



Beyond Zero Emissions: 2024 Annual Impact Report

Driving Solutions for a Zero-Emissions Future

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Recognition of traditional custodians

Beyond Zero Emissions acknowledges the Traditional Owners of Country throughout Australia and recognises their continuing connection to lands, waters and communities.

Beyond Zero Emissions maintains offices on the traditional lands of the Wurundjeri Woi Wurrung people, the Ngunnawal people, the Ngambri people, the Wonnarua people, the Worimi people and the Turrbal people.

We pay our respects to Aboriginal and Torres Strait Islander cultures; and to Elders past and present. We recognise that Aboriginal peoples' sovereignty over their land was never ceded and the impact of this ongoing dispossession continues to this day.

Our thanks to the many staff, expert volunteers, partners and supporters who power our mission.

*This page image credit: Pilbara Solar.
Cover image: Maciej Prusinski and Tim Forsyth
from Zenith Energy with BZE CEO Heidi Lee in Perth
Western Australia. Photo courtesy of Chris Grose.*

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We would like to thank all our generous partners and supporters, including:

- ACME Foundation
- Australian Environmental Grantmakers Network
- Australian Ethical Foundation
- Australian Philanthropic Services Foundation
- Boundless Earth
- Charles Warman Foundation
- Community Impact Foundation
- Giving Green
- Height Morris Foundation
- The Hope Family Foundation
- James N. Kirby Foundation
- Keuneman Foundation
- Lord Mayor's Charitable Foundation
- Milkywire
- Susan McKinnon Foundation
- The Myer Foundation

Chair's welcome

The world continues to evolve, and so do we. In 2024, Beyond Zero Emissions has sharpened its focus on the growing emissions gap that continues to undermine Australia's climate goals. While we stay true to our mission of providing real, practical solutions for a zero-emissions future, we recognise that action on adaptation and mitigation must happen in tandem.

This year, the Board has overseen the development of BZE's new strategic plan for 2025-2027, and is grateful to the supporters and donors who have already backed it in. Our central aim is to empower industry to rapidly scale projects that will fast-track Australia's transition to a renewable energy superpower.

We cannot do this alone. Through our research, media outreach, and close engagement with stakeholders, we are influencing the national conversation and driving the call for immediate action. The need for practical, scalable solutions is now more pressing than ever.

In this Annual Report, we highlight key achievements in 2024, like the launch of our *Make It Here* report on cleantech supply chains and the growth of our *Cleantech Hub*, now home to nearly 400 projects shaping Australia's clean energy future.

As global uncertainties persist, we stand firm in our belief that a zero-emissions future is vital for Australia's long-term prosperity. My deepest gratitude goes to our supporters, staff, CEO Heidi Lee, and volunteers for their tireless commitment. Together, we are ready to meet the challenges of the years ahead.

[Geoff Summerhayes](#)
Chair
Beyond Zero Emissions



Recognition

Giving Green named BZE one of Australia's three "most effective climate organisations" for the second time in a row, and CEO Heidi Lee also made *The Australian's Top 100 Green Power Players* for the third year running.

"...we welcome and support BZE's recommendations that, if implemented, will create the environment needed for local cleantech businesses like us to thrive, securing good jobs into the future and doing our bit to help Australia reach net zero."

Brian Craighead, CEO, Energy Renaissance

"BZE's research punches way above their weight given the size of the organisation."

Dr Simon Wright, Senior Research Fellow, Energy & Circularity, Gulbali Institute, Charles Sturt University



Glenrowan West Solar Farm. Photo courtesy of Chris Grose.

Policy



4

Publications



18

Submissions and expert advice



37

Public presentations



41

Government briefings

After 14 months of sustained research and targeted advocacy, we released our *Make It Here* report in May 2024, coinciding with the federal government's introduction of the **Future Made in Australia (FMiA) Bill**.

Our cleantech supply chain research and Cleantech Showcase case studies were pivotal in shaping the Bill, referenced by Independent Senator David Pocock in late 2023 and Liberal Senator Maria Kovacic in February 2024.

In August, we gave evidence to the Senate Economic Legislation Committee Inquiry, with Independent Senator David Van and ALP Senator Jess Walsh highlighting our research during the Bill's second reading. This landmark policy, aimed at strengthening local cleantech supply chains, passed in November 2024.

Many of our research-backed recommendations were included in the FMiA Act, such as:

- No funding of fossil fuel-related activities
- A National Interest Framework to guide public investment and attract private capital
- A net zero economy, delivered through the National Interest Framework and sector assessments and following community benefit principles.

