

PROVISIONAL AGENDA
SOLAR BUSINESS BANGKOK 2010
PV Solar Energy: Getting Down to Business
22nd – 23rd March 2010, 09.00 am – 19.30 pm
Ballroom and Reception Hall A, QSNCC, Bangkok, Thailand

Day 1: 22 March 2010 : Plenary Sessions

- 07.45 – 09.00** Registration
- 09.15 – 09.30** **Chairman's introduction: Goals and content of conference**
Mr. Viraphol Jirapraditkul, Director General, Energy Policy and Planning Office (EPPPO)
- 09.30 – 09.50** **Keynote Speech**
Dr. Wannarat Channukul, Minister of Energy
- 09.50 – 10.20** **Thailand's energy policy and the national renewable energy plan**
Dr. Wannarat Channukul, Minister of Energy
- 10.20 – 10.40** **Thailand Investment Promotion Policy for Renewable Energy**
Mrs. Ajarin Pattanapanchai, Deputy Secretary-General, Thailand Board of Investment (BOI)
- 10.40 – 11.00** **The market for PV solar energy in Thailand**
Dr. Wattanapong Rakwichian, Director of Asian Development Institute for Community Economy and Technology (adiCET), Chiang Mai Rajabhat University
- 11.00 – 11.20** **The global market for PV solar energy**
Dr. Arnulf Jäger-Waldau, Senior Scientist, European Commission Renewable Energies Unit
- 11.20 – 11.30** **Questions**
- 11.30 – 11.45** **Coffee break**
- 11.45 – 12.25** **Overview of applications, technology, products, costs with key trends**
Dr. Matthias Vetter, Fraunhofer Institute for Solar Energy Systems ISE
- 12.25 – 12.45** **Criteria for making solar energy profitable**
Mr. Sunil Gupta, Managing Director and head of global solar energy practice, Morgan Stanley
- 12.45 – 13.45** **Lunch**
- 14.00 – 14.20** **Investment: how major international solar energy companies decide to invest in small power plants**
Mr. Srinil Nagabhirava, Managing Director, Asia, AES Solar, USA
- 14.20 – 14.40** **Infrastructure development and aid: the role of aid and the World Bank in financing development of energy infrastructure**
Mr. Peter Cook, Senior Investment Officer, International Finance Corporation, World Bank Group

14.40 – 15.30 Successful government policies for promoting solar energy markets

- **Japan:**
*Mr. Toshiya Imada, Director,
International Projects Management Division, New Energy and Industrial Technology
Development Organization (NEDO)*
- **Germany:**
*Mr. Gerhard Stryi-Hipp, Head Energy Policy, Fraunhofer Institute for Solar Energy
Systems ISE*
- **China:**
Mr. Honghua Xu, Institute of Electrical Engineering, Chinese Academy of Sciences

15.30 – 16.30 Panel discussion

Panelists:

- *Dr. Twarath Sutabutr, Deputy Director General
Department of Alternative Energy Development and Efficiency (DEDE)*
- *All speakers from earlier sessions*

18.30 – 20.30 Cocktail Reception**Day 2: 23 March 2010 : Breakout Sessions**

Two sets of parallel workshops: from 09.30 – 12.00 and 13.15 – 15.45

08.45 – 09.00 Introduction to workshops and room assignments**09.00 – 09.15** Move to breakout rooms**09.30 – 12.00 First Group of Parallel Breakout Sessions**

Group 1: International criteria for successful large-scale investment in solar

Group 2: Solar thermal energy generation - CST

Group 3: Standards and performance testing needs for Thailand

Group 4: Opportunities for successful VSPP in Thailand

Coffee will be available in each room throughout the session.

