

Free of charge
Forum organized by:



Annual Gathering of HAESCO on Energy Efficiency and Energy Future in GBA

香港能源服務協會年會論壇：大灣區的能源效益及能源未來

Funding Organization:



Mr. VY Ek-chin

(Keynote Speaker)

Assistant Director
Electrical & Mechanical Services
Department, HKSAR Government
香港特別行政區政府機電工程署
助理署長 黃奕進



Enhancing I&T Collaboration on
Energy Efficiency/Renewable Energy
Application in GBA
提升粵港澳大灣區在節約能源和可再生能
源方面的創科合作

Mr. Chi-yan Cheng

Head Of Business Development
& Business Insights,
CLP
中華電力 業務拓展及業務洞察主管
鄭智仁



Smart Energy
Management Solutions
創新節能管理方案

Prof. Michael Leung

Professor
School of Energy &
Environment, CityU
香港城市大學能源及環境學院
梁國熙教授



Advanced
Technologies for Clean
and Renewable Energy
先進的清潔和可再生能源
技術

Mr. Raymond Fong

General Manager
Environmental Management
Division, HKPC
香港生產力促進局環境管理部
總經理 方湛樑



Energy Big Data
Analytics by Artificial
Intelligence
人工智能能源大數據分析

Mr. Yong-li Liao

Research Director
Southern China Power Grid
南方電網生產技術支持中心輸電技術
研究室主任 廖永力



The importance of a safe, reliable
and energy efficient supply of
electric power to the development
of the GBA: experience from the
Southern Grid
安全、可靠和節能的電力供應對大灣區
的重要性-南方電網的經驗

Mr. Dominic Yin

(Moderator of the Forum)

Founding Chairman
of HAESCO

香港能源服務協會 創會會長 尹德川



The Post Mortem Analysis of the
Energy Efficient Projects in Hong
Kong & China in the Past & the
Solution Proposal to GBA in Future
中港兩地的節能項目回溯
和未來大灣區的解決方案

Supporting
Organizations:



Date: 7 DEC 2019

Time: 2:30PM- 5:30PM

Venue: John Chan Lecture Theatre (LT-11), CityU

香港城市大學陳振東演講廳

Speech: Cantonese/Putonghua 廣東話/普通話



Registration:

Scan the QR code or use the link below:

<https://www.wjx.top/jq/47730421.aspx>

Free of Charge
免費參加

Funding Organization 資助機構:



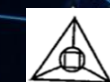
Organizer 主辦:



Supporting Organizations :



IEEE PES/PELS/PES/IAS Joint Chapter



香港國際智慧
城市研究院



大中華持續發展全球聯盟
Greater China Sustainable Development Global Alliance

Annual Gathering of HAESCO

香港能源服務協會週年聯誼大會



黃奕進先生
Mr. VY Ek-chin

香港特別行政區政府機電工
程署 助理署長
Assistant Director
Electrical & Mechanical
Services Department,
HKSAR Government



鄭智仁先生
**Mr. Chi-yan
Cheng**

中華電力業務拓展及業務
洞察主管
Head Of Business
Development and
Business Insights, CLP



梁國熙教授
**Prof.
Michael Leung**

香港城市大學能源及環境
學院
School of Energy &
Environment, CityU



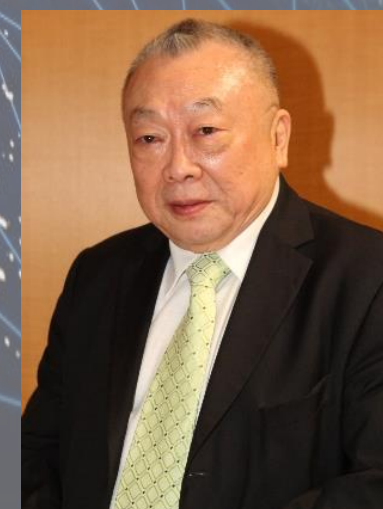
方湛樑先生
**Mr.
Raymond Fong**

香港生產力促局環境管理部
總經理 方湛樑
General Manager
of the Environmental
Management Division, HKPC



