



Modular Air Current Electrical Generator (MACEG)

Investor Pitch Deck

Zerem Tech Pty Ltd

Caboolture, Queensland, Australia

Patent Pending (AU Provisional 2025)

An aerial view of a city skyline at sunset, with rays of light breaking through the clouds and illuminating the skyscrapers. The image is used as a background for the slide.

WHO IS ZEREM TECH

Zerem Tech Pty Ltd is an Australian-based clean-tech startup founded in 2025 by Johnathan Burns, headquartered in Caboolture, Qld.

Focused on developing renewable energy solutions through innovative modular systems. Zerem Tech is the developer and provisional patent holder of the Modular Air Current Electrical Generator (MACEG) — a scalable, low-impact power platform for continuous air-current power generation.

The mission is to deliver renewable energy with minimal visual pollution, minimal land use, and no ecosystem damage.

MACEG Combines aerodynamic engineering, magnetically coupled power systems, and modular architecture to produce a rapid deployment, low maintenance, sustainable and renewable energy production system.

THE RENEWABLE ENERGY PROBLEM



ENVIRONMENT

Land-based renewables consume valuable land and disrupt ecosystems



VISUAL AMENITY

Many renewable systems are visually intrusive



HIGH COSTS

Deployment, operation, maintenance and post-life costs are expensive



RELIABILITY

Many are intermittent and require storage or backup generation



THE ZEREM TECH ENERGY SOLUTION



ENVIRONMENT

Safe design with a
minimal footprint and
minimal land use



VISUAL AMENITY

Urban deployment with
low profile and minimal
visual impact



LOW COSTS

Low deployment,
operation, maintenance
and post-life costs



RELIABILITY

Generates continuous
power from air currents



TECHNOLOGY OVERVIEW MACEG



Core Structure: Modular energy-harvesting system designed to capture continuous airflow in built infrastructure environments

Utilises venturi-accelerated airflow to increase energy density at low wind speeds

Enclosed, low-noise, low-visual-impact design suitable for urban, industrial, and transport corridors

Cartridge-based architecture enables scalable deployment from small installations to multi-module arrays

Multiple application versions in development using the same foundational architecture



GLOBAL MARKET OPPORTUNITY



Global distributed energy market exceeds hundreds of billions USD



Ideal for remote, island, defense, and offshore industries as well as existing urban environments