12.00 – 13.15 Lunch**13.15 – 15.45 Second Group of Parallel Breakout Sessions**

Group 5: Optimising technology, choosing suppliers, and system integration

*Group 6: Financing mechanisms - existing and still needed
(e.g., project financing, aid, residential loan programmes)*

Group 7: Government policy: optimising support for growth and development

15.45 – 16.30 Coffee break and [Rapporteurs only] Report Writing**16.30 – 17.40 Reports from breakout groups : 10 minutes per group****17.40 – 18.15 Conclusions**

*Ms. Suwaporn Sirikoon,
Chief Executive Director, Energy for Environment Foundation*

Detail of Breakout Groups

Group 1: International criteria for successful large-scale investment in solar

Scope: Large-scale is defined very roughly as above \$20 - \$30 million in total capital. This figure may cover a solar energy generating plant of around 10MW, or a plant to manufacture products used in those plants: raw materials, thin film, or other equipment.

- **Solar plants >10MW: the base that Thailand needs**
Mr. Srinu Nagabhirava, AES Solar (USA)
- **Solar power plant in Thailand – Investor perspective**
Miss Sukunya Phokhakul, EGCO Co.,Ltd.
- **Thailand's infrastructure for supporting large new plants: the role of industrial estates**
Mr. Aukkarees Chochouy, AMATA Corporation
- **Large-scale solar projects: tips for successful implementation**
Mr. Clive Gibson, Nexant

Moderated by Mr. Raymond Schonfeld

Group 2: Solar thermal energy generation - CST

Scope: The workshop covers only one separable category: CST, or concentrated solar thermal, in which solar energy is concentrated – for example in a parabolic trough – in order to heat a medium (often, steam) which is then used as a source for a conventional power plant. Lower-level technologies which can also be classified as “solar thermal”, such as water-heating tanks using the sun’s heat, are ignored.

- **An Investigation of Potentials of Concentrating Solar Power Technologies for Thailand**
Dr. Serm Janjai, Silpakorn Univeristy
- **CST technologies and applications**
Mr. Horst Kruse, Schott Solar (Germany)
- **Solar technology selection: CST and PV**
Mr. Philip Napier-Moore, Mott McDonald, Thailand

Moderated by Mr. Robert Stanbury

Group 3: Standards and performance testing needs for Thailand

Scope: The workshop will aim to identify currently available standards, gaps in standards, and issues which require testing. All types of standard are of interest: examples are standards for materials, fabricated products, connectivity and grid connection, test methods, and building codes. Experience from other countries indicates that the growing number of international standards must normally be complemented by national programmes. How can Thai suppliers ensure that they control the process of standards development, to ensure that they stay ahead of competition? The needs for capacity of test facilities to support market growth in Thailand are also included

- **PV standards and testing facilities in Thailand**
Dr.Dhirayut Chenvidhya , King Mongkut's University of Technology Thonburi (KMUTT)
- **Cells and modules: performance testing**
Mr. Joerg Althaus, TUV Rheinland group (Germany)
- **Safety and performance of PV sub-systems for global markets**
Mr. J.C. Sekar, Underwriters Laboratories, Singapore
- **Thailand grid code for VSPP**
Mr. Kitsanapol Daunghom, Provincial Electricity Authority (PEA)

Moderated by Dr. Cherdchai Prapanavarat

Group 4: Opportunities for successful VSPP in Thailand

Scope: VSPP = Very Small Power Plants, defined as plants <10MW range. Thai **government** policy attributes a major role to this category in its energy infrastructure development. Sample questions include: What are the keys to growing this sub-segment? How can projects be defined and implemented? How can decisions be taken on grid connection? What PPA (purchasing power agreements) are needed? What infrastructure of system integrators, design engineers, and operating staff will be needed?

- **Solar plants <10 MW: criteria and examples of success**
Dr. Murray Cameron, Phoenix Solar
- **Key success to achieve the best financing for VSPP solar project in Thailand**
Mr. Nopadej Karnasuta, Kasikorn Bank
- **Best practice for PV farm in Thailand**
Dr. Tawatchai Suwannakum, Pilot Plant Development and Training Institution (PDTI), King Mongkut's University of Technology Thonburi (KMUTT)
- **VSPP: building a national infrastructure**
Dr. Matthias Vetter, Fraunhofer Institute of Solar Energy
- **Government's roles in supporting VSPP**
Mr. Samerjai Suksumek, Energy Policy and Planning Office (EPPO)
- **PEA's roles in promoting VSPP**
Mr. Warich Khun-aksorn, Provincial Electricity Authority (PEA)
- **PV solar energy – an attractive investment**
Mr. Jatuporn Rattanachirasuth, Ekarat Solar Co.,Ltd.

