

CurrentAffairs

News and views from Ergo Consulting Ltd

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Strategy matters

Today's business environment is competitive and constantly changing. There is no room for complacency – companies cannot afford to keep doing things the way they always have. To take advantage of new opportunities they need to be thoughtful about their approach going forward. The best way to do this is with a strategic plan.

Chris and I have spent time formulating Ergo's strategic plan. The plan, which can be viewed on our website, centres on six key areas. They are:

- Value
- People
- Delivery
- Marketing
- Customers
- Longevity

Common to all areas is the goal of growing a broad and loyal client base and increasing the depth and breadth of work done for clients. Ergo aims to do this by fostering positive relationships, understanding client needs, and where possible exceeding client expectations.

Our strategic plan has led us to offer:

A complete electrical engineering solution. We have recently employed a technical specialist in the area of control system software. A protection engineer is also being actively recruited to compliment Steve Timmins.

Multi-discipline engineering services. To achieve this we have formed alliances with like-minded consultancies in other engineering disciplines.

A stand-alone project management service. We have provided this component as a matter of course on a number of projects to date.

As always we value your feedback. If you wish to comment on Ergo's direction, please contact Chris or myself to discuss.



Nigel Stevenson

Nigel Stevenson
Director – Control Systems

New@Ergo

Staff who joined Ergo this winter are Megan Martin (Administration), Eshan Verma (Power Systems) and Mike Willetts (Control Systems). Megan has had a seventeen year career in administration, most recently as an event co-ordinator for Peek Exhibition. Eshan is working part-time while he completes his engineering degree at AUT. He is currently on secondment to a network company doing RTU replacements. Mike's background is in water, wastewater, generation and industry. He has worked as a control systems engineer for three other consultancies.



Fresh faces: Mike Willetts, Megan Martin and Eshan Verma.

Newsflash – Auckland's best workplace

Ergo recently won a competition run by 'Auckland Bridge Climb and Bungy' to find Auckland's best workplace. The winning entry was an off-the-cuff poem written by Support Services Manager Jen Southan. The prize was an Auckland Bridge Climb for the whole company. Twelve staff made it clear they were a little loopy by bungy jumping off the bridge as well.



Email option. Some clients have told us they prefer an email newsletter over a printed one. If this is you, simply send an email to enquiries@ergo.co.nz with 'Please Email Newsletter' in the subject line.

Ergo's Annual Soirée

Ergo was pleased to host its valued clients, suppliers and friends at its annual function. The function was held at the auspicious Urban Café, which not only put on great food but reasonable weather. With wine tasting from greatlittlevineyards.com and a Skycity Experience prize, a great night was had by all. We thank everyone who came along.



Tanya Wylie – Thorburn Consultants, Chris Turney – Ergo, John Templeton – Pacific Steel.



Jeff Vaughan – HV Power, Tony Cox – KCCA, Nigel Stevenson – Ergo.

Power Quality Analysis

Growing concern about power quality has led Ergo to acquire an Elspec G3500 Power Quality Analyser (PQA).

Role of the PQA

Dirty loads are becoming more common with increased use of variable speed drives and switched mode power supplies. A PQA will confirm whether there is a power quality issue (it is easy to blame power quality for equipment failure), identify the nature of the problem (harmonics, flicker, under-voltage) and the source (internal or external). Best practice is to install a PQA for a week and check the quality against a standard. The commonly accepted standard in New Zealand being IEC61000-4.

Downside of hiring

Consultants tend to hire PQAs and pass the cost directly on to the client. The downside to this approach is:

- Expense to the client – the hire cost is typically \$500 per day x seven days for a sensible analysis (\$3,500).
- Lack of convenience – PQAs have to be uplifted and returned to the place of hire.
- The variable availability and quality of hire equipment.
- Lack of familiarity with the hire equipment.

Advantages of using Ergo

Now with an in-house PQA, Ergo has fully trained users who can produce quick and comprehensive reports on power quality for clients at a reasonable rate (Ergo's PQA is charged out at \$200 per day). If you have unexplained failures or dropouts in your MV or LV network give Ergo a call.

Load Assessment is Key

In 2010 Ergo designed and specified two replacement switchboards for Fonterra at its Stirling Cheese Plant. The existing switchboards had been identified for replacement by Fonterra as part of its continued drive to improve electrical safety.

Greater scope

Initially Ergo's task was to scope, design, and specify the necessary equipment and processes to replace and migrate the load from two existing switchboards to a new switchboard. However once completed, Ergo was then engaged to manage the tender process, compile contract documents (FIDIC),

and assist with project implementation. During construction Ergo liaised with fire engineers, builders, switchboard manufacturers, the main contractor and the client to manage quality, safety, and commissioning on behalf of Fonterra.

Identifying the load

Stephen Rhind, one of Ergo's senior electrical engineers, oversaw the scoping and analysis for the replacement. "The biggest challenge," comments Stephen, "was identifying existing loads on a system which was unable to be shut down due to operational requirements. Documentation was limited, and with most of the protection equipment consisting of fuses we were unable to read off existing

protection settings. Load profiling through measurement wasn't an option due to resource, time, and budget constraints. This made plant modelling difficult."

A pragmatic approach

Unknowns, such as the demands on sub-boards and distribution boards, had to be determined a different way. A load profile was completed on the basis of a careful evaluation of existing cable sizes and lengths, the connected load, and process diversity. Years of practical on-site experience and process knowledge also factored into the assessment.

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