



Port Moresby Power System, PNG

The Independent Public Business Corporation (IPBC) of Papua New Guinea (PNG) oversees a number of Government owned businesses including PNG Power. In response to continuing poor reliability of electricity supply in Port Moresby, IPBC engaged Evans & Peck to conduct a review of the Port Moresby power system.

Electricity users in Port Moresby experience power outages nearly every day, totalling up to hundreds of hours each year.

Although the system is not large enough to achieve International standards, the objective of the review was to put in place a strategy that would achieve significantly improved results, commensurate with a major city in the midst of a resources boom.

FACTS AND FIGURES

Client: Independent Public Business Corporation of PNG

E&P involvement: 2011

Evans & Peck's role

Evans & Peck was engaged by IPBC to review the Port Moresby Power System from a generation, transmission and distribution perspective. Port Moresby is served by a number of hydro and liquid fuelled power stations including some new plants. However, rolling blackouts continue.

The review was aimed at improving the reliability of and reporting on Port Moresby power assets. It involved evaluating planning, system adequacy, maintenance, reliability and policy issues.

As part of the review, Evans & Peck modelled the entire 66kV transmission system and associated generation plus loads. This enabled determination of transmission losses, reactive power compensation requirements and transmission performance under contingency events (major line outages). In addition, risk based probability models were built to enable an assessment of likely future performance if current plant reliability continued in the context of resource-led growth on the system. A 'what if' analysis was then completed to see what would happen if plant could achieve reliability commensurate with good industry practice.

Results

The review provided a series of recommendations relating to capital and operating initiatives, and reporting frameworks aimed at providing a policy framework to achieve a quantum improvement in performance over coming years.

Reviewing the Port Moresby power system to minimise rolling power blackouts

