

## JOSEPH LEUNG

Principal Consultant

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Joseph joined Hill Michael in 2011 and has more than 15 year experience in the power industry. He is the principal consultant for transmission planning, system investigation and generator testing. He is the technical leads and also responsible for business development and client support. Joseph has had a diversified skillset and experiences across the power industry. He has worked in the Generation (China Light and Power, HK), Transmission (TransGrid), Industry (BHP) and Consulting (Hatch). Prior joining Hill Michael, he was the Manager of Network Models at AEMO.

### Specialist Areas

- Strong technical skills in power system design, testing and analysis (EMTP, transient, small signal and voltage stabilities, loadflow harmonic and sub-synchronous resonance, etc.)
- Extensive knowledge in the connection areas of the National Electricity Rules (NER), including access standards and compliance requirements
- Good knowledge of the operation of the Australian electric power system and energy market (NEM)
- Good record of project management and stakeholder engagement
- Rich programming experiences, including: PSS/E, DSA Powertools, Digsilent, ATP-EMTP, MATLAB, C, Visual Basic, Oracle, SQL, FORTRAN, Python, Perl, Excel Macros and many other self-developed software
- Research and development in Power electronic technologies including Wind Turbine Generator (WTG) and Flexible AC Transmission System (FACTS)

### Significant Projects

- Generator connections, including control system design and tuning, connection analysis, performance standard, commissioning, R2 testing and development of model and data requirements for R2 tests
- Management and development of dynamic models, data sheets and releasable user guides of the NEM
- Investigation of interconnector transfer limitations, including, small signal stability constraints
- System investigations and augmentation plan developments for NSW transmission network
- HV protection design and coordination and automation control of AC/DC drives

### Qualifications, Professional Membership & Industry Involvement

- PhD, Electronic Engineering, City University of Hong Kong
- B.E. (First class Hons.) Electrical Engineering, Sydney University
- Chartered Professional Engineer (CPEng), Institution of Engineers, Australia
- Member, The Institute of Electrical and Electronics Engineers
- Member, CIGRE Load Modelling Working Group C4



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*Hill Michael is a specialist electrical networks and strategic engineering firm. Focused on the application of engineering expertise in the context of organizational and project strategy, Hill Michael is a leading advisor to owners of electricity supply networks and those wishing to connect to them. Established 1987.*