Our influence extended further. We were referenced six times in the Climate Change Authority's 2024 Sector Pathways Review, with adopted recommendations including stronger built environment regulations, expanded **Capacity Investment Scheme** funding, and enhanced energy infrastructure support.

Our research informed the \$140 million **Powering the Region's Industrial Transformation Scheme**, supporting the deployment of industrial heat pumps and electric vehicles in regional areas. Our local content recommendations were adopted in the fourth **Capacity Investment Scheme** tender. And in May, our Head of Strategy Beth Mitchell was one of a handful of representatives from environmental NGOs to be invited to an exclusive preview of the **Federal Budget** (the annual "Lockup"), in recognition of the important input the team gave in the lead-up.

As a trusted advisor, we delivered expert advice and presentations to industry and government forums, reinforcing our role in shaping Australia's clean energy future. This included our ongoing support for the Net Zero Economy Authority (NZEA), where we contributed to the Net Zero Economy Authority Bill 2024 and assisted with their outreach, including the Hunter regional events in October 2024 and a Kwinana visit. We also meet regularly with DCCEEW (the Department of Climate Change, Energy, the Environment and Water) to drive forward the rollout of Renewable Energy Industrial Precincts ([REIPs](#)) across the country.

We continue working with government decision-makers to support policy and program development, focused on better national coordination of the transition to a zero-emissions economy.

Other policy advocacy outcomes

- In February, the federal government announced a new **Vehicle Efficiency Standard** (or "fuel efficiency standard"). [Read our position: [Deploy, 2022](#); [Electric Vehicles, 2016](#)]
- In August, ARENA announced a \$550m investment in the **Solar Sunshot** program, part of a \$1 billion initiative to boost solar PV manufacturing in Australia. [Read our position: [Solar Supply Chains, 2024](#); [Make It Here, 2024](#)]
- In September, the government awarded \$523m in the **Battery Breakthrough** initiative, to be given in production incentives and targeted at the highest value opportunities in the supply chain. [Read our position: [Battery Supply Chains, 2023](#), [Make It Here, 2024](#)]



Pictured left: BZE Head of Strategy Beth Mitchell gives evidence at the Senate Economics Legislation Committee's Inquiry into the Future Made in Australia Bill, August 2024.

Research

 **98**
Expert advisors

 **106**
Volunteer contributors

 **392**
Cleantech Catalogue case studies

To highlight Australia's best opportunities in manufacturing clean technologies and the critical role of decision-makers in enabling a fast and fair energy transition, we launched briefing papers on five key supply chains—solar, wind, batteries, heat pumps, and commercial EVs—starting in late 2023. These culminated in May 2024 with the summary report ***Make It Here: Building Australia's Clean Industrial Future***, released ahead of the Federal Budget.

This research demonstrated that bold action to boost Australian manufacturing and grow onshore cleantech supply chains is vital for energy security, job creation, and decarbonisation. Developed with input from nearly 100 stakeholders across industry, business, and academia, the findings revealed Australia's potential to generate \$215 billion in cumulative revenue and create 53,000 additional, ongoing jobs by 2035. It highlighted Australia's abundant resources, innovation capacity, and manufacturing skills as critical to building a zero-emissions economy.



Key recommendations included financial support for local cleantech manufacturing, fostering demand for Australian-made products, and establishing clean industry hubs in regions like Gladstone (Qld), Kwinana (WA), and the Hunter Valley (NSW). Many recommendations were subsequently enacted through the *Future Made in Australia Act* (see page 6).

Our thanks to all who contributed, especially our Advisory Board – Tim Buckley, Dr Azadeh Keshavarzmohammadian, Kirk McDonald, Stephanie Bashir and Alan Pears AM for their important contributions.

Dr Thomas Nann, Co-founder and CEO Allegro Energy on the release of *Make It Here*:

“The study tells a story of great opportunity and hope for Australia. The analysis shows not only where we are now, but also how our economy can thrive and how Australia can become a powerhouse in a future zero-carbon economy. Great work BZE team.”



Pictured from left to right: Allegro's Rohan Borah and Fraser Hughson, BZE's Sam Mella and Heidi Lee, and Allegro CEO Dr Thomas Nann at Allegro in the Hunter Valley, NSW.

Media coverage of *Make It Here*

The *Make It Here* launch generated extensive media coverage, with 32 mentions across print, online, and TV including Sky News, and strong regional radio coverage with 53 stories on stations such as 2HD Newcastle and Fresh FM Gladstone. Digital reach exceeded 67,000, with over 600 engagements.



