

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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Toowoomba Region OHL Rating Studies



Project Achievements/Outcomes

- A cost saving to Ergon Energy in the order of \$400 000.
- The early completion of this phase of works
- The acceleration of other works due to early completion of this phase of works.
- Project successfully delivered on time and to the requirements of Ergon Energy.

Key Staff

Surveyor: Phil Tebbutt
Design Engineer: Kerry Prickett

Project Scope

Ergon Energy engaged UDCS Consulting to provide detailed survey and design services to upgrade three 33kV feeders in the western suburbs of Toowoomba (Vacy St, Wyalla St and Hampton St feeders).

The network upgrades need to be undertaken quickly to ensure the loading requirements could be met for the following summer peak. On arriving on-site and collecting data to facilitate the upgrades it became evident that the internally performed rating study was flawed. The project scope was altered to include a complete rating study and undertake detailed design to facilitate the necessary upgrades.

Rating Study Method

There are three main components to determining feeder ratings: 1) Data Capture, 2) Data Processing and Line Modeling and 3) Rating Analysis and reporting.

The studies were carried out to meet static operational design limits with digital terrain and conductor models established using PLS Cadd™. The studies were conducted in line with ESAA publications D(b)5-1987 "Current Rating of Overhead Line Conductors" and C(b)1 – 2006 "Guidelines for Design and Maintenance of Overhead Distribution and Transmission Lines".