



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

Create change

Drive your competitive advantage and enhance the performance of your transformer assets through:

- ✓ Practical industry led research that generates breakthrough innovations
- ✓ Ensuring you have the essential transformer skills for the future
- ✓ Having access to key knowledge that delivers tangible strategic benefits and savings

Give Transformer Innovation and Performance the TIC!

Welcome to Australasia's new Transformer Innovation Centre

Transformer experts and researchers from across the sector, led by senior industry executives, are pleased to announce the doors are open at our new Transformer Innovation Centre.

The new centre offers innovation and CPD programmes purpose built for the industry's future needs and delivered by acclaimed transformer experts.

The programmes bring a total focus on best practice asset management and high performance. Member organisations will reap the benefits of this focus through reduced costs, increased asset performance, reliability and asset management breakthroughs.

Membership is ideal for:

- Transmission and distribution utilities
- Product manufacturers
- Renewables and consulting firms
- Industrial, mining and infrastructure organisations

Join up today and put transformer innovation and performance at your fingertips!



The challenge

Transformer fleets across Australasia are ageing. For example, in Australia the fleet costs more than A\$200 million a year to maintain and its average age (28years) is already 70% of a 40 year design life.

Every year around 12 transformers fail, some catastrophically involving fire or explosion, costing their owners millions of dollars.

Our mission

The Australasian Transformer Innovation Centre has been launched with this environment in mind. Our mission is to improve asset performance within modern electrical networks through innovative solutions and education. These will help to mitigate the risks that asset owners face and reduce the total cost of ownership.

We will achieve this by the provision and distribution of research findings together with professional training. The material will be focused in an applied way by leveraging the collaboration between the diverse mix of centre members, including utilities, industry, universities, professional bodies and government.

The research and education opportunities that this industry led approach will create will enable centre members to develop the knowledge and skills necessary to achieve their professional goals, improve the productivity of their organisations and provide leadership and service to their industry.

Benefits of membership – gaining competitive advantage

- Access innovative transformer research solving tomorrow's challenges
 - Empower employees with latest transformer know-how, learnt from Australia's experts
 - Get hands-on experience with condition monitoring, dynamic loading and ester oil performance
 - Reduce costs and increase performance through expert asset management breakthroughs
- ### Opportunity for foundation long term membership at special introductory prices
- 20% saving in membership fees by committing to 5 year membership
 - Complimentary first CPD course attendance every year, plus 20% discount
 - Perpetual royalty free licence to centre's intellectual property
 - Free access to and use and support of transformer assessment tools and applications
 - Eligibility to participate in centre's Steering Committee and Innovation/CPD committee

A\$200m

a year to maintain aging transformer fleets

12

fail every year costing millions

70%

of design life already used

JOIN NOW



Key Features

At a glance

Australasia's leading transformer innovation centre

- Over \$1million jointly committed and being invested to establish the centre
- Wilson Transformer Company donated natural ester oil filled research transformer
- Dynamic Ratings state of the art online condition monitoring system
- Reinhausen's latest generation tap changers
- University of Queensland refurbishing and extending Long Pocket Transformer Laboratory
- Collaborative effort by UQ, QUT and Griffith researchers, UNSW and Curtin to follow

Innovation programme

The research programme is designed to create innovations that meet the evolving needs of industry including:

- Decreasing the risk of transformer failure during normal and contingency events
- Reducing maintenance costs and extending life with improved condition monitoring.
- Investigating improved operation, performance and risks with natural esters oil
- Increasing transformer utilisation and working transformers smarter
- Investigating effects of renewable generation on transformer life and cyclic rating

Transformer Innovation Centre's researchers and lecturers

Australia's leading transformer experts, Tapan Saha, Dan Martin, Hui Ma, David Allan, Shawn Nielsen, Chandima Ekanayake and Toan Phung, together with industry transformer practitioners Craig Adams, Gary Russell and Ross Willoughby will be joined by other transformer experts as the centre grows.

Continual professional development of industry engineers

Basic transformer courses will include transformer theory and applications, procurement, design, operation, maintenance and condition monitoring techniques. Advanced courses will include transformer ageing, failure analysis, specifying for requirements, dynamic loading, and condition based maintenance. Courses will be delivered by transformer experts from universities, transformer manufacturers and transmission and distribution companies.



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