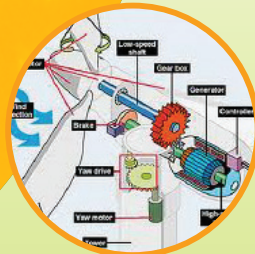




# 嶄新再生能源設備及零部件設計、 製造、應用與安裝技術會議暨 再生能源系統設計、製造及 維護研討會

Conference on Opportunities and Technologies  
for Renewable Energy Devices Manufacturing,  
Applications and Installation with Seminars on  
Renewable Energy System Design,  
Manufacturing and Preventive Maintenance

21 - 22.10.2011



## Organizer



香港電器製造業協會  
HONG KONG ELECTRICAL APPLIANCES  
MANUFACTURERS ASSOCIATION

## Implementation Agent



Hong Kong  
Productivity Council  
香港生產力促進局

## Funding Organization



香港特別行政區政府商務及經濟發展局  
COMMERCE AND ECONOMIC DEVELOPMENT BUREAU  
THE GOVERNMENT OF THE HONG KONG  
SPECIAL ADMINISTRATIVE REGION

## Collaborating Organizations



香港汽車零部件工業協會  
Hong Kong Auto Parts  
Industry Association



香港模具及產品科技協會  
Hong Kong Mould and Product Technology Association

## Supporting Organizations



香港金屬製造業協會  
The Hong Kong Metals Manufacturers Association



香港青年工業家協會  
HONG KONG YOUNG INDUSTRIALISTS COUNCIL

Sender: Hong Kong Productivity Council, 78 Tat Chee Avenue, Kowloon, Hong Kong, Tel: (852) 2788-5556.

發送者：香港生產力促進局 香港九龍達之路78號生產力大樓 電話：(852) 2788-5556。

If you do not wish to receive further information from HKPC, please inform us via fax at (852) 3187-4531.

若閣下不欲再接收本局信息，請以傳真：(852) 3187-4531 通知我們。

Disclaimer: "Any opinions, findings, conclusions or recommendations expressed in this material / any event organized under this Project do not reflect the views of the Government of the Hong Kong Special Administrative Region or the Vetting Committee for the Professional Services Development Assistance Scheme."  
「在此刊物上 / 任何的項目活動內表達的任何意見、研究成果、結論或建議，並不代表香港特別行政區政府及專業服務發展資助計劃評審委員會的觀點。」



# Introduction 簡介

There is a continuously fast growing market demand in Hong Kong, Mainland and the world on renewable energy and products, components and consumer products driven by renewable energy devices. Local professional design, manufacturing and building services engineers have an urgent need to gain knowledge on the different aspects such as market opportunities and trend, design concerns and manufacturing processes of renewable energy devices and its critical components for household and commercial use, testing and certification of wind, solar and other renewable energy devices; and system design, installation and preventative maintenance techniques of various renewable energy devices in order to support local manufacturers and building services suppliers to grasp the opportunities of the emerging and fast growing value-added renewable energy devices and components manufacturing and services market

A 1-day conference titled “*Opportunities and Technologies for Renewable Energy Devices Manufacturing, Applications and Installation*” will be held on 21 October 2011 in Hong Kong. Meanwhile, 2 seminars will be held at the next day right after the conference in order to transfer renewable energy knowledge in depth to local manufacturing sector and engineering services sector respectively.

## Who Should Attend

- Directors, managers and professional design and manufacturing engineers in **industry sectors** including electrical appliances, critical components (e.g. motor, engineering screws and bolts), plastics, metals, auto parts, consumer electronics, etc., that **interested to diversify into value added renewable energy devices and related product manufacturing** with fast growing worldwide market.
- **Local building, environmental and electrical equipment** service professional engineers, their managers, directors and suppliers who would like to extend their service scope to fast growing local market on renewable energy device installation and maintenance.
- Directors, managers and engineers of local **power companies**.

