

# Kerry Williams

DIRECTOR – PRINCIPAL ENGINEER  
K-BIK POWER PTY LTD



## QUALIFICATIONS

- FIEAust
- CPEng
- EngExec
- RPEQ
- RPEng
- NER
- APEC Engineer IntPE (Aust)
- BEng (QUT)
- AFIML
- PMP
- JP (Qual)

## PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

- Engineers Australia (Fellow) - Vice Chair  
Electrical College Brisbane
- Australian Asset Management Council
- Electric Energy Society of Australia
- Project Management Institute
- Institute of Electrical & Electronic  
Engineers
- Institute of Managers and Leaders  
(Assoc. Fellow)
- CIGRE Australia (past National  
Secretary)
- Australasian Transformer Innovation  
Centre – Platinum Member

## EXPERTISE

- High Voltage Substations
- Power Engineering
- Asset and Risk Management
- Maintenance Management
- Condition Monitoring & Diagnostics
- Design Standardisation
- Fault investigations
- Factory Acceptance Testing

*Referee/s are available upon request*

## SUMMARY OF COMPETENCIES

Kerry provides specialist consulting and engineering services to the electrical industry via his own company (K-BIK Power Pty Ltd).

A background from electrical power utilities and manufacturing underpins his engineering skills in high voltage zone, transmission, and distribution substations & the ability to develop strategies for whole of life asset assessment. He advises on the implementation of asset performance improvement strategies. He has lead engineering teams and performed complete reviews of specific asset management processes & systems for data collection and produced analysis reports that deliver improvements.

He has expert skills in the application of condition monitoring systems, CBM strategies, and reviews monitoring techniques and performs data analytics for new and aged assets. Kerry developed tools for advising on the right condition monitoring and management techniques for assets and a health index sheet for transformer condition assessments.

Kerry has an eye for detail and unique talents in forensic failure investigations. He performs detailed root cause analyses on significantly damaged HV plant by studying the internal and external influences that cause an event. His understanding of the mechanisms that lead to events enables him to generally identify the root causes and make recommendations for future preventions.

Kerry is the current Vice-Chair of the Engineers Australia Brisbane Electrical College, immediate past Australian National Secretary for CIGRE and has authored engineering papers on asset management, implementing condition monitoring & forensic investigations. He is passionate about supporting mentoring and sponsoring electrical engineering students in their fields of endeavour.

## Recent project experience

- **Water NSW:** Reviewed electrical asset strategies. Developed new maintenance strategies for implementation & made recommendations for monitoring & maintaining a wide range of HV assets. Contractor maintenance savings to Water NSW estimated at \$5Mill pa. Sept 17 to Nov17.
- **Essential Energy:** Witness testing of power transformers & MV switchgear. Including specialist review of manufacturer's design & construction of equipment. Reverse power flow analysis for OLTCs Oct 16, Jun17 & Nov 20
- **Western Power / Public Transport Authority:** Supervision of site testing of HV Current & Voltage transformers. Performed data analysis & advised on assessed condition of each across 7 substations. Feb17 to Apr 17
- **Powerlink:** Provided specialist investigative services for a review of Powerlink's outage management system. Concept design of relocatable 132kV HV Circuit Breaker switching bay. Aug 18 to Present
- **Powercor Services:** Provided independent review of 2 gassing power transformers. Reviewed data & network configurations for a detailed report & recommendations on specific findings that were previously not investigated or realised. Oct 17 to Dec17
- **Snowy Hydro Limited:** Provision of asset condition services for assessment to replace or refurbish. Includes strategy reviews and support on transformer & switchgear maintenance, health indices, analytics and probability of failure. From March 18 to Present (Contracted until Oct 2023)
- **FM Global:** provision of expert advice and support for investigation into 500kV Bushing failure including forensic investigation of bushing. Failure investigation of 550MVA 275kV transformer & reviews of end client repair strategies, condition monitoring & emergency response strategies. March 18 to Present
- **CSBP Kwinana:** provision of services for 132kV substation FMEA, outage maintenance plan, supervision of outage, review of HV equipment maintenance risks and replacement strategies. Sept 18 to Feb 20