廖永力先生
Mr. Yong-li Liao

南方電網生產技術支持中心
輸電技術研究室主任
Research Director,
Southern China Power
Grid



尹德川先生
Mr. Dominic Yin

香港能源服務協會創會會
長
Founding Chairman
of HAESCO

Annual Gathering of HAESCO on Energy Efficiency and Energy Future in GBA 香港能源服務協會年會論壇：大灣區的能源效益及能源未來		
	7th Dec, 2019, 14:00-17:30	
Venue 場地	John Chan Lecture Theatre (LT-11), CityU 香港城市大學陳振東演講廳	
Language 語言	Cantonese/Putonghua 廣東話/普通話	
Moderator (主持人): Mr. Dominic Yin, Founding Chairman of HAESCO 香港能源服務協會 創會會長 尹德川		
Rundown 流程	Programme/Topic 環節/主題	Speakers 演講嘉賓
14:00-14:30	Registration & Networking 註冊登記及會前交流	
14:30-14:35	Welcoming Remarks 歡迎致辭	Mr. Colin Tam, Chairman of HAESCO 香港能源服務協會 會長 譚兆棟
14:35-15:05	Opening Keynote Speech:Enhancing I&T Collaboration on Energy Efficiency/Renewable Energy Application in GBA 開場主題演講：提升粵港澳大灣區在節約能源和可再生能源方面的創科合作	Mr. VY Ek-chin, Assistant Director/ Electricity & Energy Efficiency, Electrical & Mechanical Services Department, HKSAR Government 香港特別行政區政府機電工程署 助理署長 黃奕進
	Session 1: Energy Efficiency (能源效益)	
15:05-15:25	Smart Energy Management Solutions 創新節能管理方案	Mr. Chi-yan Cheng, Head of business development and business insights, CLP 中華電力 業務拓展及業務洞察 主管 鄭智仁
15:25-15:45	Advanced Technologies for Clean and Renewable Energy 先進的清潔和可再生能源技術	Prof. Michael Leung, School of Energy & Environment, CityU 香港城市大學能源及環境學院 梁國熙教授
15:45-16:05	Energy Big Data Analytics by Artificial Intelligence 人工智能能源大數據分析	Mr. Raymond Fong, General Manager of the Environmental Management Division, HKPC 香港生產力促局環境管理部 總經理 方湛樑
	Session 2: Energy Future (能源未來)	
16:05-16:25	The importance of a safe, reliable and energy efficient supply of electric power to the development of the GBA - experience from the Southern Grid 安全，可靠和節能的電力供應對大灣區的重要性-南方電網的經驗	Mr. Yong-li Liao, Research Director, Southern China Power Grid 南方電網生產技術支持中心輸電技術研究室主任 廖永力
16:25-16:45	The Post Mortem Analysis of the Energy Efficient Projects in Hong Kong & China in the Past & the Solution Proposal to GBA in Future 中港兩地的節能項目回溯 和未來大灣區的解決方案	Mr. Dominic Yin, Founding Chairman of HAESCO 香港能源服務協會 創會會長 尹德川
16:45-17:30	Panel Discussion (互動環節)	
	註: 因演講人眾多,不設茶歇, 參會者可隨時自行出外飯食及如廁	

Moderator (主持人)



尹德川先生 Mr. Dominic Yin

香港能源服務協會創會會長 Founding Chairman of HAESCO

教育：美國俄亥俄州州立大學企業管理及工業工程(1960-1963)
Education: Industrial Management & Industrial Engineering (1959-1963)

