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Transpower Utilising EcoGas 600D

Transpower NZ have begun trialling components of PBA's EcoGas 600 range in their network to enable greater visibility of gas transactions, quality and stocks held across the country. The EcoGas 600D is a simple, paperless and automated database which records transactions, even when you're on the go straight from your smart device (using the 600A). You can also bulk upload data via USB flash drive.

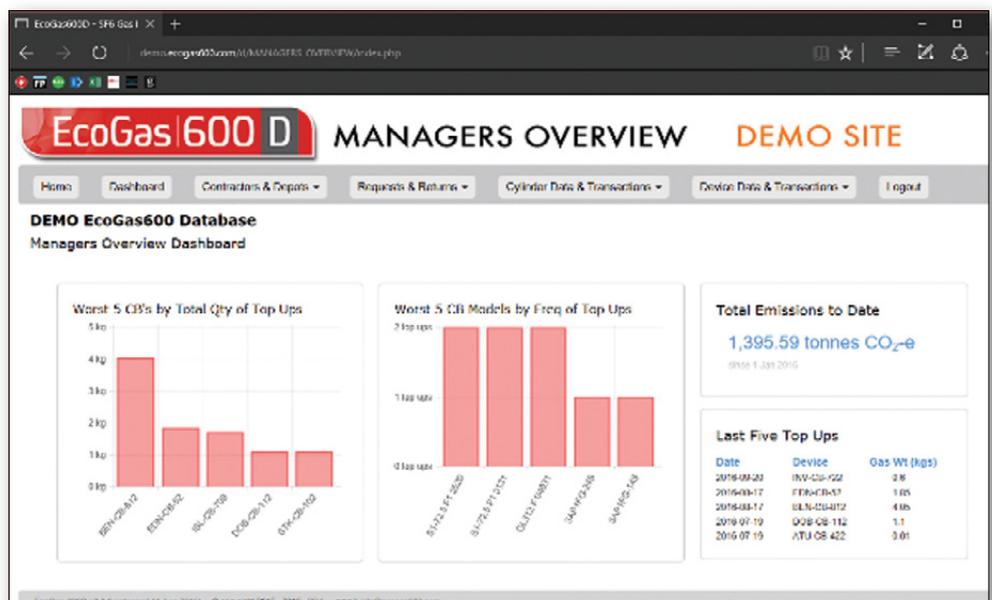
Key features of the EcoGas 600D include:

- Accurate recording of SF₆ movements providing the ability to identify leaks/losses
- The location of client gas cylinders and real time data for gas available in those cylinders
- Accurate asset management information on circuit breaker gas volumes enabling improved emissions management
- Provides data for EPA yearly emissions reporting

Transpower have close to 1,500 circuit breakers utilising SF₆ over 165 sites throughout New Zealand with a variety of contractors holding stocks of their gas - the EcoGas 600D has been engineered with all this in mind. The management of gas stocks, transactions and calculating losses used to be a fulltime job, requiring manipulation of data from different sources in a variety of formats. The EcoGas600D has simplified all of this and with a few clicks of the mouse you can:

- Ascertain where all your gas bottles are, their current contents and quality
- See which equipment has been recently topped up
- Identify poorly performing equipment
- Calculate nett loss of gas

For more information on the range of EcoGas600 products please visit: www.ecogas600.com



Cable Jointing Expertise in Fiji



PBA's Tom Bromfield was engaged to provide training and supervision to the Fiji Electricity Authority (FEA) in Fiji's capital, Suva. FEA were replacing a 33kV switchboard and Tom provided training and supervision for the installation of the 33kV cable assets. FEA had not previously had any exposure to or formal training on 33kV elbow type termination plugs.

Tom made 2 visits to Fiji providing on the job training to 6 FEA cable jointers and an appreciation course to the fitters, technicians and engineers so they were aware of the electrical makeup of the terminations and understood the requirements for using test probe attachments when testing.

Tom enjoyed working alongside a large team of Fijian tradesmen on the substation upgrade. He assisted with the design and build of an external CT support structure in the cable trench as each cable had to run through 2 large CT's prior to entering the circuit breaker cable chamber.

Some long days were spent on site in the relentless humidity of Fiji's Southeast coast but the job was a success with PBA's goal of leaving Fiji with the FEA cable jointers all being competent to apply their skills and knowledge to complete the second half of the switchboard unsupervised being met.

Network Waitaki GXP

PBA were invited by Network Waitaki to bid for a GXP upgrade and network reinforcement project. The work was located at Waitaki Power Station and would involve new twin 630mm² 11kV cables that connect from a Transpower switchboard to a new 11/33kV transformer.

The project had an interesting twist in that it was a Network Waitaki asset being constructed inside a Meridian Energy power station site and connecting to Transpower's network. Transpower also had contractors working on a related project concurrently.

PBA were awarded this work, in part due to our familiarity with distribution, generation and transmission assets, and as we have established relationships with all the relevant stakeholders. This knowledge proved to be invaluable once site work was under way, to co-ordinate multiple design changes required to marry distribution network design standards to transmission and generation company requirements, and the prior working relationships ensured smoother progress through the change management process. One of the major difficulties on site was carrying out the trenching work for the 11kV power cables – the Greywacke bedrock hidden below slowed progress down to 10m a day.