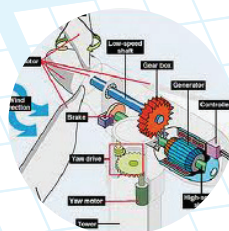
可再生能源及其帶動的相關產品，元件和消費類產品無論在香港、內地以至世界均發展為快速增長的市場需求。本地從事專業設計，製造和屋宇設備服務的工程師們迫切需要獲得這方面的知識，如市場機會和趨勢；家用及商用的可再生能源設備及其關鍵性零部件的設計技術和製造過程；風能、太陽能等可再生能源設備的測試及認證；各種可再生能源設備的系統設計、安裝和預防性維修技術等，以支持本地的製造商和屋宇設備服務供應商把握機會，進軍這個新興以及快速增長的高增值可再生能源設備和零部件製造和服務市場。

我們將於2011年10月21及22日，舉行「**嶄新可再生能源設備及零部件設計、製造、應用與安裝技術會議暨再生能源系統設計、製造及維護研討會**」，為本地製造業和工程服務業從業員提供可再生能源設備及零部件之市場、技術及深層知識。



## 誰應參加

- 電器，關鍵性零部件(如發動機，工程螺釘和螺栓)，塑膠，金屬，汽車零部件，消費類電子產品等各行業中，**有興趣於這個快速增長的全球化市場中拓展高增值的可再生能源設備及其相關產品的製造業務的董事，經理及專業設計和製造工程師。**
- 有意擴大其服務範圍至快速增長的可再生能源設備的安裝和維護市場的**本地屋宇設備，環境和電器設備的專業工程師，其經理，董事和供應商**
- **本地能源公司的董事，經理和工程師**