現任(Current)：
香港環保節能有限公司:董事長兼總裁 (環保及能源的投資, 諮詢及資源整合)
EESCO P2E2 Hong Kong Ltd.: Chairman & CEO (Investor, Consultant and Facilitator of Environmental & Energy Projects)
三荔企業有限公司:董事長(國際貿易及生產非標零部件)
Trigo Enterprises Ltd.: Chairman(International Trading & Mfg of non-standard Parts & Components)
天津市南開大學蓖麻工程科技有限公司:副董事長(全球唯一的蓖麻綠色可降解的潤滑油及航空燃油減碳添加劑生產者)
Vice Chairman of Tianjin Nankai University Castor Engineering Science and Technology Co., Ltd. (Producer of Investor and Global Unique Castor green & degradable Lubricant and carbon reduction additive for jet fuel)
先進光電技術有限公司董事長 (生產大功率LED專利技術解決散熱及角度的產品)
Synxia photonic Technology Ltd (Produce patented high power LED products to solve the problems of over heat and angle)
中華海外聯誼會首兩屆開始至2011年的理事及現任名譽理事
Former Director of China Overseas Friendship Association till 2011 and Current Honorary Director
香港友好協進會董事(創會及現任董事)
Board Member of Hong Kong Friendship Association since establishment
中國治理荒漠化基金會常務理事
Executive Director of China Foundation for Desertification Control
獨立能源投資者協會 (IPPF) 中國委員會及能效委員會現任主席
Co-Chairman of China Committee and co-chairman of Energy Efficiency Committee of Independent Power Producers Forum (IPPF)
香港總商會環境及可持續發展委員會, 中國委員會及創新技術委員會資深委員
Senior member of Environment and Sustainability Committee, China Committee and Innovation & Technology Committee of Hong Kong General Chamber of Commerce
中國能源投資網資深能源專家及高級顧問。
Senior Energy Specialist and Senior Advisor of Energy R & D Center Under China Energy Investment Association.
香港正昌科技公司高級顧問
Senior Advisor of Hong Kong Dunwell Group of Companies
香港綠色策略聯盟副主席
Vice Chairman of Hong Kong Green Strategy Alliance (HKGSA)
大中華持續發展全球聯盟執行會長
Executive President of Greater China Sustainable Development Global Alliance.

大中華持續發展基金會: 會長
President of Greater China Sustainable Development Foundation

中國科技部中國生產力促進中心協會國際智慧城市研究院獨立香港院:院長
President of Hong Kong Institute under CAPPIC International Smart City Research Institute of Ministry of Science & Technology of People's Republic of China

廣東省低碳產業技術協會高級顧問
Senior Advisor of Low Carbon Industry & Technology Association of Guangdong
台灣新北市綠色能源產業聯盟諮詢及技術顧問(2013年始)
Consulting and technical Advisor of “Green Industry Association of New Taipei City, Taiwan”. (Starting in 2013)
香港專業及資深行政人員協會會員
Member of Hong Kong Professionals and Senior Executives Association.
香港歐盟學術計劃城市創新系列講座榮譽顧問(2014年11月開始)
Honorary Advisor of EUAP Urban Innovations Programme Under European Union Academic Program, Hong Kong (Starting in September, 2014)
CINEV in 2014及2015年11月於香港舉辦的“智慧城市中的智慧機動”論壇及展覽的顧問。
Advisor of “Smart Mobility in Smart City” Forum & Exhibition Under CINEV in 2014 & Nov 2015 in Hong Kong.
香港能源服務協會創會主席及榮譽主席 (2005-2017)
Founder & Honorary Chairman of Hong Kong Association of Energy Service Companies.

廣州市智慧城市發展促進會終身名譽主席(2016年6月27日始)
Life Honorable Chairman of Guangzhou Smart City Development Association (starting on June 27, 2016).
廣東省華南低碳產業發展研究院智慧庫中低碳領域專家。
Specialist of the Low Carbon Think Tank of Institute of Guangdong South China Low Carbon Industrial Development.
中國科技部中國生產力促進中心協會國際智慧城市研究院獨立香港院:院長
President of Hong Kong Institute under CAPPIC International Smart City Research Institute of Ministry of Science & Technology of People's Republic of China