Pictured above: BZE Senior Project Manager Sam Mella fields questions on the Sky News Breakfast program in May 2024.

Battery supply chains: an economic and emissions reducing opportunity

Batteries are essential for reducing national emissions by 23% by 2035, firming the grid for 100% renewables, and supporting decarbonisation in other sectors. Our [battery supply chain research](#) influenced key developments:

- **January 2023:** We recommended 6GW/50MWh medium-duration storage for firming capacity. By August, the government set this as a target under the Capacity Investment Scheme (CIS).
- **November 2023:** We called for 12GW by 2030 and highlighted supply chain needs after which the government expanded the CIS to 9GW dispatchable and 23GW variable renewable energy.

- **February 2024:** Our findings on jobs and GDP were spotlighted by Senator Maria Kovacic, who cited our findings on batteries as a "nation-building opportunity" for 44,000 jobs and \$57 billion GDP by 2035. By March, supply chain benefits were incorporated into CIS tendering.
- **October 2024:** After sustained advocacy, the government raised its dispatchable energy target to 10GW, moving closer to our 12GW goal.

These steps are an example of our work directly shaping a strong, sustainable battery policy.

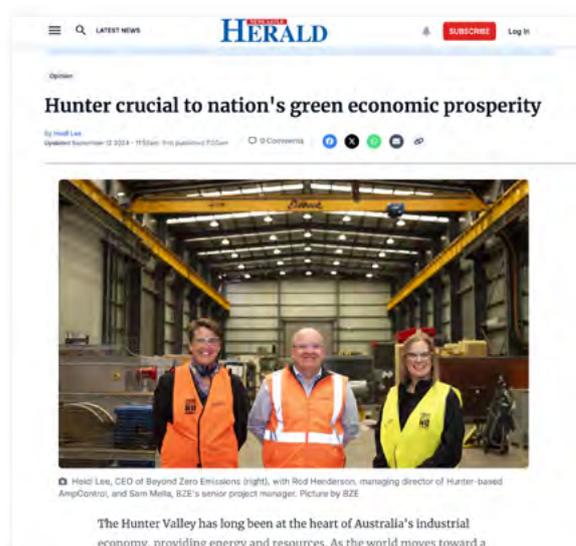


Regional engagement

Our work in Australia's regions remains a cornerstone of our approach, ensuring that local voices shape our research and recommendations.

Our secret sauce is our network of trusted relationships within regional communities and media, which amplifies positive narratives about the energy transition. Our 2023 message testing confirmed that regional successes resonate broadly, allowing us to strategically tailor our outreach. (See page 11 for more details.)

Right: Heidi Lee writes on the energy transformation for the Newcastle Herald in September 2024



Showcasing cleantech success stories in key industrial regions

In 2024, we engaged deeply with regional stakeholders through visits to Kwinana, the Latrobe and Hunter Valleys, Illawarra, Brisbane, Dubbo, Wollongong, Gladstone, and Newcastle. These visits provided opportunities to share our strategy, gather insights, and strengthen relationships with donors and industry leaders. Over 30 site visits included key locations like Stanwell Power Station, which is transitioning from coal to renewable energy, and the Waratah Super Battery in New South Wales.

"Because we have circa 30% of the world's vanadium resources, Australia is uniquely positioned to scale an entire industry from pit to battery."

Graham Arvidson, CEO of Australian Vanadium Limited



Pictured above: Graham Arvidson, CEO of Australian Vanadium Limited with Heidi Lee on site in Perth, Western Australia. Photo courtesy of Chris Grose.

Our participation at the Hunter New Energy Symposium in May further cemented our role in regional energy discussions. Senior Project Manager Sam Mella built new partnerships, and our Renewable Energy Industrial Precinct (REIP) work was highlighted by Dr Fiona Simon, CEO of the Australian Hydrogen Council. We toured **Milltech Martin Bright** in Tomago, which produces steel bars using electric induction, and **Allegro Energy**, currently manufacturing an 800kWh Redox Flow battery for long-duration storage at Origin Energy's Eraring site.

The first application of our Critical Success Criteria for a just energy transition was in the Hunter region and will be published in 2025. This work provides a framework for assessing regional readiness for major energy projects, fostering a shared understanding of the challenges and

opportunities in decarbonisation. It underscores the importance of better coordination both within regions and nationwide to drive successful outcomes.

"BZE plays an important role in bringing together data and narrative in the Hunter. Data plus narrative equals policy."