# Conference on Opportunities and Technologies for Renewable Energy Devices Manufacturing, Applications and Installation

## 嶄新再生能源設備及零部件設計、製造、應用與安裝技術會議

**Date:** 21st October 2011 (Friday)

**日期:** 2011年10月21日(星期五)

**Time:** 9:30 a.m. – 12:30 p.m. & 2:00 p.m. – 5:00 p.m.

**時間:** 上午9時30分至下午12時30分 及 下午2時至5時

**Venue:** Lecture Theatre, 1/F, HKPC Building, 78 Tat Chee  
Venue, Kowloon

**地點:** 香港九龍達之路78號生產力大樓一樓演講廳

| Morning Program   |  | 早上環節   |
|-------------------|--|--|
| 0930              | Welcome Message from Organizer   | 歡迎辭  |
| 0945              | <b>Global Overview on Renewable Energy Business and Technology Development</b><br><br><b>Mr. Glen Morris</b> , Principal of SolarQuip, Director of the Australian Solar Energy Society<br><br><i>SolarQuip have extensive experience conducting renewable energy courses, seminars and industry presentations. Their clients include the Clean Energy Council, Swinburne University of Technology and many more.</i> | 全球可再生能源業務及技術發展概況<br><br><b>Mr. Glen Morris</b><br>澳洲 SolarQuip 公司主席及澳洲太陽能協會總監<br>SolarQui 於舉辦可再生能源課程、研討會和行業匯報上擁有豐富的經驗，客戶包括 the Clean Energy Council, Swinburne University of Technology 等。 |
| 1035              | Tea Break  | 小休   |
| 1050              | <b>Overview on Development of the Mainland Wind Power Industries and Critical Components &amp; Technology in Demand</b><br><br><b>Professor Xiongwei Liu</b> , Chair of Energy and Power Management, Head of Wind Energy Engineering Research Group, School of Computing, Engineering and Physical Sciences, University of Central Lancashire, Britain   | 大陸風電產業發展概況及對關鍵元器件與技術之需求<br><br><b>劉雄偉教授</b><br>英國 University of Central Lancashire 電腦、工程與物理學院能源和電力管理首席教授及風能工程研究主管  |
| 1140              | <b>Opportunities and Critical Technical Concerns for Solar Power System Design, Installation and Preventive Maintenance</b><br><br><b>Mr. Kevin J. Berkemeyer</b> , Marketing and Business Development, First Solar Inc., U.S.A.<br><br><i>First Solar is a world leader in the manufacture of photovoltaic (PV) solar modules, and a premier provider of comprehensive PV solar systems.</i>                        | 太陽能發電系統的設計，安裝和預防性維護的機遇和關鍵技術問題<br><br><b>白凱文先生</b><br>美國 First Solar Inc. 市場及業務發展部代表<br>First Solar 是全球領先的薄膜太陽能光伏模組生產商，通過以更低成本提供清潔的可再生能源，為傳統能源的替代提供了可持續的能源選擇                                |
| 1230              | End of Morning Program   | 早上環節完畢   |
| Afternoon Program |  | 下午環節   |
| 1400              | <b>Opportunities and Critical Technical Concerns for Wind Power System Design, Installation and Preventive Maintenance</b><br><br><b>Mr. Huang Tsung Wen</b> , Metal Industries Research & Development Centre, Associate project leader of wind turbine industry promotion R&D group, Secretary of Taiwan Wind Turbine Industry Alliance (TWTIA), Spokesperson of Taiwan Offshore Wind Power Alliance (TOWA), Taiwan | 風力發電系統的設計，安裝和預防性維護的機遇和關鍵技術問題<br><br><b>黃聰文先生</b><br>台灣金屬工業研究發展中心金屬製程研發處金屬產品研發組副組長，台灣風力發電設備產業聯誼會秘書長，台灣離岸風電聯盟發言人   |
| 1455              | <b>Eco-consumer Products Innovation with Quality Mini-solar Panels</b><br><br><b>Expert from Japan/China – To be confirmed</b>   | 應用優質小型太陽能電池板的創新環保消費產品<br><br>來自日本 / 中國的專家 – 待確定  |
| 1550              | Tea Break  | 小休   |
| 1605              | <b>Applications of Composite Materials in Wind Blade and Light Weight Critical Components Making</b><br><br><b>Mr. Iain Cranwell</b> , R & D Manager, Gurit, UK<br><br><i>Gurit is a global leader in the development and manufacture of advanced composite materials as well as composite process equipment and tools for the global Wind Energy, Tooling, Transportation and Marine markets.</i>                   | 複合材料在風電葉片及輕質關鍵性零部件製造上的應用<br><br><b>Mr. Iain Cranwell</b> , 英國 Gurit 公司研發經理<br>Gurit 是全球領先的先進複合材料開發和製造商，亦專注於複合材料的結構設計、製造設備和工具，市場包括風能、模具、運輸和海事等  |
| 1700              | End of Afternoon Program   | 下午環節完畢   |



## Seminar 1: Household and Commercial Solar Power System Design and Preventive Maintenance

### 研討會一：住宅及商用太陽能發電系統設計及預防性維護

**Speaker:** *Mr. Glen Morris, Principal of SolarQuip, Director of the Australian Solar Energy Society*

**講者:** *Glen Morris 先生，澳洲 SolarQuip 公司主席及澳洲太陽能協會總監*

**Date :** 22nd October 2011 (Saturday)

**Time:** 9:30 a.m. – 12:30 p.m. & 2:00 p.m. – 5:00 p.m.

**Venue:** 1026, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon

**日期:** 2011 年 10 月 22 日 (星期六)

**時間:** 上午 9 時 30 分至下午 12 時 30 分 及 下午 2 時至 5 時

**地點:** 香港九龍達之路 78 號生產力大樓一樓 1026 室

#### Contents:

- Types, specifications, applications, prices and selection of different solar power generation devices for household, commercial and power plant purpose
- Structure, layout, accessories of solar power generation system
- System designs for household, commercial and plant solar power generation system. Merits of different system design and their applications
- Installation procedures and techniques for different solar power systems types and sizes
- Preventive maintenance of different solar power systems
- Case studies in solar power system design, installation and preventative maintenance

