



DESIGN AND ENGINEERING

Northpower has a proud record of providing innovative solutions across a broad range of high voltage and low voltage electrical requirements. Whether your need is for a new or upgraded substation, a commercial lighting system or reticulation to a new subdivision, we provide tailored solutions with an emphasis on commercial viability, safety, functionality and reliability.

“safe, reliable, hassle free service”

Head Office | 28 Mt Pleasant Road | Raumanga | Whangarei 0110 | Private Bag 9018 | Whangarei Mail Centre | Whangarei 0148 | New Zealand
Ph: 09 430 1803 | Fax: 09 430 1804 | info@northpower.com | www.northpower.com

Northpower

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Northpower has extensive experience gained in constructing and expanding its own electricity network which comprises a hydro electric power station and zone substations with subtransmission and distribution networks.

As a network operator we understand the complexities of building, developing and maintaining a network from both a cost structure and return on investment point of view, thus driving an integrated design and engineering model. We aim to develop long-term relationships with clients by consistently meeting their requirements in terms of flexibility, innovation, quality and timeliness.

Our Design and Engineering division was developed through our involvement in contracting across a variety of industries and combines practical solutions with the latest design and engineering standards. We have delivered a diverse range of turnkey solutions on both the Northpower network and other client networks. Since 2003 we have developed into a major telecommunications design consultancy with specialisation in fibre optic architecture.

We offer clients the flexibility of design-only options should they wish to manage the tender and construction phases.

We have a team of qualified staff backed by many years of professional and practical experience both within New Zealand and overseas, including Australia, South Africa, continental Africa, the Pacific Islands, the United Kingdom, Fiji and Germany. We have 17 staff who are qualified to Bachelor of Engineering Degree level or equivalent and 19 staff who hold the New Zealand Certificate of Engineering or a comparable qualification.

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ELECTRICAL NETWORK DESIGN CAPABILITIES:

- Transmission and sub-transmission pole line and cable design
- Distribution networks reticulation design (including HV feeders and LV services)
- Reticulation design for industrial, commercial and residential subdivisions
- Zone Substation building and equipment (power transformers, circuit breakers, switchboard, protection and control panels)
- Configuration and commissioning of SCADA , protection and control systems
- Electrical power network analysis and modeling
- Design of Overhead to Underground power conversions
- Rural power lines extensions and connections
- Industrial HV customer advice and support
- Building services (CAT 5 & 6, structured cabling systems, MCCs, UPSs, power, data, security, metering)
- Commercial and residential wiring
- Commercial lighting design
- Geographic Information System support

FIBRE OPTIC COMMUNICATIONS DESIGN CAPABILITIES:

- Fully conversant and experienced with developments in various network architectures (EPON, GPON etc.)
- Layer 2 and Layer 3 configuration and design
- Complete integration of Indoor and Outdoor Plant
- Design and construction of both aerial and underground networks for both Greenfields and Brownfields environments



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