



Company Profile

Oztron Energy Pty Ltd

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Our Company

Oztron Energy is a Perth based Engineering Company specializing in providing products and services to the Renewable Energy industry since 2013.

Our engineers have both utility and renewable energy experience and can address problems which others find challenging. Our solutions are highly attuned to the appropriate regulatory and technical requirements. Our goal is to provide the advantage of high quality and cost-effective engineering to projects of all sizes to ensure the best solution for our customers.

OZTRON presently services clients in Perth, regional WA, Victoria, NSW, Queensland and Singapore.

Key Technical Personnel

Name	Qualification	Function
Tirthankar Banerjee	Master of Engineering, Electrical and Electronics SMIEE, FIEAust CPEng NER APEC Engineer IntPE(Aus), RPEQ	Founder, Director CTO, Principal Engineer
Binayak Banerjee	Ph.D. Electrical Engineering, Renewable Energy MIEEE, MIEAust, NER	Founder, Director CEO, Principal Engineer
Greg D'Souza	Master of Engineering, Electrical, Controls CPEng, NER, RPEQ	Consultant
Chandra Chatterjee	Diploma Engineering Electrical Electronics	Production Manager
Debabrata Khanrah	Master of Engineering, Electrical	Senior Design Engineer

In addition, there are six more full-time engineers in the team.



Tirthankar Banerjee

SMIEE, FIEAust CPEng NER APEC Engineer IntPE(Aus) RPEQ

Tirthankar, a Post Graduate in Electrical Engineering, has been active in the field of solar energy since the 1980's. For more than 40 years he has served in various senior executive roles in the industry. His experience includes design and execution of Solar PV projects, Solar Farms, stand-alone and hybrid PV systems and Battery Storage. He had been responsible for the design and manufacture of various power electronics products like battery chargers, solar inverters, charge controllers and battery management systems.



Binayak Banerjee

MIEEE, MIEAust NER

Binayak has a diverse experience working in the electrical utility industry as well as in research and teaching. Before commencing his Ph.D. in Electrical Power Systems, he was employed by Western Power where he completed projects in distribution design, reliability, underground power and demand management as part of the Smart Grid rollout for the Perth Solar Cities project.

In addition to the overall management of the Company, Binayak is currently engaged in the development of advanced Microgrid Control Systems. He is an Adjunct Lecturer at the University of Western Australia. Binayak has also published a number of research papers in peer reviewed journals and presented research papers at international conferences.



Greg D'Souza

MIEAust CPEng NER RPEQ

Greg is an experienced Engineer with a Bachelor of Technology (Hons) Degree in Electrical Engineering, a Master of Science Degree in Telecommunications Management.

With over 40 years industry experience in Australia and India, he is skilled in managing and leading a team of engineers and other professionals in the electrical design and automation, project management, installation, commissioning, and practical completion of EPCM projects in core industry sectors like mining, bulk material handling, mineral processing, hydrocarbons, infrastructure, energy, and defence. He is also trained and experienced in Functional Safety evaluation and implementation in greenfield and brownfield projects.

Our Services

Electrical Engineering and Drafting

- LV and HV distribution network design
- Protection System design, fault levels
- Protection grading
- Utility connections
- Network analysis (PowerFactory)
- Electrical drafting
- Updating and maintaining electrical drawings (Microstation, AutoCad)
- Conversion from dwg to dgn format and vice versa
- Protection Relay testing
- Power Quality measurements

Renewable Energy

Oztron Energy can prepare detailed design and engineering drawings for renewable energy projects.

- System Design
- Optimization using HOMER Pro
- Yield assessment using PVSyst
- Detailed Layout, both for Roof-Top and Ground Mounted Systems
- Detailed design for DC and AC side
- Cable Layout, Sizing and Voltage drops
- Protection and Isolation
- Metering, Monitoring, SCADA
- Loss Analysis, shading
- All designs as per the relevant AS/ANZ Standards
- Design management and documentation

Commissioning

- Inspection and Test Plan preparation
- Construction Verification
- Power Quality testing
- Secondary Injection testing
- Inverter and protection system setting
- Communication and Control systems
- Feed-in Management
- Detailed reporting
- Certification by Chartered Engineer (NPER/RPEQ)

Documentation

- Operation and Maintenance manuals
- Document Control
- Drawing format conversion, dgn to dwg and vice versa
- Drawing updates and maintenance on AutoCad and Microstation

Software Tools

- PVSyst
- HOMER Pro
- Microstation Connect
- Autodesk Fusion 360
- Helioscope
- Power CAD
- DraftSight
- AutoCad

Test Instruments

- Fluke 435 II Power Quality Analyzer
- MIRO PQ45 Power Quality Analyzer
- OMICRON CMC 356 Enhanced Protection Relay Test Set
- Other Test and Measurement instruments

In-house Test Set-up

- 30kVA/19.2kWh bidirectional inverter with battery
- 30kWp solar array
- Oztron EMS for testing

Current in-house Engineering capacity: 456 man-hours per week.

Software Capability

Oztron has in-house capability for developing advanced software for controlling and managing renewable energy and battery based installations. This includes creating and managing cloud based database for storing historical data for warranty purpose.

Battery Storage and Microgrids

Oztron is closely working with Horizon Power to develop various technologies for integrating high volume of renewable energy into microgrids and weak regional networks. We have developed in-house capability to design and deploy the necessary control hardware and software. Several battery based Generation Management systems have been installed in Western Australia and are under close monitoring. Oztron is continuously working towards increasing the capability and performance of these systems.

Oztron is currently in discussion with community groups to design and develop microgrids which will subsequently enable whole communities to become energy independent.

Energy Management Systems

Oztron designs, manufactures, installs and manages advanced Energy Management Systems and Microgrid Management Systems. Different models of EMS and MMS are deployed for:

- Battery based Generation Management and Feed-in Management systems
- PV-battery-diesel hybrid systems
- Microgrids – both islanded and grid connected

Research & Development

Oztron has a strong commitment in R&D and been availing R&D tax benefits for the last 3 years for developing advanced energy management techniques for controlling microgrids.

Oztron is currently participating as an industry partner in the Trailblazer programme led by Deakin University and Federation University for developing advanced power conversion equipment for Renewable Energy and Microgrids.