

CURRENT AFFAIRS

News and views from Ergo Consulting Ltd

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NO ROOM FOR DELAY ON HIGH PRESSURE PROJECT

Time was of the essence when Ergo upgraded two 11kV substations and replaced four 400V switchboards at Fonterra's Te Awamutu dairy factory.

There was only a limited window of opportunity, which was created by the winter lull in milk production.

Ergo Senior Engineer, Scott Wilson, says the plant is only shut once a year, for a limited time.

"This created a very short time frame, from scoping and planning through to ordering equipment and commissioning the plant."

Ergo's Power and Control systems teams were both involved in the upgrade.

Control Systems designed two new low-voltage switchboards to replace four that were nearing the end of their lifecycle.

"Standards have changed a lot over the years and switchboard designs that used to be common practise are no longer acceptable," says Scott.

Ergo's Power Systems team focused on outdoor equipment, upgrading high voltage switchgear in the factory's cream products and energy centres' outdoor substations.

Subsiding foundations for two old transformers were replaced and Ergo recommended improving segregation levels by shifting a ring main unit to eliminate a 200 m loop.

Chris Turney, Ergo Director, says shifting the ring main units to a better location and removing an old one means the plant can now be shut down in functional sections, rather than all at once.

Thomas Watts – Fonterra's Project Engineer, Capital – says the tight timeframes made for a tricky project but Ergo did a great job of thinking ahead. As a result, the project was completed on time and Ergo's designs eliminated other problems on the site that had not been included in the original project scope.

"They went out of their way to thoroughly understand the job. The team had a nice personal touch and they showed genuine interest in the project."



Tech specs

- The site's cream treatment technology produces salted and unsalted butter products for markets around the world.
- Every year Fonterra's Te Awamutu dairy factory produces enough bags of milk powder to stretch the length of New Zealand three times.
- The factory's whole, skim and butter milk dryers produce a range of instant, regular, vitamin fortified and nutritional powders.
- Three 400V switchboards were integrated into one new board with a fourth switchboard replaced.
- Seven ring main units were upgraded, with five circuits being replaced on one and seven on the other.



From the old to the new. One of the old 400V switchboards in the powder plant (left). The new switchboards will serve the plant well for decades to come.

EARNING OUR KEEP

Why bother using a consultant when one can do the job in-house or get in a contractor? It's a fair question, and one that we are often asked.

A good consultant can add value and save their client money in many different ways. The trick is to know how to pick a consultant with these qualities.

The fee obviously needs to be taken into account but price should only be one factor in the decision making. While it is possible to save money on consultancy fees, these savings can be off-set by unanticipated construction costs and ongoing problems that arise from poor design. Cheapest is not always best!

When choosing a consultancy, find out exactly who will be working on the project and ask about their relevant experience. A good consultancy will ensure your project is overseen by an engineer who has experience in your field.

Ask the consultancy about its intended approach to the project. For example, will they be applying a standard solution to a problem

that you consider to be unique, or will they tailor a solution to your specific needs?

A good consultancy will work with you to clearly define the project's objectives, boundaries, risks and problem areas. They will also work in a transparent manner and have clearly defined outcomes and delivery timeframes.

Ultimately consultancies live and die upon the quality of their work and their relationships with clients. We at Ergo pride ourselves on fostering excellent relationships with our clients, taking a thorough approach, and providing reliable and cost-effective solutions that produce great results now and for the future.

Best wishes

NIGEL

*Nigel Stevenson
Director
Control Systems
Ergo Consulting*



PARTY, PARTY, PARTY

Our annual client party was a great success, with 95 clients, suppliers and friends joining us in late October. It was an even greater success for the two prize draw winners, who each won a night for two at Sky City Hotel. We're not sure how Hawkins Infrastructure managed to score both prizes, but congratulations to Sam Hooper-Smith and Tony Parsons on their excellent luck.



(From left): A particularly well-stocked John Templeton (Fletcher Building-Pacific Steel Group) caught up over a beer with Perry Hutchinson (Honeywell), Scott Wilson (Ergo Consulting) and Sam Hooper-Smith (Hawkins Infrastructure).

INSIGHT ADDS VALUE TO NETWORK MODELLING

Years of practical electrical engineering experience and a PhD in short-term load forecasting enables Maria Kobe to develop high quality network models for Ergo's clients.

Ergo recently purchased ETAP to compliment its Digsilent modelling software. Unless software such as ETAP is used by an experienced practitioner, there is a risk of creating attractive looking reports that do not fully reflect reality. For this reason Maria has been employed to do network modelling exclusively and become a centre of excellence at Ergo.

Maria joined the team in September following time out of the workforce raising her two children. Before then, she was an Auckland University junior lecturer on controlling power systems and had also worked in an electrical engineering planning role at the Auckland Power Board (now Vector).

"Having hands-on experience gives me strong insights into what's being modelled," she says.

Maria has put measures in place to prevent a 'rubbish in, rubbish out' scenario. This has involved developing a range of standards and protocols relating to information input and report production.

Combining her real world knowledge of networks with auditable inputs means clients gain reliable, high quality network modelling information in an easily-read report.

"ETAP is great but any program like this is even better when it is operated by someone who understands how the design will be applied in a real-life situation," says Maria.



Maria Kobe



Scott's unsuccessful attempt at 'road testing' Sam's prize.

THE ERGO PROMISE

We will...

- take responsibility for our designs
- be generous with our knowledge and encourage developing engineers
- provide accurate information and will voice any doubts or uncertainties that we have.



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