前任 (Previous)：
中國人民政協成都委員會前任委員
Former Director of Chengdu Committee of Chinese People's Political Consultative Conference
重慶市海外聯誼會常務理事
Executive Director of Chongqing Overseas Friendship Association since 1991
深圳市節能協會前理事長及現任名譽理事長
Ex-Chairman and current Honorary Chairman of Shenzhen Energy Saving Association
中國全國工商聯合會環境服務業商會發起人
Founder member & Director of Environment Service Association of China Commerce & Industry Association
美國商會能源委員會前主席 (2012-2013)
Former Chairman of Energy Committee of American Chamber of Commerce in Hong Kong (2012-2013)
能效與環保上海聯合體名譽理事長兼首席顧問
Honorary Chairman and The Chief Advisor of Shanghai Energy & Environment Coalition Council
國資委/中國資源綜合利用協會能源資源綜合利用專業委員會高級顧問
Senior Advisor of China Association of Resource Comprehensive Utilization Energy Saving Cooperation Alliance
中國能源研究會能效與投資評估專業委員會榮譽顧問
Professional Honorary Consultant of China Energy Efficiency and Investment Research Organization
前中德環保集團顧問(至2013)
Former Advisor of Zhongde Environment Group (till 2013)
世界青年商會參議員No.8118
JCI Senator No.8118
中華民國全國工業總會理事(至1984)
Director of Industrial Federation of Republic of China (till 1984)
台灣區螺絲同業公司理事長(1979-1984)
Chinaman of Taiwan Fasteners Industries Association (1979-1984)
13. 台灣區手工界同業公司常務理事(1979-1984)
Executive of Taiwan Hand Tools Industries Association (1979-1984)
香港工業總會理事 (1965)
General Committee member of Federation of Hong Kong Industries (1965)
東華三院百週年總理 (1970)
Director of Tung Wah Group of Hospital (1970)
港島青年商會主席 (1967)
Chairman of Island Junior Chamber (1967)
香港中華廠商會董事(1968-1970)
Director of Chinese Manufacturers Association of Hong Kong (1968-1970)

Welcoming Remarks (歡迎致辭)



譚兆棟先生

Mr. Colin Tam

**香港能源區塊鏈實驗室董事
香港能源服務協會主席
獨立電力生產商協會主席**
Director of the Hong Kong
Energy Block-chain
Laboratory
Chairman of HAESCO
Chairman of the
Independent Power
Producers Association

Mr. Colin Tam born in mainland China and grew up in Hong Kong. He received higher education in the United Kingdom and the United States. He holds a bachelor's degree in electrical engineering from New York University, a master's degree in electrical engineering from New York Institute of Technology, and a master's degree in business administration from Pace University.

Mr. Colin Tam is a director and current chairman of the Hong Kong Energy Service Association (HAESCO) and the founder and current chairman of the Independent Power Producers Association (IPPF) (2000-now). He has served as a member of the Board of Directors of AmCham Hong Kong (2010-2015) and a director of Solena Corporation (2013-2015).

Mr. Tam is also a director of the Hong Kong Energy Block-chain Laboratory, a director of Meiqi Power (China) Co., Ltd. and an expert consultant of the Energy Investment Professional Committee of the China Investment Association. He is also an independent director of Solena Group Inc. in DC, Washington, USA.

譚先生出生于中国大陆，成长在香港，在英国和美国接受高等教育。其拥有纽约大学电子工程学士学位、纽约理工学院电子工程硕士学位和佩斯大学工商管理硕士学位。

譚先生是香港能源服务协会（HAESCO）董事和现任主席、亦是独立电力生产商协会（IPPF）的创立者和现任主席（2000-now）。曾兼任香港美国商会（AmCham Hong Kong）理事会成员（2010-2015）、美国Solena公司董事（2013-2015）。

譚先生现兼任香港能源區塊鏈實驗室董事，美启电力（中国）有限公司的董事和中国投资协会能源投资专业委员会专家顾问。他也是美國華盛頓DC市Solena Group Inc. 公司的獨立董事。

Opening Keynote Speech:

Enhancing I&T Collaboration on Energy Efficiency/Renewable Energy Application in GBA 提升粵港澳大灣區在節約能源和可再生能源方面的創科合作



黃奕進先生
Mr. VY Ek-chin

香港特別行政區政府機電工程署 助理署長
Assistant Director
Electrical & Mechanical
Services Department,
HKSAR Government

Mr. Ek Chin VY is the Branch Head of the Electricity and Energy Efficiency Branch of Electrical and Mechanical Services Department (EMSD), HKSAR Government. He is responsible for the development, implementation and promotion of various energy efficiency and conservation (EE&C), and renewable energy (RE) programmes. The Branch is also the enforcement body for Ordinances on energy efficiency (labelling of products), building energy efficiency and electricity safety. Mr. VY has over 30 years of working experience in power company and in Government Bureau and Departments. He has been responsible for formulating the public works policy, development, implementation and promotion of various EE&C and RE programmes, development of LPG taxi scheme, project management, quality and safety management, operation and maintenance management of engineering systems, railway safety regulatory works, design and construction of power plant and administration of associated energy efficiency (EE) and air pollution control system.