Dr Jessica Allen, University of Newcastle



Pictured left: BZE Senior Project Manager, Sam Mella (second from right), with other Hunter-based stakeholders at the Hunter New Energy Symposium.

Bipartisan breakthrough on Queensland renewables

In 2024, BZE was recognised for playing a key role in securing bipartisan support for Queensland's renewable energy target and Energy and Jobs Plan, earning the endorsement of the new LNP Premier in October.

We know regional success stories resonate. So, building on our 2023 message testing, we filmed five WA case studies in February, highlighting renewables driving jobs and innovation. By March, as Parliament debated the plan, we shared these stories with Queensland decision-makers, reaching 570,000 video views and driving 7,200 visits to our Cleantech Showcase.

Our joint paper with **Solar Citizens** outlined bold opportunities for jobs and growth. By showing renewables done well, we gave decision-makers the confidence to back ambitious energy policies.



Pictured above: BZE Senior Researcher Dr Heidi Edmonds congratulates (former) Premier of Qld Steven Miles on the state's Clean Economy Jobs Act, the Queensland Energy and Jobs Plan and other legislation supporting emissions reduction.

Outreach and digital outcomes

2024 Digital and media reach



185,000

Website visits



900

Downloads of our reports



2,580

New email subscribers



16,259

LinkedIn followers
(increase of 3k)



16,065

Facebook followers



1,778

Instagram followers



2 million

Total media reach
(national)



1.3 million

Total media reach
(regional)

Standout achievements



540+

regional and

230+

national media
stories



1M+

Reached in
2 campaigns
over 80 days

Working with partners

Collaboration is at the heart of our work, and thanks to core funding support, we're able to contribute to a range of non-partisan efforts across the climate network and green industry partners. Here's a small sample of highlights from our partners that we loved supporting in 2024:

- **Advocating for strong targets:** We contributed case studies and strategic input to the Investor Group on Climate Change's [Climate Action Pays Off](#) campaign, pushing for a strong 2035 climate target.
- **Regional collaboration:** In the Hunter Renewable Energy Zone (REZ), we helped connect conservation groups with local partners at a Nature & Renewables Workshop. We also expanded into the Central West Orana REZ, with Sam Mella and Beth Mitchell presenting at the Dubbo Resources, Energy and Industry Innovation Forum.
- **Showcasing leadership:** At the Hunter Environmental Institute's seminar, Sam Mella presented our National Action Plan alongside industry leaders like GHD and Yancoal.
- **National impact:** Heidi Lee chaired the Community Housing Industry Association's new Climate Action Network, mentored in the Climate Salad Global Growth Program, and spoke at major events including the All Energy Conference and University of Newcastle's *Looking Ahead* lecture series.

We thrive as part of a collaborative network, bringing communities and industries together to accelerate the clean economy.



Pictured above: BZE Senior Researcher Dr Heidi Edmonds with chair Shannon O'Rourke of Powering Australia at the University of Sydney Symposium on Advancing Responsible Minerals for the Energy Transition (image credit: University of Technology Sydney).



Pictured above: Panellists discuss the build-out of utility solar on a panel at All Energy with (from left) Andrew Barson (Gentari), Peter Wheale (NextTracker), Heidi Lee (BZE), Matt Kean (Climate Change Authority) and Shane Murphy (InfraBuild), chaired by Simon Currie (right, Energy Estate).