Moderated by Mr. Komkrit Chuawittayawuth

Group 5: Optimising technology, choosing suppliers, and system integration

Scope: This workshop covers the technological decision-making process of a potential designer, builder or operator of a solar energy installation of any size. At the start, the range of technological choice will be outlined and the criteria, for facilities of any size. At the other end of the process, an experienced system integrator for smaller installations will cover how the final decisions are taken and applied.

- **Cells, their costs, and benefits**
Mr. Ku Jun Heong, Trina Solar
- **The role of thin-film technology**
Mr. Hiroshi Ishida, Director, Oerlikon Systems Dept., Tokyo Electron Ltd
- **EGAT's experiences in PV projects**
Mr. Winai Naknam, Electricity Generation Authority of Thailand (EGAT)
- **System integration for optimal production output of solar**
Mr. Phairot Phanukan, Schneider Electric
- **Battery technology in solar plants: from conventional technology to advanced VLRA**
Mr. Masaaki Shiomi, Yuasa Batteries
- **VSPP: building a national infrastructure (TBC)**
Dr. Matthias Vetter, Fraunhofer Institute of Solar Energy

Moderated by Mr. Robert Stanbury

Group 6: Financing mechanisms - existing and still needed (e.g., project financing, aid, residential loan programmes)

Scope: This workshop will cover the full range of financing mechanisms used in the solar energy sector to finance credible solar energy investments. Once a project meets conventional criteria for return on investment, what special mechanisms are available or need to be developed in this sector in Thailand? Examples range from aid finance, through the CDM mechanism, right down to the need for new consumer loan programmes to finance growth of the residential market.

- **How far can international financial institutions go?**
Mr. Peter Cook, International Finance Corporation
- **Experience of a successful system integrator**
Dr. Murray Cameron, Phoenix Solar
- **What are the financial tools and financing programs available for the solar project?**
Mr. Nopadej Karnasuta, Kasikorn Bank
- **Carbon Market Situation & Opportunities for PV**
Mr. Nattorn Kijamrej, TISCO Securities Co.,Ltd.
- **Financing mechanism needed for PV projects**
Mr. Wornpahol Sangtian, Ekarat Solar Co.,Ltd.
- **Government financing support: ESCO Fund**
Miss Sunee Muangcharoen, Energy for Environment Foundation

Moderated by Mr. Raymond Schonfeld

Group 7: Government policy: optimising support for growth and development

Scope: This workshop is intended to give participants the opportunity to understand and discuss the full range of government policies used internationally to support growth of solar markets. Existing Thai government policies will be included, but the workshop aims to go beyond those, to discuss other programmes used successfully in other countries. The discussion is aimed to benefit both Thai government policymakers and business eager to ensure that government support is available and effective.

- **European experience: policy and international cooperation**
Mr. Samuel Cantell, European Commission Delegation to Thailand
- **Government policies: the IEA PVPS Agreement**
Mr. Peter Ahm, Executive Committee, IEA PVPS
- **National programs & policy on solar energy for the future of Thailand – My Proposal**
Dr. Dusit Kruangarm, Thai Solar Future Co. Ltd.
- **CDM opportunities for PV projects**
Mr. Sirithan Pairoj- Boriboon, Executive Director, Thailand Greenhouse Gas Management Organization (TGO)
- **Government policy for solar energy development**
Mr. Samerjai Suksumek, Energy Policy and Planning Office (EPPO)
- **Issuance Process and Regulation for Energy Industry Operation**
Prof. Emeritus Dr. Direk Lavansiri, Office of Energy Regulatory Commission
- **Existing government support: Is PV farm feasible?**
Ms. Wandee Khunchornyakong, Solar Power Co.,Ltd.

Moderated by Ms. Suwaporn Sirikoon
