

Utility Consultants Ltd

Advisors to the utility and infrastructure industries



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Utility Consultants has strategy, policy and regulatory expertise in the electricity and gas sectors at the intersection of opportunities, performance, risk and cost. This profile describes some recent projects (in no particular order). For further information please call me at the above number or visit the website. Utility Consultants has advised clients in the following countries...

- New Zealand
- Australia
- Tonga
- United States
- Canada
- Sweden
- South Africa
- Philippines

Utility Consultants' director, Phil Caffyn, is a Chartered Professional Engineer (CPEng) and an International Professional Engineer (IntPE), and is a 40 year veteran of the NZ electricity sector.

Transaction advisory

- Compiled CapEx forecasts, OpEx forecasts and commercial / market risk assessments for a buy-side advisory report for a major gas and electric company.
- Compiled 30 year CapEx forecasts, assessed regulatory risks and assessed technical risks for a sell-side technical advisory report for a major electric and gas company.
- Assessed asset condition forecasts and RepEx forecasts on behalf of a bidder for New Zealand lines business.
- Assessed CapEx forecasts and asset condition risks on behalf of a network investor.

- Assessed the value drivers for an EDB to purchase a 110kV line.
- Prepared a proposal and associated financial analysis for a New Zealand lines business to purchase Council street lights.
- Advised a City Council on the implications of a large network sale.
- Assessed the investment characteristics of a power network in New Zealand as part of an acquisition strategy.
- Performed due diligence of two power networks and a group of gas turbine power stations in New Zealand.
- Advised three New Zealand electricity lines companies on a range of acquisition issues.
- Advised a New Zealand electricity lines company on structuring an acquisition deal for another electricity company.
- Advised an Australian utility on possible acquisition options of professional services companies.
- Advised an Australian power utility on possible acquisitions of electrical contracting companies.
- Advised an Australian power utility on possible asset management opportunities in New Zealand.
- Prepared a bid on behalf of a New Zealand electricity company to reticulate a major industrial park.
- Prepared a bid on behalf of a medium-sized NZ lines business to reticulate a Greenfield residential development.

Asset management

- Assessing the alignment of an EDB's lifecycle planning strategy against external and internal standards.
- Assisting a large solar farm operator to identify suitable CMMS options.

- Assessing the suitability of an electricity lines company's security of supply standards, and making recommendations for a revised standard.
- Developed and facilitated an asset management practices improvement program for 3 EDB's with particular emphasis on improving the information feeding into lifecycle decisions.
- Assessing a large electricity generators AMP's against their own internal risk standards.
- Preparation of a detailed asset management plan for a small Pacific island electric company.
- Developed an asset management framework for a fiber network.
- Development of an overhead conductor strategy for a large EDB.
- Developing a template for improving a large electricity generator's AMP's
- Assessed the asset management practices of 14 NZ lines businesses against the AMMAT framework as part of the Information Disclosure requirements.
- Written, re-written, modified or independently assessed the asset management plans for 26 of New Zealand's 29 electricity lines companies.
- Assessed a large multi-utility's asset management practices against several recognised frameworks.
- Assessment of overhead line inspection practices as part of an expert witness case.
- Amended a gas transmission AMP to strengthen the economic arguments.
- Developed a smart grid strategy for a New Zealand lines business, and assessed the likely impacts on spend estimates.
- Developed an Excel-based tool for a New Zealand lines business to more objectively estimate the remaining life of key distribution assets.
- Prepared an asset management plan template to support an Australian lines business' regulatory proposal.
- Developed an asset management framework for a gas distribution business that links strongly to the regulatory requirements.

- Assisted the writing of asset management plans for 2 of New Zealand's councils covering wastewater, storm water, community facilities and landfills.
- Advised a major African transmission business on how to strengthen its intelligence gathering processes and ICT support.
- Assisted a large Australian lines business to strengthen its identification of CapEx-OpEx tradeoffs.
- Assisted a medium-sized NZ lines business to identify possible CapEx-OpEx tradeoffs.
- Assisted a large Australian lines business to strengthen its Reliability Centered Maintenance practices.
- Assisted a major Australian electricity business to develop an asset management framework.
- Assisted a medium-sized NZ lines business to strengthen its asset inspection processes.
- Assisted a major mining company to strengthen its fixed asset management practices.
- Advised a medium-sized lines business on the status of PAS 55-1 in New Zealand regulatory thinking.
- Developed an asset strategy for a medium-sized NZ lines business.
- Identified options for improving security of supply for a medium-sized NZ lines business.
- Identified HV bus section switching practices for a medium-sized NZ lines business.
- Reviewed current New Zealand, Australian and UK security of supply practices and emerging global issues on behalf of a New Zealand electricity lines company.
- Advised a large NZ lines business on life extension techniques for wooden and concrete poles.
- Provided an independent assessment of the implementation of a large New Zealand lines company's asset management plan.