Forward focus

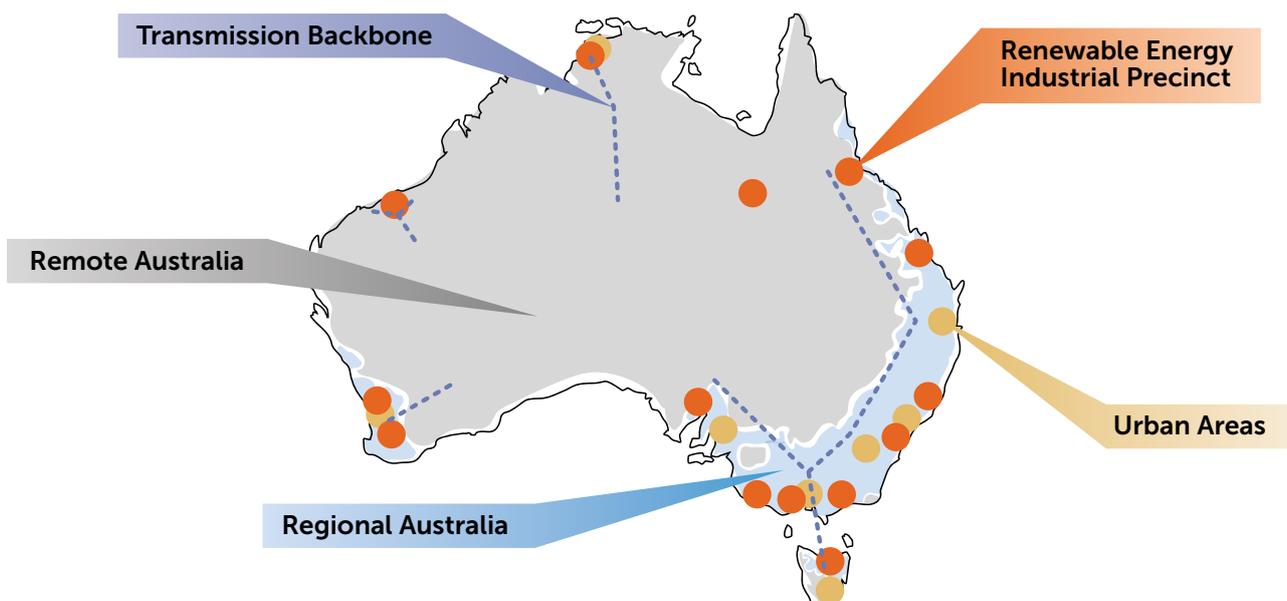
In 2024, we launched our flagship *National Action Plan*, a game-changer for Australia's transition to a zero-emissions economy. This plan is currently in development and will pinpoint the right investments, in the right places, at the right time, to close critical gaps in the energy transition. It is the centrepiece of BZE's three-year strategy, which was shaped by experts from across the country.

An initial breakthrough was our *Critical Success Criteria* (CSC), developed with 20+ experts leading Australia's energy transition. This powerful framework assesses the readiness

of industrial regions to host major projects and identifies the highest-impact actions to unlock their renewable potential.

We put our CSC to the test in the Hunter Region, an area we know inside out. The results were clear, actionable insights, validated by local experts and which we are sharing through workshops and high-level inside-track briefings.

This work is critical for regional decarbonisation. It cuts through the noise, tackling misconceptions about renewables and clean projects, and proving that better coordination is the key to making major projects work for communities and the country.



Turbocharge Australia's clean economy

Australia's transition to a zero-emissions economy is happening—but not fast enough. **With your support**, we can break through roadblocks and drive real, lasting change where it matters most.

In 2025 and beyond, we will focus on high-impact interventions that accelerate decarbonisation, cut through complexity, and turn ambition into action. Here is how your support will make a difference:

- ✓ **Pinpoint the most powerful actions**—mapping out the best sequence of steps, key players, and priority locations to cut emissions at speed.
- ✓ **Unblock barriers to implementation**—our research will show exactly how to remove obstacles to clean industry growth, so solutions can scale fast.
- ✓ **Inspire decision-makers to act**—from business to government, we will ensure the right people in the right places take decisive steps toward zero emissions.
- ✓ **Hold leaders accountable**—tracking and reporting on real progress (not just promises) to keep climate action on course.
- ✓ **Strengthen our movement**—investing in our team, expert volunteers, and support systems to sustain and scale our impact.



Expanding our reach

With your help, we will take our Showcase Tours to new regions, giving local communities a firsthand look at clean technology in action and building momentum for change. We will refine our Critical Success Criteria through new case studies, helping more regions get ready for major clean energy projects.

We will also amplify our voice—growing our earned media reach to shape the public conversation, and introducing structured First Nations engagement to ensure our work is grounded in cultural and regional perspectives.

A defining year for climate action

With the global geopolitical shifts in 2025, the stakes could not be higher. Your support will help us put climate solutions at the heart of political discussions, influencing policies and securing stronger backing for renewable energy and decarbonisation.

This is a pivotal moment. Let's make sure Australia does not just catch up—we lead. Will you help us drive the transition?

"Beyond Zero Emissions have been leaders of painting a picture of what the future could be, presenting a vision for the transition. Clearly, the time has come to embrace all these great ideas."

Independent Senator David Pocock

Pictured left: Independent Senator David Pocock (middle) with BZE Senior Project Manager Sam Mella (left) and Energy Renaissance CEO Brian Craighead (right). Photo courtesy of Energy Renaissance.

Want to help us fund this vital work?

Contact donations@bze.org.au or call +61 444 589 866.



Ready to help realise Australia's
clean energy future?

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