## Recognition Awards

- Nominated for National Professional Electrical Engineer of the Year – 2019 Engineers Australia
- Western Power Recognition Certificate for “Excellent Customer Service and engagement during intensive network issues” (2015)
- Awarded Membership to Golden Key International Assoc. for high academic achievement (top 15% internationally) (2013)
- TechCon Asia Pacific – Best Paper for “The Condition Monitoring Maze Made Simpler with a Selection Tool”. (2014)
- Ergon Energy Innovation Award for “The NOMAD Mobile Substation Design and Construction Project”. (2007)
- Western Power Recognition Certificate for “Diagnostic Measurements of Power Transformers” (2013)

## Technical Publications

- IEEE / DEIS – Journal - Paper Published: “Calculating a Health Index for Power Transformers Using a Sub-system Based GRNN Approach” Joint Paper (IEEE Transactions Paper 2018, Volume 33, Issue 4)
- IEEE / DEIS – Journal - Paper Published: “*Field Studies on comparing techniques for measuring the water content of power transformer insulation.*” – joint authors (2015)
- Member CIGRE Working Groups: WG B3:43 – *Safety Systems in Substations* & WG B3:58 – *Knowledge Transfer of Substation Engineering and Experiences*
- TechCon SEA 2019 - Bangkok – Paper Presented: “*Harmonics from Renewables – the new threat to substation primary plant*”
- TechCon USA 2018- Denver – Paper Presented: “*The Changing Face of Condition Monitoring Data Management*”
- Transmission & Distribution Journal – 2016 to 2017 – four-part series – Published: “*Determining Condition Based Asset Management Strategies*”
- TechCon Asia Pacific 2017 – Kuala Lumpur – Paper Presented: “*Asset Management - Australian Utility perspective and experiences*”
- TechCon AusNZ 2017, Sydney Paper Presented: “*Instrument Transformer Failures Due to an Internal Vacuum Phenomena*”
- ICECE 2014 – Bangladesh - Paper Presented (by others): “*Extending Methods to Determine the Life Remaining of Transformer Paper Insulation*” – joint authors (Dec. 2014)
- TechCon Asia Pacific 2014, Sydney - Paper Presented: “*The Condition Monitoring Maze made Simpler with a Selection Tool*” – Best Paper Award (April 2014)
- CIGRE Study Committees B3 & D1 Colloquium, Brisbane - Paper Presented: “*State of the Art Review on Managing Vegetable Oil Filled Transformers*” – Joint Paper (Sept 2013)
- IEEE / DEIS – Journal - Paper Published: “*Water Uptake Rates of Transformer Paper Insulation Impregnated with Vegetable Oil*” – joint authors (Sept / Oct. 2013)
- CIGRE Transformers 2010, Melbourne – Paper Presented: “*Procurement of Sealed Power Transformers*” (May 10)
- CIGRE HV Substations 2010, Melbourne – Paper Presented: “*HV GIS Equipment Failure*” (March 10)
- PT&D Journal 2010, Brisbane – Paper Presented: “*Fully Sealed Transformers - The Changes Needed*” (Sept 10)
- EESA Conference 2008, Brisbane - Paper Presented: “*An Innovative Approach to Substation Maintenance and Plant Failure with the use of Variable Voltage Mobile Substations – Risks*” (Aug 08)
- CEPsi 2008, Macau China – Paper presented: “*An Innovative Approach to Risk Mitigation for Substation Maintenance and Plant Failure: Variable Voltage Mobile Substations*” (Oct 08)
- EESA 2007, Brisbane – Paper Presented: “*NOMAD Mobile Substations – Scope, Design & Implementation*” (Sept 07)
- E21C Conference 2007, Sydney - Paper Presented: “*An Innovative Approach to Substation Maintenance and Plant Failure with the use of Variable Voltage Mobile Substation*” (Nov 07)
- Project Management Institute 2006, Melbourne - Panel member with expert representatives from Ericsson, Victoria Police and Lend Lease on “*The Strategic Alignment of Business Cases for Organisations*” (Oct 06)
- TechCon Asia Pacific 2006, Sydney - Paper Presented: “*Condition Monitoring of OLTCs using Vibration Analysis*” (May 06)

**Other technical papers and presentations can be supplied upon request.**