

HIOKI

Presents

A One Day Technical Seminar

The New Energy Reality

Power Quality and Resilience in a Changing World

22 July 2026

Wed | 8.30am - 5.30pm

Conrad Orchard Hotel

Key Speaker

Er. Professor Lock Kai Sang

Head, Energy Efficiency Technology Centre
Singapore Institute of Technology

Seminar Outline

An industry-focused technical seminar on today's changing power quality challenges, covering:

- The new energy reality in modern power systems
- Non-linear loads, harmonics and emerging risks
- Power quality challenges in buildings, data centres and critical infrastructure
- Practical measurement and monitoring strategies
- From assessment to action: identify, validate and mitigate risks
- Industry insights for reliable and resilient power systems



PEB APPROVED

Approved with 8 PDU points
from Professional Engineers
Board (PEB).



SCEM POINTS

Approved with 6 SCEM points.



**60-min Panel Discussion
With Industry Experts ▶▶▶**

Power Quality In Practice

**Managing Efficiency, Constraints, and
Reliability in Modern Power Systems**

Ticketing Details ▶▶▶

\$220^{SGD}

**Before 9% Singapore Goods & Service Tax

PHYSICAL

CONRAD ORCHARD
HOTEL

- ★ Networking Session with local engineers!
- ★ 2 Tea Breaks
- ★ 1 Lunch
- ★ Close Up Session with our distinguished speakers!
- ★ Digital Certificate
- ★ Special discounts on Hioki products!

\$120^{SGD}

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ONLINE

VIRTUAL VIA ZOOM

- ★ View the seminar anywhere at your own comfort
- ★ Digital Certificate



Er. Ho See Fong

Managing Director
HY M&E Consultancy

Mr. Wong Tew Kiat

Chairman
Data Centre Chapter
Singapore Computer Society

Mr. Tan Kong Peng

Senior Principal Engr
Singapore PowerGrid
Limited

Why Should You Attend?

Who Should Attend:

- Electrical Engineers
- Facility & Maintenance Engineers
- Energy Managers & Consultants
- Plant & Operations Managers
- Design & Project Engineers
- System Integrators & Contractors
- Academia, Researchers & Students
- Utilities and Regulatory Bodies



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A One Day Technical Seminar

The New Energy Reality

Power Quality and Resilience in a Changing World

Background >>>

The global energy landscape is evolving rapidly. The transition to electrification, increasing reliance on renewable energy, proliferation of power electronics, and growing digitalization are transforming how power is generated, distributed, and consumed.

These changes bring unprecedented opportunities, but also significant power quality challenges that can impact equipment performance, operational reliability, energy efficiency, and safety.

From harmonics and voltage disturbances to non-linear loads and unstable grids, today's power systems are more complex and dynamic than ever. Engineers are on the front line, ensuring that power systems remain reliable, resilient and sustainable.

Why This Topic Matters >>>



Rising non-linear loads and power electronic devices increase the risk of harmonics and power quality issues.



Critical facilities, data centers, and industries require higher power quality and resilience to avoid costly downtime.



Integration of renewable energy sources introduces variability and new power quality considerations.



Standards and regulations are evolving, demanding better monitoring, analysis and compliance.



Collaboration, knowledge sharing, and practical solutions are essential to tackle these challenges together

This seminar brings together industry experts, and practitioners to share insights, real-world experience, and practical solutions for a more reliable and sustainable energy future.

A One Day Technical Seminar

The New Energy Reality

Power Quality and Resilience in a Changing World

Full Program >>>

TIME	SESSION	FOCUS
0830 - 0845	Registration & Welcome Remarks	Opening
0845-1000	Session 1: The New Energy Reality	Power Quality in an efficiency-driven and electrified world; changing load characteristics; the link between energy efficiency, electrification, and resilience.
1000-1030	Tea Break	
1030-1130	Session 2: Non-Linear Loads and Emerging Power Quality Challenges	Harmonics and interharmonics fundamentals; UPS systems, drives, converters, inverters, and energy-saving equipment; technical consequences for networks and equipment.
1130-1230	Panel Discussion	Power Quality in Practice: Managing Efficiency, Constraints and Reliability in Modern Power Systems
1230 - 1330	Networking Lunch	
1330 - 1430	Session 3: Power Quality Constraints in Real Applications	Commercial buildings and high-rise developments; industrial facilities with large non-linear loads; data centres and critical power environments; system constraints at facility and network level
1430 - 1530	Session 4: From Assessment to Action	Monitoring and measurement strategies, identifying risk areas in design and operation; reporting, validation, troubleshooting, and mitigation
1530-1600	Tea Break	
1600-1700	Session 5: Practical Lessons and Future Considerations	What engineers should start paying attention to now; what building owners, consultants, and operators often miss; preparing for a more constrained and quality-sensitive power environment.
1700-1730	Closing Q&A and Wrap-Up	

