



## DISTRIBUTION TRANSFORMER MONITORING

ETEL is committed to the development of new technology to improve the performance of electricity distribution systems and, in association with Callaghan Innovation and Robinson Research Institute, has developed and is trialling technology to allow for the effective monitoring of winding temperature, moisture and hydrogen levels of the insulating oil in distribution transformers.

Temperature and moisture data can be used to accurately predict remaining transformer life while hydrogen level data is used as an early warning system for fault indication within the transformer.

The monitoring of these parameters enables utilities to develop a proactive asset management strategy, leading to a reduction in the total cost of maintenance and in the quantity of spare transformers required. This will result in

fewer urgent and emergency interruptions due to transformer maintenance.

ETEL have several patents that have been approved or pending review for the following:

- **Improvements in Smart Distribution Transformer Systems:** This patent relates to the smart transformer, designed and developed by ETEL. The smart transformer kiosk as a complete unit is capable of the following: transformer fault monitoring, voltage control and data transfer via remote communication.
- **A transformer and method of manufacture:** This patent relates to the novel manufacturing method of integrating fibre optic temperature sensors into transformer and ability to retrofit fibres in the field.
- **A hydrogen sensor:** This patent relates to the novel palladium based fibre optic sensor for hydrogen gas detection inside transformers.

# ARC FAULT KIOSK APPROVED ON NZ NETWORKS

ETEL's arc fault kiosk has now been approved for use on a number of New Zealand networks.

An arc fault contained kiosk is designed to be intrinsically safe for operators and the public in the event of an internal fault in the MV switchgear compartment.

ETEL's current solution is designed and type tested for use

with Siemens's MV switchgear and we are in the process of designing for other switchgear makes and models.

The kiosk is available in 100kVA, 200kVA, 300kVA and 500kVA capacities, with a total footprint of 5m<sup>2</sup>. We also have a 750kVA and 1000kVA sized kiosk, with a total footprint of 6m<sup>2</sup>.



# NEW SERVICE CENTRE OPENS IN PERTH

ETEL's newest Sales and Service Centre has opened for business in Perth, providing stock warehousing and local product support for our customers in Western Australia.

Part of the operation also involves a service department where ETEL can evaluate, refurbish and repair all makes and models of old transformers that have been removed from service.

The service department includes a high voltage test bay which allows ETEL to test transformers to AS60076, along with overhead gantry and a holding oven for transformer core-coils that have been removed from their tanks.

The facility is headed by our Regional Sales Representative Jeremy Newman, who is joined by Krishnan Nair and Vaughn Brown. Krishnan has with been with ETEL in New Zealand since 2015, and Vaughn has over 9 years' experience working in the transformer industry in Australia.



The new service centre is located at 9 Contest Link in Henderson, Perth. ETEL also operates a sales and warehouse facility in Melbourne which recently moved into a larger premise at 21 Healey Road, Dandenong South.

## ETEL NEWS • SEPTEMBER 2018

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