黃奕進先生主管香港特別行政區政府機電工程署電力及能源效益科，負責政府能源效益及節約以及可再生能源計劃的發展、推行和推廣。該科也是《能源效益（產品標籤）條例》、《建築物能源效益條例》和《電力安全條例》的執行機構。黃先生在電力公司和政府工作了30多年，所負責的工作包括公務工程政策的制訂，能源效益及節約以及可再生能源計劃的發展、推行和推廣，液化石油氣出租車計劃的制訂，工程系統的項目管理、質量安全、營運和維修管理，鐵路安全規管，電廠設計建造以及其相關的能源效率和空氣污染控制系統的管理。

Abstract (摘要)

The Hong Kong Government has set out ambitious energy saving and carbon reduction targets for Hong Kong. The smart applications of innovation and technology (I&T) in Hong Kong and the close regional collaboration with other cities in the Greater Bay Area (GBA) are conducive to achieve our targets and so to join hand in mitigating the global issue of climate change. Government is leading by example and encourage the community to take part in promoting energy saving initiatives and RE development, and facilitate the wider and faster adoption of related innovation and technology solutions in Hong Kong and in GBA as well. Exemplary cases include the EE&C measures in action of Hong Kong, our RE development measures, E&M InnoPortal of EMSD, retro-commissioning collaboration, Green I&T Day (綠色創科日), and memorandum of co-operation with the corresponding organisations in GBA, etc.

香港政府為香港製定了宏偉的節能減排目標。香港創新科技的智能應用以及與大灣區（GBA）其他城市的緊密區域合作有利於實現我們的目標，從而共同緩解全球氣候變化問題。政府以身作則，鼓勵社會人士參與推行節能措施和可再生能源發展，並促進香港和大灣區更廣泛、更快捷地採用相關的創新技術解決方案。典型案例包括香港採取的EE&C措施，我們的可再生能源開發措施，EMSD的創新科技協作平台，委託調試合作，綠色創科日，以及與之合作的大灣區中相應的組織等。

Session 1: Energy Efficiency (能源效益)

Smart Energy Management Solutions

創新節能管理方案



鄭智仁先生
Mr. Chi-yan Cheng

**中華電力業務拓展及業務
洞察主管**
**Head Of Business
Development and
Business Insights, CLP**

Mr CY Cheng is currently the Head of Business Development and Business Insights serving business customers under Customer and Business Development. He takes charge of developing new business opportunities and formulating new business sales model, customer engagement strategy, sales plan and marketing campaigns for achieving sales and other business objectives. Prior to this position, CY held a number of engineering and managerial positions in various departments of CLPP, including engineering design, construction, maintenance and operations of transmission and distribution systems, overseeing CLPP's motor fleet ranging from general vehicles, electric vehicles to heavy trailers, and management of manpower workforces and high value contracts.

鄭智仁工程師現任業務拓展及業務洞察主管，負責客戶和業務發展領域的工商客戶。他負責開發新的商機，並制定新的業務銷售模型，建立客戶關係，銷售計劃和市場營銷活動，以實現銷售和其他業務目標。在擔任此職位之前，鄭智仁工程師在中電各個部門擔任過多個工程和管理職位，包括輸電和配電系統的工程設計，建造，維護和營運，監督中電的運輸車隊，包括普通車輛，電動車輛，重型拖車，以及人力和高價值採購合約的管理。

Abstract (摘要)

CLP is firmly committed to energy efficiency and conservation. We encourage our residential and business customers and the Hong Kong community at large to use energy more efficiently and change their behaviour so that they save energy and help to create a better environment. The New Eco Building Fund has been established since 1 October 2018 to cover commercial and industrial buildings. On top of lighting and air-conditioning systems replacement, the fund will also support retro-commissioning and smart technologies. In this seminar, we will share examples adopting big data approach on retro-commissioning and vision-based artificial intelligence technology for helping our customers to save energy consumption.

