

UDCS Consulting Project Summary

THE COMPANY

UDCS Consulting provides

- survey and
- engineering consultancy services

to the

- electricity
- infrastructure
- mining
- commercial sectors

The primary works being undertaken are in reticulation, distribution and transmission of power, water and gas.

Our Clients

Domestic and foreign Utilities

Major construction companies

Government & Private asset owners.

Services Offered

Engineering Survey

Electrical Distribution Design

Sub-transmission OH Design

Sub-transmission UG Design

Substation Design

Preparation of environmental reviews

Developer initiated Design

Solar Power and Lighting Design

Road Lighting Design

HV Auditing (QLD ESO)

Contact Details

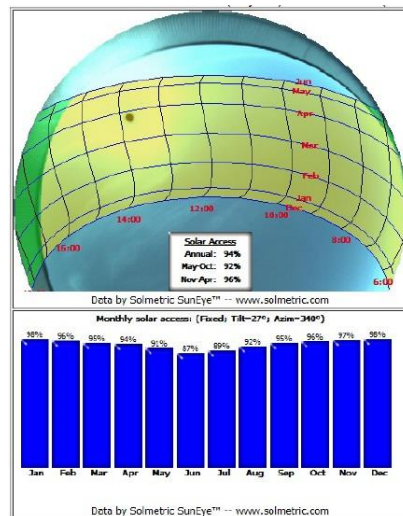
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100kW PV Grid Connected System John Barnes & Co



Project Scope

UDCS Consulting was engaged to provide a Grid Connected PV Study to assist the installation contractor with the tendering of a 99kW Grid Connected PV system at John Barnes and Co Locksmiths..

The study encompassed reviewing Energex's local distribution network and the design of an appropriately sized solar system. The primary brief was to advise on the best size fit to obtain a zero bill or consider a most economical solution within current regulations.

Key Personal

Client: John Barnes and Co
Consulting Engineers: Kerry Prickett
Stephen Edwards

Our Involvement

The study included:

- An on-site assessment, including shade analysis using a Solmetric Suneye to establish the effects of shading on the proposed PV array, and establish the space limitations surrounding the proposed system.
- Inspection of Energex and Private LV supply system to establish the system limitations.
- Analysis of historical billing data to establish current and future load trends.
- Develop a concept Grid Connected PV design including a list of proposed PV modules, inverters, cables and racking system.

Project Outcomes

Based on the analysis of the site we concluded that the space available could only accommodate 368 PV modules giving a peak capacity of 92kW before array derating. Using the shading analysis results along with standard variables and manufacturer's data the system output was established as 365kWh/day which would provide an annual saving of \$23 775 per year to the customer.

The PV system design was in line with AS/NZS4777 and the Clean Energy Council Design guidelines. All wiring and cabling was designed as per AS/NZS 3000 and AS/NZS 3008.