and depth of trained volunteers and diversify the skills and technical expertise as more ZCA reports are launched and released, including developing teams of volunteers who are experienced in each of the topic areas (renewable energy, building energy efficiency, electric vehicles etc).



Using these assets, we will also need to engage effectively with industry, academia, community leaders and government. We must exert stronger influence to bring about the required wholesale changes to energy production, building efficiency, modes of transport and land practices.

Outcome 2a: by end 2016, have 500 volunteers around Australia that are trained and equipped to communicate the ZCA reports to a variety of audiences

Outcome 2b: by end 2016, have built a groundswell of 5,000 motivated people articulating the ZCA vision and actively lobbying for change

Outcome 2c: by end 2016, industry and community leaders have facilitated the implementation of 2 key technical solutions highlighted in each of the ZCA reports

Outcome 2d: by end 2016 are actively sought after as experts on technical solutions to climate change, with strong communications/media presence in mainstream media and at least 1 article in broadsheets every month.

Mission Objective Three:

Busting the myths and challenging the status quo on climate change

Many Australians are deeply concerned about climate change and in 2007 ranked action on climate change as one of the top priorities for government and the community. This commitment is being challenged but remains a critical priority for Australians as the impacts of climate change become ever present. Our solutions to climate change are in the interests of everyone facing difficult economic decisions and facing the impacts of climate change, including drought, floods, sea level rise, bushfires and heatwaves.

Beyond Zero Emissions aims to bust many of the myths about climate action, to show that these are easily implemented, and indeed that they will enhance our economic diversity and prosperity, standard of living, health and wellbeing.

We aim to challenge the status quo because the status quo will not address climate change: the current operating system is inadequate to address the challenge.

What is required is forethought, dynamism, and innovation, all qualities that Australians possess and have drawn on when facing tough challenges in the past.

Outcome 3a: by end 2016, we will have contributed to increased public discussion around the realities of climate change and improved understanding of the impact of Australian Government and corporate policies, individual lifestyles and daily choices on the climate system, through regular stories in mainstream media, participation in high-profile seminars with business and community leaders.

Outcome 3b: by end 2016, our research will be widely recognised for having contributed to a shift in Australian values and attitudes towards those more accepting of the science and supportive of policies and actions aimed at addressing climate change.

How we will measure our mission success

Mission Objective One:

Blueprint for a zero carbon Australia

- We will have clearly documented and researched credible solutions to addressing climate change and the extent to which industry, community leaders and governments incorporate these into their policies, legislation and actions.
- We will be actively sought after for our expertise on climate solutions across a range of sectors in the economy.
- We will have developed constructive partnerships with a range of research institutions and NGOs, as well as productive alliances with industry.



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Mission Objective Two:

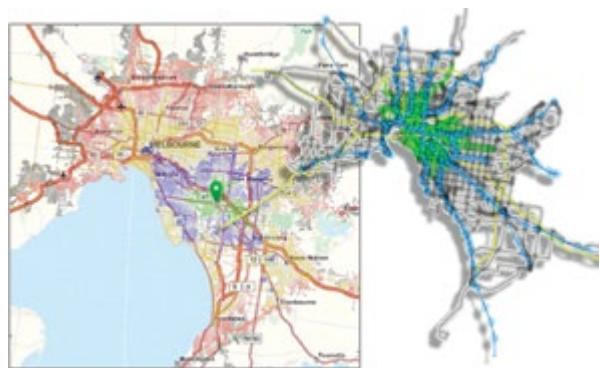
Mission Objective Two: More Action on climate change

- There will have been concrete actions on climate change as a result of our research such as greater penetration of renewable energy and electric vehicles in Australia, zero emissions buildings and transport systems, and better land use practices.
- We will be able to demonstrate that more Australians are informed about climate solutions and actively lobbying for them.

Mission Objective Three:

Mission Objective Three: Challenging the status quo in Australia

- There will have been a positive shift in the understanding of climate change solutions and our individual and collective role as Australians to implement them.
- There will have been a positive shift in how Australians act on climate change, setting leadership examples for the world on this issue.



Rethinking Melbourne's public transport system

Organisational objectives

Organisational Objective One:

Build and diversify skill sets

Build and diversify our skill set to complement our technical strengths in the areas of new economics, accounting and social science, so our research can lead to the changes necessary to rapidly address climate change.

This will enhance the quality and depth of our research and ensure that our solutions are implementable and achievable. We will focus on shorter term research projects that are targeted at priority issues as they arise, so that we are more responsive to new information and analysis, as well as the changing political, economic and

international environment. We will build our media and communications area so that we are actively sought after on commentary on climate change.

Where practical and effective, we will work to implement the "capital" or ideas invested and developed in the Zero Carbon Australia reports through individual programs of action. This will be done by BZE on its own, and through effective partnerships with other organisations and individuals.

Organisational Objective Two:

Raise profile, supporter base, revenue

Raise our profile, double our supporter base, and increase our annual revenue to \$3 million per year by 2016.

We will substantially increase our supporter base, including building an active network in our partner universities. We will deepen our relationship with our supporters by enhancing their understanding of our mission. We will attract a number of high profile Australians as BZE "Ambassadors", actively promoting the messages in BZE reports to the broader community. We will develop and implement a Volunteer Engagement Guide to provide structure and focus for our volunteers and develop clear and transparent communications between all parts of the organisation. This will include good internal democracy and participation, governance and management.

We will consult our supporters on priorities and ensure that we have the skills, alliances and strategies to deliver on those priorities, and ensure that we have a more secure funding base for our activities. We will invest in the skills required to deliver our ambitious agenda and develop the tools to energise our supporters and partners. We will build our use of innovative and creative communication techniques to empower people to act on climate change.

Organisational Objective Three:

Capacity building of board, staff, and volunteers

Increase the power of our people by building the capacity of our board, staff and volunteers to deliver on this ambitious strategy.

We will build an organisational culture that promotes creativity, compassion and resilience. This culture will be introduced to board and staff members during their inductions and fostered throughout the organisation. As an employer of choice we will attract high quality staff who are committed to our mission and values. We will minimise staff turnover, retain organisational memory and provide advancement opportunities for our stronger performers.

Our workforce will be gender balanced and diverse. We will achieve and maintain work-life balance for all staff members in the organisation.

We will build the capacity of our staff members to manage our diverse and highly valued volunteers.

We will celebrate and recognise the massive contributions our volunteers make to our mission and their integral place in the organisation's success. We will encourage committed volunteers to participate in BZE's journey and strengthen our volunteers' contribution to the organisation.



How we will measure our organisational success:

Organisational Objective One:

Build and diversify skills

We will have actively recruited staff and volunteers with economic and social science skills and experience. We will have amended our business model to be more responsive to research needs as they arise.

Organisational Objective Two:

Increase our supporter base

We will have doubled our supporter base , and increased our annual revenue to \$3 million per year by 2016. We will have attracted at least 1 high profile ambassador to spread BZE's message.

Organisational Objective Three:

Empower our people

We will have improved gender balance in the organisation, better work/life balance, less fatigue and staff turnover, improved staff remuneration and advancement opportunities. We will have built a strong and diverse volunteer base able to support the organisation to deliver on its ambitious agenda.



“ We have the solutions to combat climate change, and at the same time enhance our prosperity and wellbeing. The longer we wait the higher the costs for our planet and all life on it. ”

Stephen Bygrave



info@bze.org.au

Beyond Zero Emissions
Kindness House
Suite 10, Level 1
288 Brunswick Street
Fitzroy, Victoria 3065

Phone: 03 9415 1301
www.bze.org.au