- Reviewed the content and format of the draft AMP of a major rail owner.
- Merged the asset management and long-term capital development plans for two electricity lines companies following a merger.
- Developed a condition-driven maintenance plan for two New Zealand electricity lines companies and for a major thermal power station.
- Performed a range of engineering and operational studies and investigations in electricity lines companies, hydro power stations and thermal power stations covering electrical, instrumentation, mechanical and environmental disciplines.
- Assisted a medium-sized New Zealand electricity lines business to optimise its pole inspection processes and volume to better match available resources without compromising safety or reliability.
- Assisted a medium-sized New Zealand electricity lines business to optimise its tree trimming processes.
- Drafted a submission on the Electricity Commission's demand forecasting methodology for a small New Zealand electricity lines company.
- Assisted a medium-sized lines business to draft asset inspection policies in order to minimise its public safety risks.
- Identified conceptual options for a large lines business to avoid new zone substation investment.
- Prepared an asset strategy for a medium sized lines business to identify likely trends and asset configuration requirements.
- Identified options for providing increased security of supply for a medium sized lines business, including assessing options against financial, regulatory, commercial and strategic criteria.
- Examined zone substation HV bus section switching practices for a medium sized lines business.
- Assisted a medium-sized NZ lines business to develop a policy on allowable flicker from generation.

- Advised a medium-sized NZ lines business on the implications of a replacement transmission GXP.
- Advised a large NZ lines business on how to strengthen its CapEx governance framework.
- Examined electricity distribution asset life extension techniques on behalf of a large NZ lines business.
- Advised a medium sized NZ lines business on the ratings of its sub-transmission lines and cables.
- Prepared an independent demand forecast for a transmission utility to support a regulatory proposal for grid investment.

Risk management

- Developed comprehensive risk frameworks based on ISO 31000 for non-electricity companies, including reporting templates.
- Compilation of risk committee charters for 2 non-electricity companies.
- Identified options for minimizing the safety risk of customer-owned lines.
- Performed a qualitative sub-transmission security of supply assessment for a medium-sized NZ lines business, including identification of options for improving security.
- Performed several studies assessing the long-term risk of supply interruption due to zone substation transformer capacities.
- Performed network physical risk assessments for six New Zealand electricity lines companies.
- Prepared natural disaster recovery plans for four New Zealand electricity lines companies.
- Prepared business continuity plans for four New Zealand electricity lines companies.
- Prepared restoration plans from key asset failure events for four New Zealand electricity lines companies.
- Advised a New Zealand council on the risk exposure of its sewage activity.

- Preparation of building evacuation procedures for a medium-sized lines business.
- Advised a large Australian lines business on how to strengthen its understanding of in-service asset failure risk.
- Advised a medium-sized NZ lines business on the emerging electrical public safety regulations.
- Advised a major mining company on the requirements of emerging public electrical safety regulations.
- Performed an electricity supply reliability assessment for a major mining company.
- Advised a medium-sized NZ lines business on the safety issues of ground mount switches.

Energy transition & digital transformation

- Identifying emerging best practices for community-scale and grid-scale batteries for an Australian lines company.
- Advised an Australian electric company on how the Regulator has treated network transformation expenditure.
- Identifying best practices in EV charging for an Australian lines company, including likely regulatory treatment of chargers.
- Compiled an EV charging strategy including estimates of the number of EV's, likely charging habits and possible tariff options.
- Compiling a solar PV market intelligence report for an EDB.
- Compiled a regulatory submission on proposed regulatory settings for DER's on behalf of an EDB.
- Identifying the key features of distributor-led transition from a DNO to a DSO or DMO.
- Assess solar PV investment opportunities on behalf of a private investor.
- Identified emerging practices in DER integration.

- Compiled a regulatory submission on EV charging on behalf of an EDB.
- Advised a US electric company on the role that demand aggregators are playing in the Australian NEM, and how that demand aggregation might defer distribution feeder investment.
- Advised a US electric company on Australian best practices in EV charging, including what value streams are available.
- Advised a US electric company on which Australian electric companies have the best behind-the-meter practices.
- Advised a US electric company on the likely costs of DER integration based on recent Australian regulatory proposals.
- Advised a US electric company on how DERMS in NZ and Australia are altering CapEx and OpEx requirements.