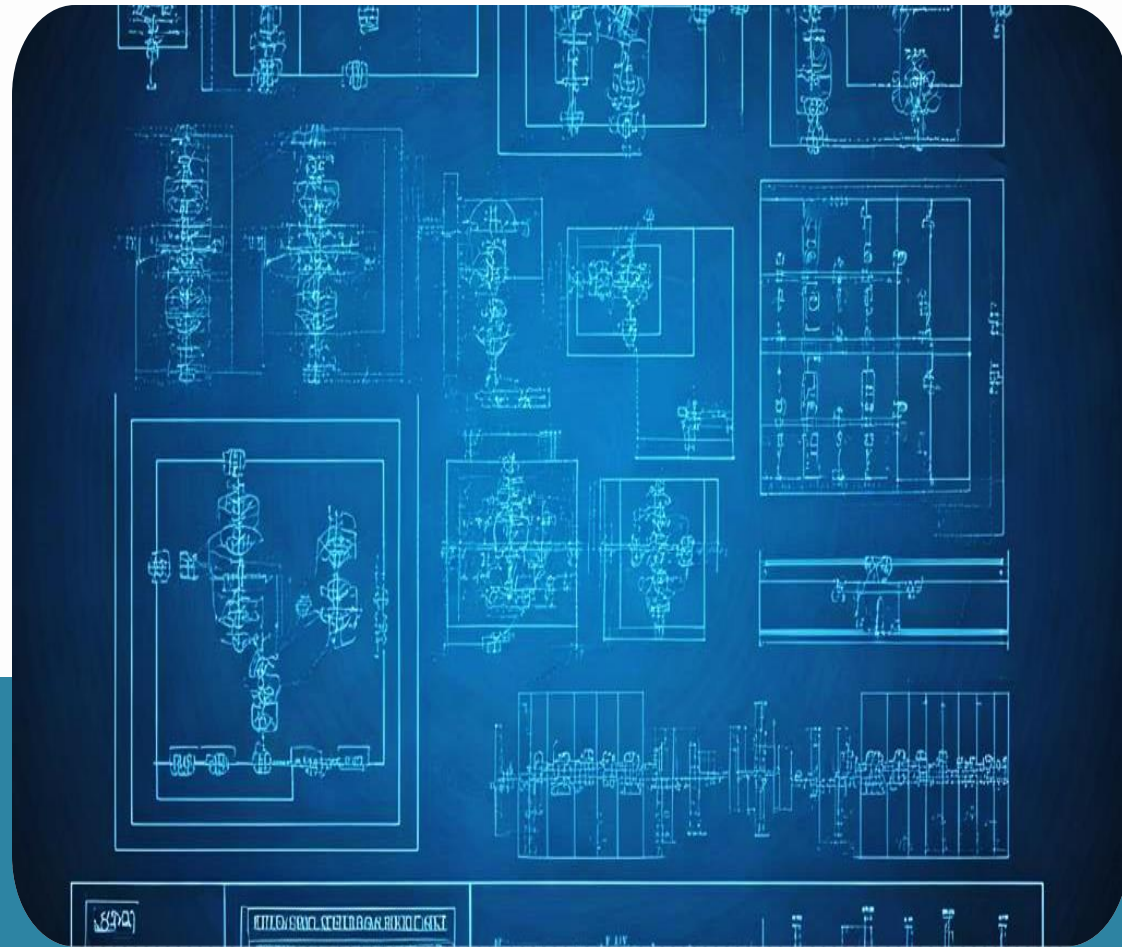


Supports Clean Energy strategies in Australia and abroad



Potential synergy with other renewable energy generation systems

ZEREM TECH PROGRESS



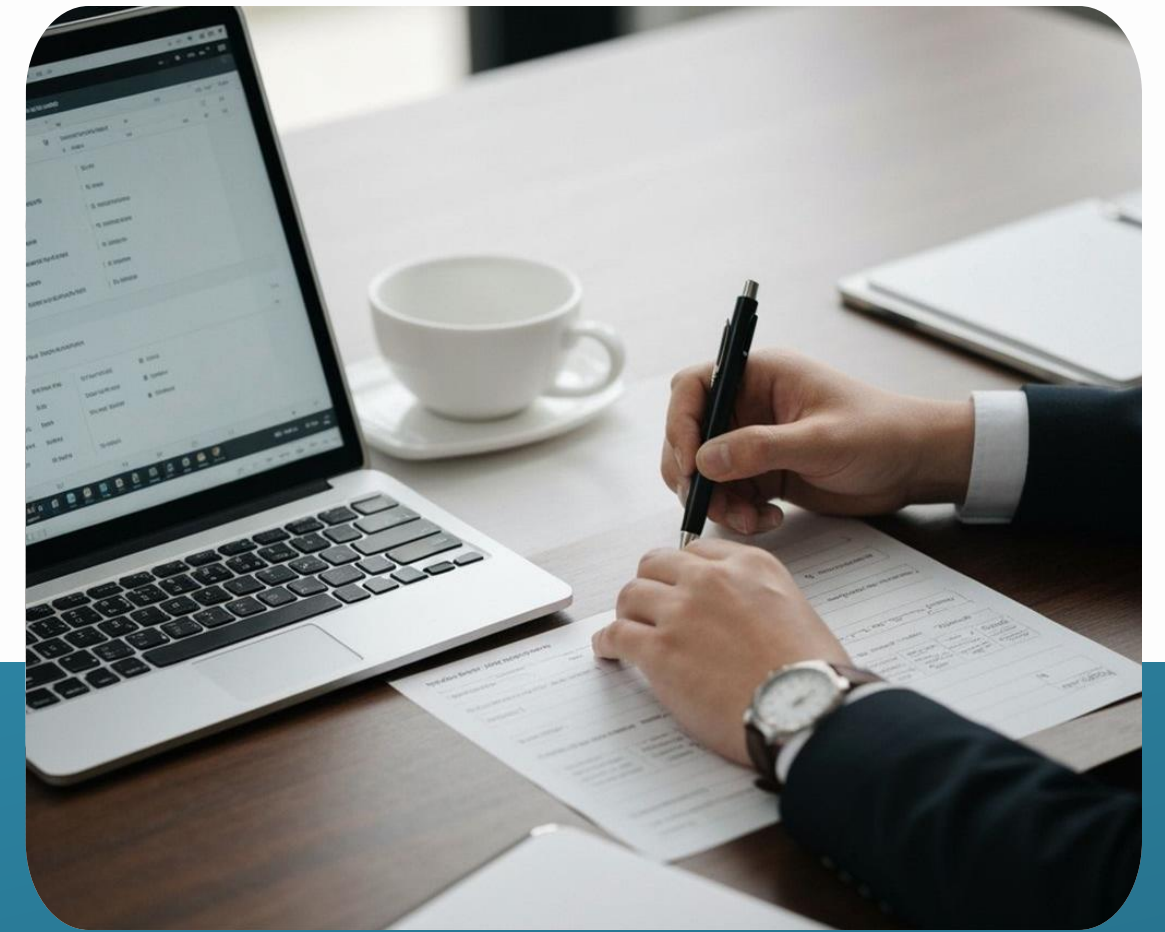
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PRELIMINARY ENGINEERING
SCHEMATICS COMPLETED