A One Day Technical Seminar

The New Energy Reality

Power Quality and Resilience in a Changing World

Speaker's Profile



Key Speaker

Er. Professor Lock Kai Sang

BSc PhD FSEng Hon FIES SFAAET FIET FICS FSI Arb PEng PBM BBM

Head, Energy Efficiency Technology Centre

Singapore Institute of Technology

Professor Lock has a unique blend of practicing and academic experience acquired through a career which is equally split between the industry and the academia. He received his B.Sc. (1st Class Honours) in Electrical and Electronics Engineering in 1975 from the University of Strathclyde, UK. He completed his Ph.D. degree at the same university in 1979 researching on the design optimization of electrical machines. He joined the National University of Singapore as a lecturer in 1980 and was the Head of its Power and Machines Division, Department of Electrical Engineering, when he left in 1997 to set up his consulting practice. He has authored over 250 consultancy reports, mainly in power quality and reliability, lightning and surge protection, EMC, failure investigations, and design for mission-critical facility. He has been active in dispute resolution as an expert witness, mediator, adjudicator and arbitrator.

He returned to the academia in 2016 as a Professor (Engineering) at Singapore Institute of Technology and is concurrently the Head of the Energy Efficiency Technology Centre. He plays an active role in energy efficiency, being the Chairman of Accreditation Committee for Energy Service Companies (ESCOs) and the Co-Chair of Steering Committee of Singapore Certified Energy Managers (SCEM) Scheme. He is a Fellow of Academy of Engineering, Singapore, Senior Fellow of ASEAN Academy of Engineering and Technology and Honorary Fellow of ASEAN Federation of Engineering Organizations. He is an Emeritus President and Honorary Fellow of the Institution of Engineers, Singapore. He served as a Board Member of the Professional Engineers Board, Singapore for 14 years.

A One Day Technical Seminar

The New Energy Reality

Power Quality and Resilience in a Changing World

Panelist's Profile



Er. Ho See Fong
Managing Director
HY M&E Consultancy Services

Er. Ho See Fong received his fundamental engineering studies at Imperial College, London, graduating with a Bachelors of Engineering degree in Electrical and Electronics Engineering. He furthered his studies specializing in Electric Power Engineering at the Kungl Tekniska Högskolan (Royal Institute of Technology), Stockholm, graduating with a Masters of Science. Thereafter See Fong started an interesting and exciting career at the Defence Science and Technology Agency (DSTA) Singapore where he served for almost 10 years. He was involved in the development of electrical networks and special facilities, such as the submarine cable connections and the Underground Ammunition Facility. See Fong was also involved in technology development projects exploring new Energy and Power applications for defence operations. See Fong has been involved in a variety of projects related to lightning safety, hazardous materials, reliability assessment, EMI, security, building automation and SCADA systems.

He left DSTA as a Senior Engineer to assist in his father's engineering business.

Currently, See Fong is a Professional Electrical Engineer, and a Licensed Electrical Engineer, serving at HY M&E Consultancy Services and Commodore. He leads a team of engineers applying simulation and modelling tools to better assess the performance of engineered systems, such as ground potential rise, thermal, electromagnetic and lightning induced effects. He is actively involved in the testing, measurement and verification of engineered systems, which he feels is fundamental to an engineer's training. In recent years, See Fong has been involved in emerging electrification projects involving EVs, PVs, Microgrids, Energy Storage Systems and Energy Modelling.

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The New Energy Reality

Power Quality and Resilience in a Changing World

Panelist's Profile



Mr. Wong Tew Kiat
Chairman, Data Centre Chapter
Singapore Computer Society
Founder & Managing Director
Organization Resilience Management

Mr. Wong Tew Kiat has more than 30 years of experience and possesses extensive knowledge in Data Centre (DC) Infrastructure and Operations Management, Business Continuity Management (BCM), Pandemic Preparedness Planning, Crisis Response Management, Incident Response, IT Disaster Recovery (DR) Management, Emergency Management, and Data Centre Risk and Health Check Management.

He managed the data centre infrastructure and operations of a 100,000 sq ft data centre space for 25 years while he was with Singapore Computer Systems Ltd, which was eventually acquired by Singtel. During this time, he led a team of 40 staff responsible for managing the data centre infrastructure and operations, which served as a Business Continuity Centre for more than 100 clients. He also worked closely with the building management team to manage the annual HT/LT servicing, during which incoming power was switched to backup power systems, including generators and UPS.

In 2008, he oversaw and project-managed the design and construction of an additional 25,000 sq ft Tier 3 data centre space. Over the past six years, he has conducted numerous risk assessments for data centres in Singapore, Indonesia, and Fiji. His recent major data centre project involved the design, construction, and operation of two data centres in Indochina.

He is currently appointed as the Chairman of the Data Centre Chapter by the Singapore Computer Society. The chapter serves as a national platform for data centre professionals to network, share research, exchange innovative ideas, and address the evolving trends of the data centre landscape.

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The New Energy Reality

Power Quality and Resilience in a Changing World

Panelist's Profile



Mr. Tan Kong Peng
Senior Principal Engineer
Power Quality & Transient Management
SP PowerGrid Limited

Mr. Tan Kong Peng joined the Public Utilities Board (PUB) in 1982 as an engineer in the Customer Projects Section, where he was responsible for managing the implementation of high-voltage (HV) and low-voltage (LV) services for customers. In this role, he was involved in supporting customer-related electrical service projects and ensuring that the required HV and LV service implementations were properly managed and coordinated.