Climate response, resilience and governance

- Aligning an electric company's governance framework to the Taskforce on Climate-related Financial Disclosure (TCFD) recommendations.
- Compiling a TCFD reporting framework for an electric distribution company.
- Translating climate policy into infrastructure asset management practices.
- Linking an electric distribution company's asset management practices to climate predictions.
- Identifying leading global practices for electric company climate resilience, including developing specific asset strategies.
- Assisting 2 electric companies to identify the revenue growth opportunities as decarbonisation creates new markets for energy services.
- Amending risk management frameworks to include climate risk identification, quantification and mitigation.

Economic & structural regulation

- Examined contestability and depth of regional markets for heavy electrical contracting as part of advising 6 electricity lines companies on the related party transaction aspects of information disclosure.
- Advised an electricity lines company on the issues around possible re-regulation.
- Assessed the prudence and efficiency of 3 EDB's spend forecasts against the expenditure objective as a prelude to compiling the AMP's.
- Advised 2 Australian electric companies on the aspects of its regulatory proposal that could be strengthened in response to previous regulatory determinations.
- Provided an Engineer's Report to support a Customised Price Path application.
- Analysed the impact of a Australian regulatory regime on an electric company's spending as an expert witness.
- Analysing the reduction in OpEx costs from 2 revenue determinations as part of an expert witness case.
- Aligned a gas transmission AMP to the Customised Price Path requirements.
- Advised a medium-sized Australian lines business on the regulatory implications of its proposed in-sourcing arrangements.
- Identified a range of economic and regulatory arguments to support inclusion of a transmission interconnection charge risk component in network tariffs for a New Zealand lines business.
- Prepared a submission on customer insolvency and prudential requirements on behalf of a New Zealand lines business.
- Prepared a submission on metering equipment provider issues on behalf of a small New Zealand lines business.
- Identified a range of potentially suitably independent verifiers for a gas transmission utility to support a possible Customised Price Path application.
- Advised a medium-sized Australian lines business on the asset management practice improvements necessary to support its' Regulatory Proposal.
- Advised a medium-sized Australian lines business on trends in asset management practices based on recent regulatory decisions.

- Advised a medium-sized lines business on the supporting information that a customised price path is likely to need.
- Advised a medium sized lines business on the origins of the 2.5 β criteria for excluding extreme weather events from SAIDI calculations.
- Advised a large Australian lines business on strengthening the CapEx chapter of its Revised Proposal.
- Advised 2 large lines businesses on key issues and concerns with regulator's proposed treatment of CapEx and OpEx.
- Advised a Canadian lines business on asset management practices in New Zealand as part of their overview of global AM practices to support a price reset.
- Advised a large Australian line business on how to strengthen its Regulatory Proposal.
- Critiqued a regulatory discussion paper on treatment of CapEx for a large New Zealand electricity and gas distributor.
- Advised a medium-sized lines business on the expected requirements of the impending Safety Management Systems.
- Developed a conceptual model to assist a large NZ lines business identify uneconomic lines.
- Advised an international energy utility on the regulatory trends in the NZ gas distribution industry.
- Drafted a submission on extreme weather events for a small New Zealand electricity lines business.
- Drafted a submission on the Electricity Commission's principal objectives for a small New Zealand electricity lines business.
- Prepared an industry-wide summary of the implications of the national energy strategy for New Zealand electricity lines companies.
- Prepared submissions on the proposed regulation of distributed generation.

- Prepared a submission on behalf of a medium-sized lines business identifying issues preventing the reclassification of a transmission grid asset for pricing purposes.
- Analysed a recent electricity regulatory decision to identify key issues for New Zealand electricity lines companies.
- Advised a New Zealand electricity lines company on various aspects of the transmission grid pricing methodology including preparation of a submission to the regulator.
- Assisted a New Zealand electricity lines company to verify that its revenue complied with the required regulatory regime.
- Assisted ten New Zealand electricity lines companies to consult with their customers as required by the regulatory regime.
- Prepared a submission on the Grid Investment Test on behalf of a New Zealand electricity lines company.
- Prepared a submission on behalf of a New Zealand electricity lines company in response to the regulators proposed information disclosure regime.
- Prepared a submission on behalf of a New Zealand electricity lines company in response to the regulators proposed asset valuation methodology.
- Advised an Australian electricity company on the likely implications of separating lines and energy businesses.
- Prepared a submission on behalf of a New Zealand electricity lines company in response to the regulators proposed grid investment test, transmission pricing methodology and retail market activity indicators.
- Prepared a summary of recent global regulatory decisions on behalf of a major New Zealand electricity lines company.
- Assisted a major New Zealand electricity lines company to identify the burden of proof implied by recent regulatory determinations.
- Prepared a suite of distributed generation connection information for six New Zealand electricity lines companies that comply with the regulations.
- Advised 4 lines companies on how to comply with their obligations to implement a public safety management system.