#### 內容:

- 應用於家庭、商業及發電廠之不同太陽能發電設備的各種類型、規格、用途及選擇方法
- 太陽能發電系統的結構、佈置及配套設施
- 用於家庭、商業和電廠的各種太陽能發電系統結構與設計及不同系統的優點和應用
- 不同類型和尺寸的太陽能發電系統的安裝程序和技術
- 各類太陽能發電系統的預防性維護
- 太陽能發電系統的設計、安裝和預防性維護案例研究

## Seminar 2: Small-and-Medium-Sized Wind Turbine Design and Manufacturing

### 研討會二：小型和中型風力發電機組的設計與製造

**Speaker:** *Mr. Huang Tsung Wen, Metal Industries Research & Development Centre, Associate project leader of wind turbine industry promotion R&D group, Secretary of Taiwan Wind Turbine Industry Alliance (TWTIA), Spokesperson of Taiwan Offshore Wind Power Alliance (TOWA), Taiwan*

**講者:** *黃聰文先生，台灣金屬工業研究發展中心金屬製程研發處金屬產品研發組副組長，台灣風力發電設備產業聯誼會秘書長，台灣離岸風電聯盟發言人*

**Date :** 22nd October 2011 (Saturday)

**Time:** 9:30 a.m. – 12:30 p.m. & 2:00 p.m. – 5:00 p.m.

**Venue:** 1006, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon

**日期:** 2011 年 10 月 22 日 (星期六)

**時間:** 上午 9 時 30 分至下午 12 時 30 分 及 下午 2 時至 5 時

**地點:** 香港九龍達之路 78 號生產力大樓一樓 1006 室

#### Contents:

- The design and development of small and medium wind turbine
  - Types of wind turbine
  - Related design requirements
  - Structure of wind turbine
  - The key elements of the overall design
- Standards and certification of small and medium sized wind turbine
  - Statement of power and durability testing for wind turbine
  - The comparison of wind turbine testing standards between IEC, the United States and Britain.
  - Global wind turbine testing and certification mechanisms

#### 內容:

- 中小型風力發電機組的設計及開發
  - 風力發電機組的種類
  - 相關的設計要求
  - 風力發電機組的結構
  - 整體設計的關鍵要素
- 中小型風力發電機組的標準及認證
  - 風力發電機組的電力及耐久性測試聲明
  - 比較 IEC，美國及英國針對風力發電機組的測試標準及要求
  - 全球風力發電機組的測試及認證機制

## Speakers 專業講師



### Mr. Kevin J. Berkemeyer

*Marketing and Business Development, First Solar Inc., U.S.A.*  
美國 First Solar Inc. 市場及業務發展部代表

Kevin currently serves as First Solar's China Representative. This role includes leading First Solar's origination and execution of photovoltaic projects in the utility-scale and commercial & industrial market segments. Prior to joining First Solar, Kevin was part of a start-up energy company, Juice Energy, Inc., that focused on providing renewable energy solutions and environmental services to commercial and industrial energy consumers in the U.S.

白凱文先生現為 First Solar 的中國代表。工作範圍包括領導 First Solar 在公用事業，以及商業和工業市場上開發及執行光伏模組項目。在加入 First Solar 前，白先生曾於 Juice Energy, Inc 工作，為美國的商業和工業能源消費者提供可再生能源解決方案和環境服務。



### Mr. Iain Cranwell

*R & D Manager, Gurit, UK*  
英國 Gurit 公司研發經理

Mr. Iain Cranwell graduated from the University of Nottingham with a degree in Materials Engineering and more than 15 years industrial experience. Iain worked for 5 years in the automotive industry with Ford Motor Co. A period with GKN Aerospace, a tier one supplier to Airbus, Boeing and all major aerospace primes, resulted in specialising in the composite materials field. In 2000 Iain was appointed Chief Materials Engineer (Composites) at GKN. In 2003 Iain joined Gurit (formerly SP Systems) an industry-leading supplier of composite materials, working on numerous major research and customer focused projects.

