



Electricity Distributors require connectivity solutions for the control and management of the network. Control requirements include the ability to remotely operate switching and protection equipment with real time measurement of energy flows becoming critical.



Ergon Energy supplies electricity across a diverse service area of more than one million square kilometres. The network is comprised of 160,000 km of powerlines serving 733,000 customers. To monitor and control the electricity network Ergon Energy proposed to implement a private cellular network to provide communication to network devices and electricity meters.

The Business Challenge

Ergon Energy secured the licence for spectrum suitable for the installation of a private cellular network throughout regional Queensland. Following the development and submission of a business case, a project was created for the implementation of a private cellular network. The major challenges included that typically only carriers implement cellular networks and the proposed network model of data only. Ergon Energy had a significant and high quality underlying telecommunication network that supported existing commercial and operational requirements.

By implementing a private network, Ergon Energy aimed to achieve two key strategic outcomes that were ability to manage and control the performance of data communication links plus ensure an ongoing competitive tension with existing network providers to minimise long term costs.

The Gravelroad Solution

Although Ergon Energy had significant internal telecommunication technical skills, additional support was required in terms of carrier based network infrastructure and the management of large projects. Gravelroad built on strong radio engineering and previous carrier experience to support the end to end process from tender, through implementation and integration into day to day operations.

Gravelroad was engaged to provide project oversight for both procurement and delivery.

Key functions provided by Gravelroad included the development of the technical requirements for inclusion in the market request, participating in the tender evaluation including

the justification of the preferred option, commercial negotiations, management of the supplier contract throughout project, base station site selection and coordination of Ergon Energy internal resources.

The tender respondents included all of the major international telecommunication network equipment suppliers and the successful supplier has delivered networks across the world.

A key success of the project was the development by Gravelroad of a base station solution that enabled the installation of base stations on distribution power poles with minimum network interruption and integrated standby power allowing the communication network to continue to operate when mains power was lost providing a platform for service restoration.

The Outcome

The multimillion-dollar network was successfully constructed, on time and on budget and integrated into Ergon Energy's network operations.

Ergon Energy now have a Cellular Network with primary and redundant cores plus base stations installed in the majority of Queensland regional population centres. The HSPA+ Network provides connectivity to electricity network control devices and metering devices with the ability to expand the network to up to one million customers.

Related Work

Gravelroad has supported many clients in the procurement and delivery of large radio networks.

Gravelroad is an independent professional change management consulting firm with a difference. What sets us apart is our customer centric culture, which drives our collaborative approach. The combination of our teams' deep and practical industry experience, our ability to work in close partnership with our Clients, and our independence from any one solution, enables us to provide Clients with advice that is aligned to their strategic direction.

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SERVICES

- Project Planning
- Project Governance
- Analysis and Evaluation
- Coverage Mapping
- Commercial Negotiation