From 1989 to 1998, he was posted to the City Network Renewal Unit and the Distribution Projects Section. During this period, he was involved in the implementation of departmental projects, as well as major works projects for the Housing & Development Board (HDB) and Jurong Town Corporation (JTC). His responsibilities included supporting the renewal and development of city network infrastructure, together with the planning and execution of key distribution-related projects.

In July 1998, Mr. Tan subsequently joined the Power Quality and Load Analysis Section. In this role, he was responsible for the development, operation, and maintenance of the permanent power quality monitoring system. His work contributed to the monitoring and analysis of power quality performance, supporting the reliability and stability of the electrical network.

With his long-standing experience across customer projects, network renewal, distribution projects, and power quality monitoring, Mr. Tan Kong Peng has built up extensive practical knowledge in electrical infrastructure implementation, power distribution, and power quality management.



The New Energy Reality:

Power Quality and Resilience in a Changing World

PANEL TITLE

Power Quality in Practice: Managing Efficiency, Constraints and Reliability in Modern Power Systems

DISCUSSION THEMES

- How energy-saving technologies can introduce new power quality challenges in modern facilities
- Where engineers are seeing the biggest constraints today – buildings, industry, data centres, and critical infrastructure
- How to improve efficiency without pushing systems closer to instability, distortion, or performance risk
- What consultants, operators, and asset owners should monitor more closely in design, commissioning, and operation
- How to balance energy efficiency, reliability, and long-term electrical performance in constrained systems

PANELISTS



Er. Dr. Lock Kai Sang

Professor and Head,
Energy Efficiency Technology Centre,
Singapore Institute of Technology



Er. Ho See Fong

Managing Director,
HY M&E Consultancy
Services Pte Ltd



Mr. Wong Tew Kiat

Chairman, Data Centre Chapter
Singapore Computer Society
Founder & Managing Director
Organisation Resilience
Management



Organisation
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PREPARED ALWAYS, RESILIENT ALWAYS



Mr. Tan Kong Peng

Power Quality &
Transient Management
SP PowerGrid Limited



Empowering the Future of Energy



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THINK HY PERFORMANCE



**TICKETED
EVENT**

The New Energy Reality:

Power Quality and Resilience in a Changing World

Conrad Orchard, Singapore | 8.30am onwards



PEB APPROVED

Approved with 8 PDU points from Professional Engineers Board (PEB).



SCEM POINTS

Approved with 6 SCEM points.

WHY ATTEND ONSITE?



Networking Lunch included



Direct Access to Speakers



Panel Discussion Interaction



Industry Networking



Consultants + Utilities + Operators in One Room



8 PDU + 6 SCEM Points Approved



Limited Seats



5-Star Hotel Experience



Face-to-Face Q&A

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DESCRIPTION	ONSITE (IN SGD)	ONLINE (IN SGD)
EARLY BIRD (30% DISCOUNT)	SGD 154.00	SGD 84.00
NORMAL PRICE (1ST JULY ONWARDS)	SGD 220.00	SGD 120.00
GROUP RATE (15% DISCOUNT) Applicable for 4 pax and above from the same organisation.	SGD 187.00	SGD 102.00



Group rate is applicable for 4 pax and above from the same organisation.



Onsite rate includes 1 networking lunch and 2 tea breaks.



All rates are in SGD and subject to 9% government tax.

VENUE INFORMATION



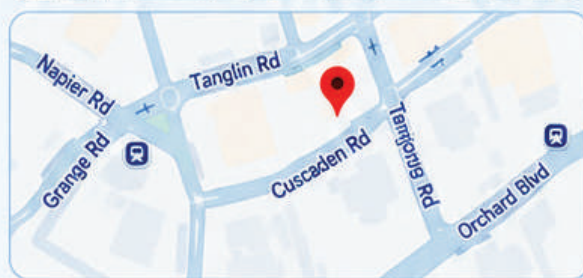
Conrad Singapore Orchard

Address: 1 Cuscaden Rd, Singapore 249715

Conrad Singapore Orchard is 24 km from Changi International Airport, approximately 30 minutes by car.

Nearby MRT Stations:

- 5-minute walk to Orchard Boulevard MRT
- 10-minute walk to Napier MRT
- 14-minute walk to Orchard MRT



SEATS ARE LIMITED!

Register early to secure your spot.



FOR ENQUIRIES

kevin@hioki.com



**TICKETED
EVENT**

The New Energy Reality:

Power Quality and Resilience in a Changing World



Conrad Orchard, Singapore



8.30am onwards



REGISTRATION

Choose your preferred attendance mode and scan the QR code to register.



PHYSICAL / ONSITE REGISTRATION

Register to attend **in person** at the venue.



Conrad Singapore Orchard

1 Cuscaden Rd, Singapore 249715



Nearest MRT:

Orchard Boulevard MRT



*Approximately 30 minutes by car
from Changi International Airport.*



ONLINE / ZOOM REGISTRATION

Register to join the event **virtually** via Zoom.



zoom



For enquiries:
kevin@hioki.com