Iain Cranwell 先生畢業於諾丁漢大學 (University of Nottingham) 材料工程系，在複合材料領域工作超過十五年，曾經在汽車製造商 Ford Motor Co. 工作逾五年，其後於 GKN AEROSPACE 擔任總物料工程師一職，專長為複合物料應用及開發。GKN AEROSPACE 為航空業界領先的供應商，其客戶包括 Airbus, Boeing 等世界頂級航空企業。由 2003 年起，Iain Cranwell 先生加入 Gurit，參與主要的研發項目。



### Mr. Huang, Tsung-Wen

*Metal Industries Research & Development Centre, Associate project leader, wind turbine industry promotion R&D group, Secretary, Taiwan Wind Turbine Industry Alliance (TWTIA), Spokesman, Taiwan Offshore Wind Power Alliance (TOWA), Taiwan*

#### 黃聰文先生

台灣金屬工業研究發展中心金屬製程研發處金屬產品研發組副組長，台灣風力發電設備產業聯誼會秘書長，台灣離岸風電聯盟發言人

Mr. Huang has been supporting the development of wind power industry in Taiwan since 2005. He engaged the establishment of the Taiwan Association of Wind Power Equipment Industry in 2005. In 2010, he developed and set up small wind turbine system testing laboratories as well as the establishment of Taiwan's offshore wind power alliance. Mr. Huang major areas of research include development of the wind power industry, wind power equipment, testing and certification standards and development of high value added metal products.

黃聰文先生自 2005 一直在台灣推動風電產業發展，他協助成立台灣風電設備協會。於 2010 年，他協助成立小型風電測試實驗室及台灣離岸風電聯盟。黃先生現於台灣金屬工業研究發展中心工作，主要工作範圍包括風電測試認證、高增值金屬產品研發和推動風電產業發展。



### Professor Xiongwei Liu

*Chair of Energy and Power Management, Head of Wind Energy Engineering Research Group, School of Computing, Engineering and Physical Sciences, University of Central Lancashire*

#### 劉雄偉教授

英國 University of Central Lancashire 電腦、工程與物理學院能源和電力管理首席教授及風能工程研究主管

Professor Xiongwei Liu is currently working as Chair Professor of Energy and Power Management and Head of Wind Energy Engineering Research Group at the University of Central Lancashire. He has been working for Northwestern Polytechnic University, Huaqiao University, Leeds Met University, University of Hertfordshire and University of Central Lancashire. His research interests include wind energy engineering, renewable energy technologies and intelligent energy management system.

劉雄偉教授現為英國 University of Central Lancashire 能源和電力管理首席教授及風能工程研究主管。他曾於多間著名大學任教包括西北工業大學，華僑大學，利茲大都會大學，赫特福德大學與中央蘭開夏大學。劉教授的主要研究範圍包括風電工程、再生能源技術及智慧電網等。

# ENROLMENT FORM 報名表



1. Program Name 會議及研討會名稱: **Conference on Opportunities and Technologies for Renewable Energy Devices Manufacturing, Applications and Installation with Seminars on Renewable Energy System Design, Manufacturing and Preventive Maintenance**  
**嶄新再生能源設備及零部件設計、製造、應用與安裝技術會議暨再生能源系統設計、製造及維護研討會**

Date 日期: **21-22 October 2011 2011年10月21及22日**

Fee 費用: ☐ **Conference 會議:** (21.10.2011) 每位參加者 **HK\$ 980.** - per participant Total Fee 合共費用: \_\_\_\_\_  
☐ **Seminar 1 研討會 1:** (22.10.2011) 每位參加者 **HK\$ 1,200.** - per participant **HK\$** \_\_\_\_\_  
☐ **Seminar 2 研討會 2:** (22.10.2011) 每位參加者 **HK\$ 1,200.** - per participant \_\_\_\_\_