中電一向致力於推動能源效益和節約能源的工作，鼓勵由住宅、工商客戶以至整個香港社區一同參與，從採用高能源效益的電能設備和改變用電模式著手，為環保出一分力。而中電綠適樓宇基金自2018年10月1日起，資助範圍擴展至商業樓宇、工業樓宇及綜合樓宇；除了資助更換照明及空調系統，重新校驗及為樓宇安裝智能設備亦納入資助項目。我們將於研討會上分享如何透過大數據在重新校驗及影像分析配合人工智能技術的應用，以協助客戶減少用電量。

Session 1: Energy Efficiency (能源效益)

Advanced Technologies for Clean and Renewable Energy

先進的清潔和可再生能源技術



梁國熙教授
Prof.
Michael Leung

香港城市大學能源及環境學院
School of Energy & Environment, CityU

Prof. Michael Leung is a Professor in the School of Energy and Environment (SEE) at the City University of Hong Kong (CityU). He is also the Director of Ability R&D Energy Research Centre at CityU. His current research interests include solar photocatalysis, marine antifouling, fuel cell and advanced refrigeration/air-conditioning. His research works are impactful and have received international recognition as he is recently listed as a Highly Cited Researcher by Clarivate Analytics in 2018. He is also listed in The Most Cited Researchers in Energy Science and Engineering, developed for ShanghaiRanking's Global Ranking of Academic Subjects by Elsevier. . Prof. LEUNG has received total HK\$40M+ research grants as a PI from NSFC, ITF, RGC, ECF, SDF, industrial sponsorships, university internal grants, donations, etc. He is an Editorial Board Member for Applied Energy and HKIE Transactions. He has published 150+ journal papers, 80+ conference papers, 15 books/book chapters, and 7 patents.

梁國熙教授現職香港城市大學能源及環境學院教授，能量研發能源研究中心主任。主要研究領域包括太陽能光催化、海洋防污、微流液相燃料電池、先進製冷/空調等。他的研究成果具有影響力，並在國際上得到認可，最近更獲Clarivate Analytics列入《2018年高引用研究人員》世界級研究人員名單。他還獲列入Elsevier為上海排名而開發的全球學術科目排名《能源科學與工程領域高引用研究人員》名單。梁教授共獲得國家自然科學基金、ITF、RGC、ECF、SDF、工業贊助、大學內部資助、捐贈等4000多萬港元的研究資助。他亦是《Applied Energy》和《HKIE Transactions》的編委。他發表了150多篇期刊論文，80多篇會議論文，15本書/書籍章節，7項專利。

Abstract (摘要)

Solar photocatalysis is a promising approach to achieve production of renewable hydrogen fuel for future sustainable energy. Photocatalysis (PC) can also be integrated with fuel cell (FC) to form photocatalytic fuel cell (PFC) that effectively utilizes solar energy for simultaneous wastewater treatment and recovery of energy chemically stored in wastewater. PFC using photoanode and photocathode can utilize solar energy effectively for hydrogen production, carbon reduction, wastewater treatment and recovery of the energy chemically stored in wastewater. Solar PC can decompose organic compounds while the FC component provides an electrical potential bias to drive the transport of the photogenerated electrons. In this talk, the speaker will first discuss the properties and fundamental mechanisms of solar photocatalysis followed by the development of effective visible-light activated nano-photocatalysts. Then, different reactor configurations, designs and control strategies for various applications will be presented. The talk will also cover upcoming R&D challenges for enhancing the solar photocatalysis technologies.