2025905702

AUSTRALIAN PROVISIONAL
PATENT FILED



2025

ZEREM TECH PTY LTD
COMPANY ESTABLISHED

FUNDING THE FUTURE

Funding Sought: AUD \$225,000 – \$590,000 (Seed Round)

Goal: Validate prototype performance and scalability toward Series A manufacturing and pilot deployments.

- **Detailed CAD Engineering & 3D Drafting** – Finalise parametric models, fabrication drawings, and FEA verifications (AU\$20k–\$60k).
- **Computational Fluid Dynamics (CFD) Modelling** – Simulate venturi performance, aerodynamic loads, and efficiency optimisation (AU\$35k–\$90k).
- **1:2 Scale Prototype Fabrication** – Manufacture, assemble, and instrument a working sub-scale model for validation (AU\$60k–\$120k).
- **Wind Tunnel Testing** – Controlled environment trials at facilities (AU\$25k–\$80k).
- **Short Urban Trial Program** – Deploy prototype in urban environments for operational proof and durability testing (AU\$30k–\$90k).
- **Project Management & Compliance** – Oversight, documentation, and safety certification support (AU\$20k–\$50k).
- **Contingency Reserve** – ~15–20% allocation for unforeseen engineering or testing costs (AU\$35k–\$100k).



ENERGY YIELD & EFFICIENCY

	Capacity Factor	Installed Cost (AUD/kW)	Annual Energy	LCOE (AUD/MWh)	Visual Impact
MACEG (projected)	25-45 %	2000-4000	40-80 MWh	70-160	Very Low
Onshore Wind	30-40 %	2500-2875	60-100 MWh	80-85	High
Micro-Wind	5-15 %	4000-9000	5-15 MWh	200+	Medium
Rooftop Solar	15-25 %	900-1500	25-45 MWh	50-110	Medium
Diesel	80-90 %	800-1500	Variable	250-400	Medium