Strategic studies

- Identified a range of structural and service delivery models for an investor-owned electric company.
- Compiled reports to assist with 4 energy trust ownership reviews, including assessing options for future ownership.
- Assessed the electricity regulatory framework in Australian states as part of a market entry strategy.
- Advised an Australian gas utility on the various structural models used in the industry.
- Advised the shareholding trust of a New Zealand electricity lines company on possible options for future ownership.
- Advised a New Zealand gas company on the strategic implications of acquiring a major gas pipeline.
- Advised a New Zealand electricity company on the implications of the exit of a major player.
- Prepared a statement of corporate intent for a New Zealand electricity lines company that met the relevant legal requirements.
- Prepared a strategic plan to position a New Zealand electricity lines company for growth.
- Advised an electricity trust on the possibility of acquiring a large electricity lines business.
- Advised a New Zealand gas company on recent gas pipeline acquisitions in Australia.
- Advised a New Zealand electricity company on the strategic issues surrounding a wood-waste fired power plant.
- Advised a New Zealand gas company on possible acquisition opportunities arising from the exit of a major industry player.
- Recommended a staff structure for the asset management function of a large Australian electricity distributor.

- Examining the feasibility of using electric traction wires and electric locomotives as a back-up transmission line and mobile substation.
- Examining the feasibility of using diesel-electric locomotives as portable diesel generators.

Board advisory & assurance

- Provided assurance to a shareholder that a proposed beneficiary restructuring was technically possible.
- Assessed the long-term investment characteristics of an investor-owned electric company.
- Identification of a range of structural and service delivery models for an electric company.
- Provided assurance that an asset management plan was sufficiently robust to enable directors to fulfil their statutory obligations.
- Provided assurance to an electricity lines company's board that recalculated SAIFI's would not materially affect compilation of the next revenue control.
- Provided assurance to an electricity lines company's board that its use of system agreements (UoSA's) were legally compliant and aligned to industry practices.
- Prepared an assurance report for the board of an electricity lines company in regard to fault restoration procedures being appropriately resourced and aligned to industry practices.
- Performed an assurance review of wood pole inspection procedures, in particular around numbers of inspections being performed.
- Providing assurance that the risks around a planned hydro station head gate refurbishment had been correctly identified and assessed.
- Provided assurance that an electric company's asset management practices were robust against recognised frameworks and standards.

Financial analysis

- Assisted a large US electric and gas company to identify opportunities for additional capitalisation of OpEx in accordance with State allowances.
- Compiled a global analysis of transmission prices as a percent of total residential electric bills.
- Assisted with the cost and performance benchmarking of an Australian hydro generation business.
- Performed a high-level benchmarking of pole replacement costs for a large NZ lines business.
- Advised a large Australian lines business on how to strengthen its CapEx governance processes.
- Peer reviewed the proposed network asset valuation methodology of a small lines business.
- Determined the value of load control to a large NZ lines business.
- Assisted a medium-sized New Zealand electricity lines company to strengthen its CapEx analysis and approval procedures.
- Advised the shareholding trust of a New Zealand electricity lines company on its dividend payout level.
- Independently bench marked the cost performance of twelve New Zealand electricity lines companies.
- Valued three electricity lines companies as part of possible acquisition bids.
- Performed numerous cost-benefit analyses of investment and acquisition opportunities and prepared the associated business cases.
- Advised a New Zealand gas company on target market tariffs in order to define a market entry position.
- Prepared a methodology for valuing investment drivers for a large Australian electricity distributor.
- Prepared an up-front payment policy for a large NZ lines business.

Project controls

- Development of an engineering projects control program for a group of 4 thermal power stations.
- Development of a capital projects control template for a charitable organisation.
- Development a framework for understanding building project and funding risks, including consideration of the robustness of cost forecasts.

This profile was last updated on 27 December 2024.