太陽能光催化是其中一種可拓展未來可持續能源生產可再生氫燃料的途徑。光催化（PC）也可以與燃料電池（FC）集成，形成光催化燃料電池（PFC），有效地利用太陽能進行廢水處理和回收廢水中化學儲存的能量。使用光陽極和光陰極的光催化燃料電池可以有效地利用太陽能生產氫氣、減少碳、廢水處理和回收廢水中化學儲存的能量。太陽能光催化可以分解有機化合物，而燃料電池元件提供電勢偏置，以推動光產生電子的傳輸。在本次講座中，演講者將首先討論太陽能催化的特性和基本機制，開發有效的可見光活化納米光催化劑。然後，將介紹不同應用的反應器配置、設計和控制策略。該演講還會討論在增強太陽能光催化技術方面的研發挑戰。

Session 1: Energy Efficiency (能源效益)

Energy Big Data Analytics by Artificial Intelligence

人工智能能源大數據分析



方湛樑先生
Mr.
Raymond Fong

香港生產力促進局環境管理部
總經理 方湛樑
General Manager
of the Environmental
Management Division, HKPC

Mr. Raymond Fong is the General Manager of the Environmental Management Division of Hong Kong Productivity Council (HKPC). Mr. Fong has ample experience in air pollution control, energy efficiency, cleaner production as well as environmental management studies. On top of leading a wide range of environmental and energy related projects and studies for the government, public, industrial and commercial sectors, Mr. Fong has been a co-opt member of the HKSAR Government's Energy Efficiency & Conservation Subcommittee since 2008 to offer expert advice to the Government on energy policy formulation.

Mr. Fong possesses the following professional qualifications :
Corporate Member (Environmental Discipline and Energy Discipline) of the Hong Kong Institution of Engineers
Registered Professional Engineer, Hong Kong
Registered Energy Assessor, Hong Kong
Corporate Member of the Energy Institute, United Kingdom
Chartered Engineer, United Kingdom

方湛樑先生是香港生產力促進局環境管理部總經理，方先生擁有豐富的空氣污染控制、能源效益、清潔生產和環境管理研究等技術顧問經驗，並以全面及廣泛的知識，領導專家為政府部門、公營機構和工商業等進行範圍廣泛的環境與能源項目及研究。自2008年起方先生更獲香港特區政府委任為能源效益及節約小組委員會成員，為特區政府制定能源政策提供專業意見。

方先生擁有多項專業資格，包括：

- 香港工程師學會會員（環境工程與能源工程專業）
- 香港註冊專業工程師
- 香港能源效益評核人
- 英國能源學會會員
- 英國特許工程師

Abstract (摘要)

Emerging technologies adopting Artificial Intelligence (AI) are transforming our society and everyone's daily life. While their applications are developing fast in many areas (like finance, social media, healthcare, robotics and transportation, etc.), there are much rooms for their development and application in energy saving.

"Deep Learning" using Artificial Neural Network (ANN) is a powerful AI tool for finding insight from big data. In this session, the speaker will briefly introduce the concept of "Deep Learning" and discuss its potential application in data analytics of energy data collected from smart energy meters. He will also elaborate its application with an example on automated operation efficiency monitoring on an industrial machine, using real-time energy data captured by smart energy meter.

應用人工智能開發的各種新型技術正不斷滲入並改變我們的社區以及日常生活，這些技術應用於多個領域中正在急速發展，如金融、社交媒體、醫療、自動機械及運輸等等。然而在節能應用領域方面，人工智能技術仍然存在相當大的開發空間。

使用人工神經網絡(ANN)運算模型作『深度學習』是一種能夠從大數據中洞悉智慧的人工智能分析工具。在這個專題演說中，講者將簡短介紹『深度學習』的概念，並討論其應用於智能電錶數據分析的潛在空間，講者並將透過講解一個應用於工業機器的案例，闡述怎樣能夠利用智能電錶實時數據及『深度學習』對機器的運行效率作自動化監測。

Session 2: Energy Future (能源未來)

The importance of a safe, reliable and energy efficient supply of electric power to the development of the GBA: experience from the Southern Grid
安全，可靠和節能的電力供應對大灣區的重要性-南方電網的經驗