Highlight

✓ Solar Supply

✓ High energy

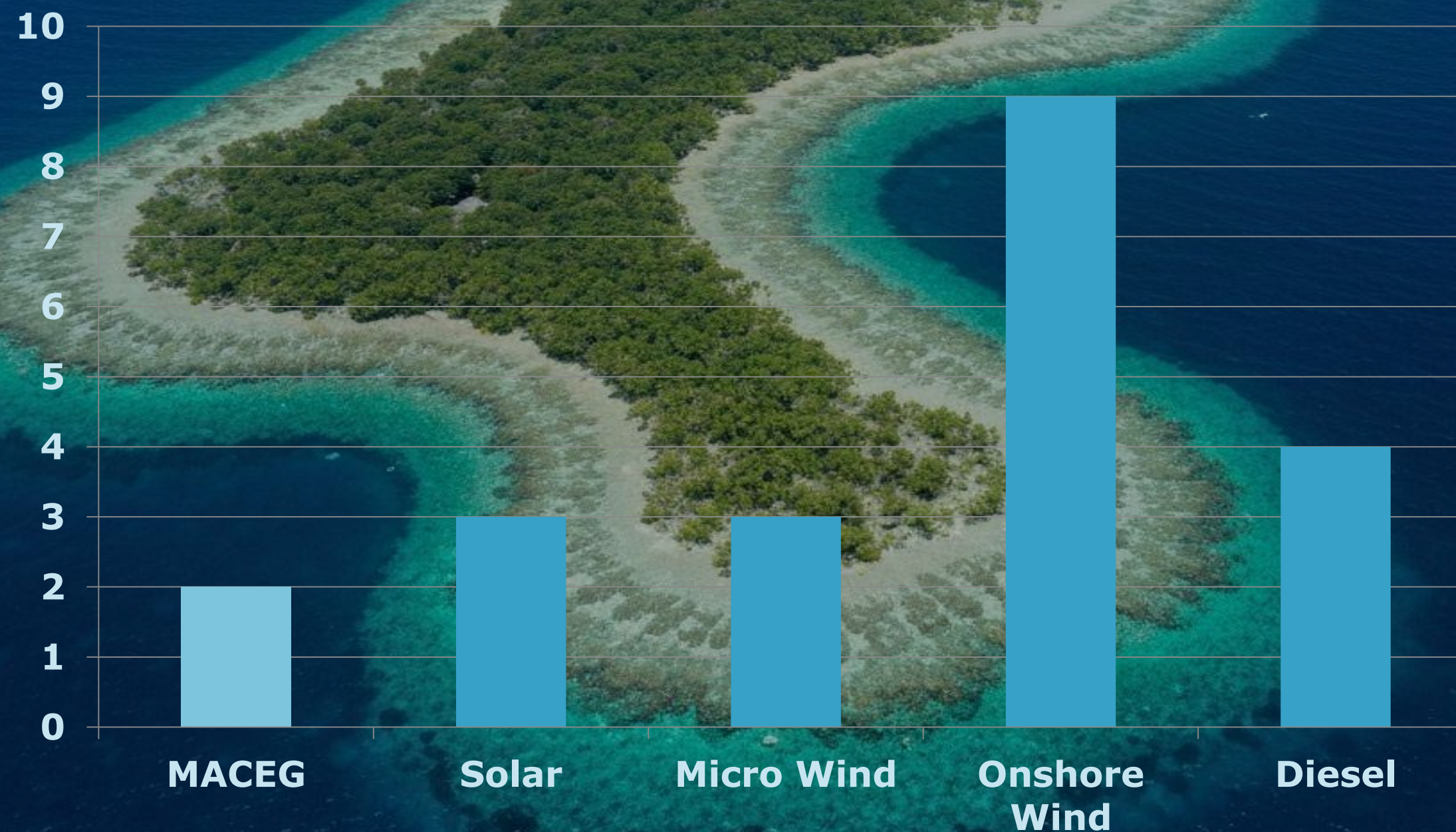
✓ Minimal site

✓ Scalable unit



AESTHETIC & VISUAL IMPACT

INDICATIVE VISUAL / AESTHETIC IMPACT



Environmental Advantages

- ✓ **Urban installation**
- ✓ **Silent operation**
- ✓ **Synergetic with solar**
- ✓ **Low visual impact**
- ✓ **Low maintenance**
- ✓ **Recyclable materials**



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