2. Mr/Miss/Mrs \_\_\_\_\_ Chinese Name 中文姓名 \_\_\_\_\_

Position 職位 \_\_\_\_\_

3. Organization (英文) \_\_\_\_\_

受僱公司名稱(中文) \_\_\_\_\_

Business Address 辦公室地址 \_\_\_\_\_

Email 電子郵件 \_\_\_\_\_

Nature of Business & Products 企業性質及產品 \_\_\_\_\_

Tel 電話 \_\_\_\_\_ Fax 傳真 \_\_\_\_\_

Signature 簽名 \_\_\_\_\_ Date 日期 \_\_\_\_\_

|  |   |
|--|---|
| <b>Quota:</b><br><b>名額:</b>              | Conference會議: Limited to 110 participants 只限110名, 先到先得, 以收到支票為實<br>Seminars研討會: Limited to 25 participants / seminar 每場研討會只限25名, 先到先得, 以收到支票為實  |
| <b>Language:</b><br><b>講授語言:</b>         | English and Putonghua<br>英文及普通話   |
| <b>Date &amp; Time:</b><br><b>日期及時間:</b> | Conference 會議 - 21 October 2011, 9:30 a.m.-12:30 p.m. & 2:00 p.m. – 5:00 p.m.<br>- 2011年10月21日, 上午九時三十分至下午十二時三十分及下午二時至五時<br>Seminars 兩項研討會 - 22 October 2011, 9:30 a.m.-12:30 p.m. & 2:00 p.m. – 5:00 p.m.<br>- 2011年10月22日, 上午九時三十分至下午十二時三十分及下午二時至五時   |
| <b>Venue:</b><br><b>地點:</b>              | 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong<br>香港九龍達之路78號生產力大樓一樓   |
| <b>Application:</b><br><b>報名辦法:</b>      | To enroll, please complete the attached enrolment form and fax it to HKPC at (852) 27885543 for prior registration, then send the completed form together with the appropriate fee to HKPC at <b>MTD, 5/F, HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong (Attn: Ms Emily Yeung)</b> on or before 13 October 2011 [All cheques should be crossed and made payable to Hong Kong Productivity Council. Please also write down the course name at the back of the cheque]<br>請填妥報名表並傳真至 (852) 27885543 以便留位, 並於 2011 年 10 月 13 日或以前將報名表格及學費一併寄往『香港九龍達之路78號生產力大樓5樓製造科技部收(楊小姐)』。(所有支票請書明支付「香港生產力促進局」, 並於支票背面寫上課程名稱及請劃線) |
| <b>Enquiry:</b><br><b>查詢:</b>            | Please dial (852) 27885786/27885553/27886047 or fax (852) 27885543 or Email: emilyyeung@hkpc.org/ivanwong@hkpc.org<br>請撥電話 (852) 27885786/ 27885553/27886047 或 傳真 (852) 27885543 或 電郵: emilyyeung@hkpc.org/ivanwong@hkpc.org  |

## IMPORTANT 注意:

- Conference / Seminar fees must accompany this form (or its photocopy), otherwise enrolment may be rejected.
  - Participants are encouraged to pay by cheques, if possible. Amount received will be imprinted. Cheques are subject to bank clearance.
  - Enrolment fee is not refundable unless HKPC is notified in writing of your withdrawal at least 5 working days before the conference/seminars commences. A handling charge of HK\$200 will also be levied.
  - An applicant may, subject on approval from HKPC, nominate a substitute to attend the conference/seminars on his/her behalf.
  - The information provided will be used for the process of enrolment application, statistical purposes and other related matters. It may be provided to persons authorized to process the information for purpose relating to conference / seminars enrolment.
- 報名表(可用影印本)必須連同費用繳交, 否則報名可能無效。
  - 本局建議參加者以支票繳交費用。費用收據以本局機印方為有效, 支票收妥作實。
  - 會議及研討會開始前最少 5 個工作日收到申請者書面通知退學, 否則已繳學費概不退還。申請者申請退還學費需繳交手續費\$200。
  - 參加者可提名他人替其本人出席會議及研討會, 惟事先須得本局同意。
  - 申請人所提供的資料, 將用於審核會議 / 研討會的申請、統計分析及有關的程序上。