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Julie Y.C. Wong  
Shelley W. Zhou

## PHOTOVOLTAIC PANEL SYSTEM TRAINING COURSE (PPSTC)

January 2019



### Organizer

Hong Kong Association of Energy Engineers (HKAEE)

### Co-organizers

- Electrical Engineering Department, The Hong Kong Polytechnic University
- Association of Energy Engineers Hong Kong Chapter
- Energy Institute Hong Kong

### Supporting Organizations

- Environment Bureau
- Electrical and Mechanical Services Department
- CLP Power Hong Kong Limited
- The Hongkong Electric Company, Limited
- The American Society of Heating, Refrigerating and Air-Conditioning Engineers Hong Kong Chapter
- Building Services Operation and Maintenance Executives Society
- Hong Kong Air Conditioning and Refrigeration Association
- The Hong Kong Institution of Engineers - Electrical Division
- The Hong Kong Institution of Engineers - Environmental Division
- The Hong Kong Institution of Engineers - Gas & Energy Division
- Hong Kong Licensed Plumbing Professionals Association Limited
- Minor Works Contractor Association
- N.T. Western District Electricians Association

### Course Description

Following the Feed-in-Tariff policy, a large number of PV systems at village houses, villas, schools, institutional and commercial buildings will be installed in the coming years. The Hong Kong Association of Energy Engineers (HKAEE) Photovoltaic Panel System Training Course (PPSTC) provides in-depth technical knowledge and step-by-step methodology for design, installation, testing, commissioning and maintenance of grid-connected and off-grid solar PV systems. This course is designed ideally for professionals looking to enter solar industry, or interact with solar projects in current line of work.

The HKAEE PPSTC provides a set of local and international standards by which PV professionals with skills and experience to distinguish themselves and give the employers a credential for judging the competency of practitioners in solar industry.

**President** **Key Speakers**

S.K. Ho

• Lecture 1 & Review Session: **Dr Edward Lo**, Associate Head & Associate Professor, Department of Electrical Engineering, The Hong Kong Polytechnic University. He used to be a guest lecturer on PV system in local Universities.

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• Lecture 2: **Dr Chan Chi Yiu**, Analytical Engineer, CLP Power Hong Kong Limited

**Chairman**  
Eric K.W. Lau

• Lecture 2: **Ir Choi Chun Keung**, Senior Customer Installation Engineer, The Hongkong Electric Company, Limited

**Vice Chairmen**  
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Conson K.H. Yu

• Lecture 3, 3 Workshops & Review Session: **Ir Dr Conson Yu**, Vice Chairman & Membership Committee Chairman, Hong Kong Association of Energy Engineers

• Lecture 4, 3 Workshops & Review Session: **Mr William Leung**, Member of Hong Kong Association of Energy Engineers. William started installing On-grid solar power systems 8 years ago in Hong Kong. He used to be a guest lecturer on PV system in local Universities.

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**General Information**

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<b>Date:</b>	4 Lectures (Design): 7, 8, 10 & 15 January 2019 3 Workshops (Installation): - Group 1: 16, 18 & 22 January 2019 - Group 2: 17, 21 & 23 January 2019 <i>* The group of workshop chosen is subject to confirmation. The Organizer shall contact the registrants if change to another group is required.</i> 1 Review Session: 24 January 2019 (Thursday)		
<b>Time:</b>	6:30 pm – 9:45 pm		
<b>Venue:</b>	Lectures & Review Session: HKPC Building (78 Tat Chee Avenue, Kowloon Tong) Workshops: JEC Workshop (9/F, 78 Hung To Road, Kwun Tong)		
<b>Medium of Instruction:</b>	Cantonese with English course material		
<b>Target Participants:</b>	Practitioners in solar industry, energy managers, environmental engineers, building services/electrical engineers and contractors, system operations and maintenance engineers and technical personnel etc.		
<b>Course Fee:</b>	Design (4 Lectures & 1 Review Session)	HK\$4,000 per person (member of Organizer)  HK\$4,400 per person (member of Co-organizers & Supporting Organizations)  HK\$4,800 per person (non-member)	Includes training materials / notes and tea breaks