PBA and Network Waitaki worked very well together in documenting, analysing and approving required changes in a timely manner, and the new GXP was safely commissioned in November 2015. PBA's staff hold competencies for multiple asset owners throughout the HV industry and this project is another example of PBA's ability to execute projects while maintaining compliance with multiple asset owners' requirements.





KiwiRail SF₆ Work

PBA are working with KiwiRail to improve the quality of SF₆ gas in their circuit breakers which connect the electrified rail system around the upper North Island. These sites include Hamilton, Manunui, Tangiwai and Bunnythorpe.

PBA were approached by KiwiRail to test the quality of the gas, check for leaks and top up if required. As work commenced, we discovered that the gas had deteriorated from their commissioned state and the circuit breakers were showing signs of cracking on their perspex inspection covers, an issue which could cause leaks. Working with KiwiRail, PBA removed the insulating gas, dried out the circuit breaker poles and supplied KiwiRail with new SF₆.

PBA are currently working with KiwiRail on a solution to replace the perspex covers, allowing them to continue planning for the replacement of their circuit breakers.

PBA are Nexans Accredited

PBA and Cuthbert Stewart Ltd (CSL) have formed a supplier-installer relationship. This represents a turnkey solution for the Nexans range of cable jointing and terminating products. Where previously suppliers and installers have been separate entities, asset owners can now enjoy the simplicity and peace of mind that comes through a supply and install arrangement.

PBA have completed Nexans medium voltage (11-33kV) jointing accreditation facilitated by CSL at their Auckland headquarters.

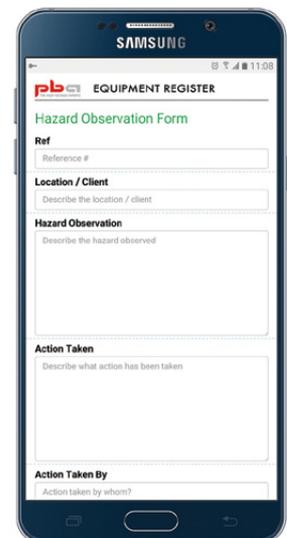
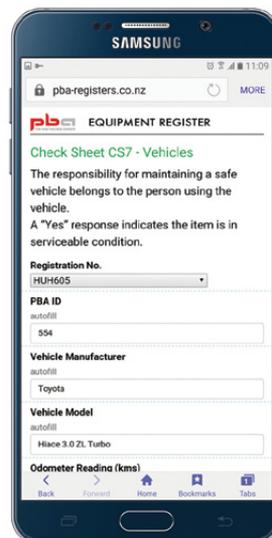
This partnership provides assurance to asset owners that Nexans products are installed by accredited experts backed up by a specialist HV contracting organisation with quality, environmental and safety certifications.



PBA Registers - Paperless Eutopia

Following on from recently upgrading PBA's electronic register to enable competencies to be viewed 'on the fly', we have started implementing mobile forms for our most commonly used check sheets. The first cab off the rank was the vehicle check sheet – allowing a paperless 3 monthly vehicle check. Not having to print out a form before carrying out an inspection has seen a huge improvement in how quickly these checks are being carried out and submitted. Clayton McKnight, one of PBA's original members, was quoted saying "wow, having this takes away all the old excuses, why didn't we do this earlier!"

Included in the roll out are a few additional forms including: truck, forklift, trailer, ladder, EWP and maypole inspections as well as hazard observations.



Training, Training and more Training...

Task specific safety training provides PBA staff with knowledge, which is one of the key components of competence along with skills and experience. This allows PBA staff to carry out tasks safely and to recognised standards. PBA invests heavily in its staff by providing regular task specific safety training. In

the 2015-16 financial year, PBA staff undertook 4,555 hours of task specific safety training. This is equivalent to 4.8% of the total hours worked by PBA or effectively 2 weeks of training per person!

Celebrating 5 Years with PBA

2016 sees PBA enter its 8th year of operation. During the 2016 Safety Summit the following staff were awarded with chalices by the Board of Directors, represented by Robyn Armstrong to formally acknowledge 5 years with PBA:

- Wendy Bence
- Matt Daffin
- Hayden Burrows
- Jayde Linton
- Daniel Booker
- Nick Crocker
- Tom Solomon

PBA wish to thank not only those mentioned above, but also their families for their ongoing commitment and support.



PBA Welcomes John Hadjis

John Hadjis has 30 years' experience within the telecommunications and electrical industries working with some of New Zealand's leading organisations and has recently joined the PBA team.

Having completed an Electrical Apprenticeship with the NZ Army in 1987 and after gaining further engineering and management qualifications, John progressed into a variety of technical and managerial positions encompassing design, manufacture and sales. John brings his well honed commercial and technical background to PBA as the newly appointed Business Development Manager and focuses on ensuring our customers' needs are understood and being met.