廖永力先生
Mr. Yong-li Liao

南方電網生產技術支持中心
輸電技術研究室主任
Research Director,
Southern China Power
Grid

Mr. Yong-li Liao graduated from Tsinghua University in July 2008 with a master's degree in electrical engineering. Now working at China Southern Power Grid Science Research Institute Co., Ltd. He is the research director of the Transmission Technology Research Office of China Southern Power Grid Production Technology Support Center. He is mainly engaged in research work on transmission equipment operation technology and new product and new technology. He is member of the National Naked Electric Wire Standardization Technical Committee and the CIGRE WG D1.50 Working Group. He won the second prize of China Electric Power Science and Technology Award, the second prize of China Electrotechnical Science and Technology Progress Award, the first prize of China Power Innovation Award, the second prize of China Energy Research Association Energy Innovation Award, the first prize of China Southern Power Grid Technology Progress Award, etc. Provincial and ministerial level science and technology awards. A total of 19 papers were published as the main accomplisheers. 158 patents were filed (117 invention patents).

廖永力先生2008年7月畢業於清華大學，獲電氣工程專業碩士學位。現就職於南方電網科學研究院有限責任公司，擔任南方電網生產技術支持中心輸電技術研究室主任，主要從事輸電設備運行技術及新產品新技術等方面的研究工作。兼職有全國裸電 線標準化技術委員會委員、CIGRE WG D1.50 工作組成員等。獲中國電力科技獎 二等獎、中國電工技術科技進步獎二等獎、中國電力創新獎一等獎、中國能源研 究會能源創新獎二等獎、南方電網公司科技進步獎一等獎等多項省部級科技獎勵。作為主要完成人共計發表論文 19 篇。申請了專利 158 件（發明專利 117 件）。

Abstract (摘要)

The development of GBA is dependent on a safe, energy efficient and stable power supply. Hong Kong's power is partly supplied by the 7 overhead transmission lines of China Southern Power Grid (500kV Lingyi A B lines, 500kV Ling Shen AB lines, 500kV Nuclear Wei line, 400kV Nuclear Shen line, 220kV Bay Ridge line). Catering to the present situation, we need to do a good job in upgrading and reconstructing the coastal transmission lines and improving the power supply capacity to Hong Kong. The ways to achieve this include improving the ability of the transmission lines to with stand typhoon and natural disasters; applying energy efficient and capacity enhancing technologies that are suitable for urbanization. Demonstration cases include the implementation of the typhoon-proof reinforcement and reconstruction project of the transmission line supplying nuclear power to Hong Kong in the South China Power Grid, the planning of the guaranteed power grid, the wind speed distribution map, the measures to reinforce towers, and the use of carbon fiber conductors.

大湾区的发展离不开安全、节能和稳定的电力供应。香港的电力供应部分来源于南方电网深圳7回架空输电线路（500kV岭赬甲乙线、500kV岭深甲乙线、500kV核惠线、400kV核深线、220kV湾岭线），适应新形势，我们需要做好沿海涉港输电线路的升级改造建设，提升香港电力供应的保障能力。实现途径有，提高涉港输电线路防台风抗灾的能力，应用适应城市化建设的节能、增容技术。示范案例包括南方电网实施涉核涉港沿海输电线路防风加固改造工程、保底电网规划、风速分布图、加强塔措施，以及碳纤维导线等。



尹德川先生
Mr. Dominic Yin

香港能源服務協會創會會長
Founding Chairman
of HAESCO

Session 2: Energy Future (能源未來)

The Post Mortem Analysis of the Energy Efficient Projects in Hong Kong & China in the Past & the Solution Proposal to GBA in Future
中港兩地的節能項目回溯和未來大灣區的解決方案

Abstract (摘要)

1. The “Post Mortem Analysis” of the failure of the energy efficiency projects in Hong Kong & China & how to use “Four Wheel Drive” methodology to make the success of this “Fifth Energy” to be the model in GBA to be duplicated in Belt & Road Countries.
 2. Briefly mention the future energies & will organize a specialized Forum to the public in Hong Kong & GBA.
-
1. 香港和中國大陸在節能項目過去未能全面成功的原因分析以後今後應該如何利用四輪驅動的方式全面整體把這個<<第五能源>>在粵港澳大灣區做強做大. 建立範例以便擴至全國並進軍<<一帶一路>>沿線國家.
 2. 淺談未來的能源並將另行組織專業論壇.