		Design & Installation (4 Lectures, 3 Workshops & 1 Review Session)	HK\$6,000 per person (member of Organizer) HK\$6,500 per person (member of Co-organizers & Supporting Organizations) HK\$7,000 per person (non-member)	
<p><b>President</b> S.K. Ho</p> <p><b>Immediate Past President</b> Raymond K.L. Chan</p> <p><b>Chairman</b> Eric K.W. Lau</p> <p><b>Vice Chairmen</b> Richard S.T. Chan Ringo T. C. Shea H.W. Yu Conson K.H. Yu</p>	<p><b>Registration:</b></p>	<p>Please register via online system <a href="http://goo.gl/oPrBVL">goo.gl/oPrBVL</a> (copy this link and paste on the browser if it cannot be linked directly) for seat reservation.</p> <p>Payment details will be advised after receiving your registration.</p> <p><i>Note: Enrolment will only be confirmed upon receipt of course fee.</i></p> 		
	<p><b>Registration Deadline:</b></p>	<p>21 December 2018 (Friday)</p>		
<p><b>Secretary</b> Leo H.Y. Chan</p> <p><b>Treasurer</b> Mike C.Y. Cheng</p> <p><b>Directors</b> C.K. Au Paul K.L. Chong Colin C.L. Chung Sam C. M. Hui Thomas Y. S. Li K.C. Tam Jerry W.P. Tam W.K. Wong Glorisun W.Y. Wong Julie Y.C. Wong Shelley W. Zhou</p>	<p><b>Certificate:</b></p>	<p><i>Attendance certificate will be issued to participants with attendance rate not less than 80%:</i></p> <ul style="list-style-type: none"> <li>- Design (4 Lectures &amp; 1 Review Session): 15-hour Attendance Certificate</li> <li>- Design &amp; Installation (4 Lectures, 3 Workshops &amp; 1 Review Session): 24-hour Attendance Certificate</li> </ul>		
	<p><b>Special Notes:</b></p>	<ul style="list-style-type: none"> <li>- HKAEE reserves the discretion on admission of participants.</li> <li>- Generally 2 participants from each organization will be admitted subject to enrolment status.</li> <li>- The course is subject to cancellation. Only course fee will be refunded and no other liabilities will be borne by the Organizer, Co-organizers and Supporting Organizations.</li> </ul>		
	<p><b>Enquiry:</b></p>	<p>Ms LI [Tel: (852) 2967 8855; email: <a href="mailto:aprilagc@gmail.com">aprilagc@gmail.com</a>]</p>		



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**Course Details**

Part	No.	Speaker	Course Outlines
Design	Lecture 1	Ir Dr Edward Lo, PolyU	<ul style="list-style-type: none"> <li>- Fundamental principle of PV systems</li> <li>- General estimation of annual yield of a PV system, together with evaluation of its financial performance</li> <li>- Design considerations, sizing methods and selections of key components</li> </ul>
	Lecture 2	Dr Chan Chi Yiu, CLP	<ul style="list-style-type: none"> <li>- Overview of renewable energy grid connection</li> <li>- Considerations &amp; constraints of grid connection</li> <li>- Technical considerations of grid connection of renewable energy system</li> </ul>
		Ir Choi Chun Keung, HKE	<ul style="list-style-type: none"> <li>- Application procedures for Feed-in Tariff (FiT) Scheme</li> <li>- Interface requirements for grid connection of renewable energy power system</li> <li>- Commissioning report and inspection prior to grid connection</li> </ul>
	Lecture 3	Ir Dr Conson Yu, HKAEE	<ul style="list-style-type: none"> <li>- Safety &amp; risk assessment</li> <li>- Minor works requirements</li> </ul>
	Lecture 4	Mr William Leung, HKAEE	<ul style="list-style-type: none"> <li>- Selection of materials including PV panel, Inverters etc. and good practice in PV panel</li> <li>- Lightning strike prevention</li> <li>- Fire risk aspects</li> </ul>
Review Session		Ir Dr Edward Lo, PolyU, Ir Dr Conson Yu, HKAEE & Mr William Leung, HKAEE	<ul style="list-style-type: none"> <li>- Summary &amp; review</li> <li>- The way forward in HK on development of PV technology</li> <li>- Micro-inverter introduction</li> </ul>

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Part	No.	Speaker	Course Outlines
Installation	Workshop 1	Ir Dr Conson Yu, HKAEE & Mr William Leung, HKAEE	- System explanation - with devices - MC4 connector crimping - Mounting methodology - Earthing system - DC protection explanation
	Workshop 2		- Isolation transformer connection - AC protection explanation - RE meter arrangement - PV array set-up, inverter matching, grid connection designs, - Practice and exercise
	Workshop 3		- Operation Procedure, T&C, and WR1 - Performing testing, commissioning, maintenance activities in accordance with relevant international standards relating to grid-connection

*\* Contents are subject to change without further notice.*