



## Company Capabilities and References

### Company Capabilities

Tropical Energy Solutions Pty Ltd provides turn-key solutions for on-grid and off-grid energy generation, energy saving and demand management applications.

We identify, promote and implement solutions that are clean, reliable and economically viable.

The business is focussed on delivering products and services that suit tropical environments and conditions. Being located in Townsville, Australia we work in close cooperation with leading manufacturers and their representatives. The business operates in three core areas:

- 1 - **Technical Services** for the engineering, project management and operation of innovative energy solutions including the complete development and installation of hybrid off-grid power systems for remote areas
- 2 - **Energy Management Services** for the development of Energy Management Systems, Energy Auditing and Demand Management Strategies for commercial operations and property developments
- 3 - **Education Services** for the training of personnel in renewable energy generation and business sustainable energy management techniques

Tropical Energy Solutions capabilities include:

- Significant experience with commercial scale, off-grid, hybrid power system - design and supply;
- Development of Energy Management Systems for organisations, buildings or specific processes;
- Consulting Services and Energy Audits in accordance with AS/NZS 3598:2000;
- Development and delivery of training programs to assist in the implementation of Energy Management Systems and the recommended actions from Energy Audits;
- Development and delivery of education and training packages in renewable power systems and energy management;
- Technical services for the engineering, project management and operation of innovative energy solutions;
- The ability to meet the requirements and objectives in a wide range of industries and Government agencies.

In all activities we combine best practices with hands-on experience and compliance with the relevant AS/NZS or ISO standards.

The Directors of Tropical Energy Solutions have significant professional experience in the national and international marketplace including:

- Project management;
- Engineering;
- Training and Business development.



# Tropical Energy Solutions

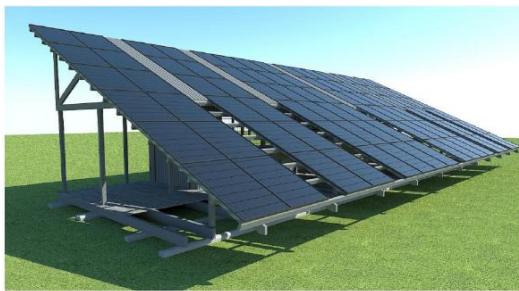
CLEAN > RELIABLE > AFFORDABLE

## Reference Projects

Tropical Energy Solutions has delivered many successful projects for diverse customer requirements including undertakings in Far North, North and South East Queensland. Our customers have been impressed by the results of our work and have highly recommended us to other businesses. A small selection of these projects is listed below.

### System Design and Supply

- Lady Elliot Island Eco Resort - a 150 bed (plus 25 staff) tourism business on a remote island in South East Queensland.
- This project included a Level 3 Energy Audit of the resort operation and site specific recommendations that resulted in significant energy savings.
- A complete new stand-alone 100 kW power system was engineered. It includes a 20kWp PV Solar Generator a 6000Ah battery bank, a 60kW genset and a purpose built shelter. At present all materials are shipped to the island and ground works are commencing. We expect the project to be completed in November 2008.



Referee: Peter Gash, Managing Director, (07) 5536 3644, [peter@ladyelliott.com.au](mailto:peter@ladyelliott.com.au)

### System Refurbishment and Expansion

- The Great Barrier Reef Marine Park Authority - Low Island Facilities (Far North Queensland).
- Tropical Energy Solutions conducted an Energy Audit on Low Island (an important tourist destination which receives 50 - 100 visitors a day), repaired and updated a severely damaged, existing photovoltaic power system. The project's aim was to reduce reliance on diesel generated power. Following the refurbishment the generator ran for less than 3 hours a day compared to 24 hours before.
- Tropical Energy Solutions was then selected to design and install a 5kWp extension to the existing photovoltaic system. Following its installation in August 2008 the island is now completely powered by solar power with redundancy back-up through a bio-diesel genset.



Referee: Commonwealth Islands Group, Great Barrier Reef Marine Park Authority, (07) 4750 0700



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## Energy Audits

- Townsville Orthodontic Specialists – a specialist medical practice with over 20 staff.
- This Level 2 Energy Audit included the analysis of energy usages throughout the surgery and administration operations. Significant saving opportunities were identified and communicated through briefings to the staff and the management team.



Referee: Dr. Paul Hanrahan, Partner, (07) 4775 4433



## Business Education and Development

- Tropical Energy Solutions is part of the ongoing AusIndustry funded BCSE program to train North Queensland businesses in the economic benefits of good energy, water and waste management procedures.
- In awarding its funding AusIndustry recognised the relevant knowledge and skills held by Tropical Energy Solutions and the three partner companies within this project. The project is titled 'Going Green – learn, do and save' and administered by Kleinhardt Business Consultants through the Kleinhardt Eco-Efficiency and Sustainability Group.
- Tropical Energy Solutions has provided workshop content, technical expertise for the development of an on-line audit tool and delivered all seminars throughout the North Queensland Region.

Referee: Graham Poon, Senior Business Consultant, (07) 4040 7100, [graham@kleinhardt.com.au](mailto:graham@kleinhardt.com.au)

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