



SOLAR TECHNOLOGY
STANDARDS AND CONFORMANCE INITIATIVE

Workshop on Ensuring Photovoltaic (PV) Reliability and Durability

The Howard Plaza Hotel Taipei
No. 160 Ren Ai Road, Sec. 3
Taipei, Chinese Taipei
October 12-13 2011

Matching funding for this conference is provided by:



USAID
FROM THE AMERICAN PEOPLE

Additional support has been provided by:



Wednesday, October 12, 2011

- 8:30 a.m. - 9:00 a.m. Registration**
- 9:00 a.m. - 9:10 a.m. Introduction and Welcome**
Mr. Eric MADISON
Deputy Director, Taipei Office, American Institute in Chinese Taipei, United States
- 9:10 a.m. – 9:30 a.m. Keynote Address**
Vice Minister, Ministry of Economic Affairs, Chinese Taipei
- 9:30 a.m. – 10:00 a.m. Overview of APEC Activities in Solar Technology**
- Ms. Julia DOHERTY**
Chair, Subcommittee on Standards and Conformance
Senior Director, Non-Tariff Measures, Office of the United States Trade Representative, United States
- Dr. H. Tom LEE**
Chair, Experts Group on New and Renewable Technologies

Division Director, New Energy Technology Division, Green Energy & Environment Research Labs, Industrial Technology Research Institute, Chinese Taipei

10:00 a.m. - 10:30 a.m. Results of the first APEC Solar Technology Standards and Conformance Measures Survey and Workshop (San Francisco, CA)

Mr. T. Khoi DO
Global Government Affairs Specialist, Underwriters Laboratories, Inc., United States

10:30 a.m. – 10:45 a.m. Tea Break

**10:45 a.m. – 12:30 p.m. Session 1
Framing the PV Material Reliability Issue**
This session will examine the issue of PV materials reliability from a number of different perspectives (safety, research and development, government policy regulation and standards development, global trade, and investment) discussing the macro level implications and areas for collaboration within the industry.

Moderator: **Julia DOHERTY**
Chair, APEC Subcommittee on Standards and Conformance, Senior Director, Non-Tariff Measures, Office of the United States Trade Representative, United States United States

Panelists: *Trade in Solar Technologies and Future Opportunities*
Mr. Ryan MULHOLLAND
Renewable Energy Trade Specialist, Department of Commerce, United States

PV performance evaluation systems and its traceability in Japan

Mr. Masaaki YAMAMICHI
Research Center for PVs, Japanese National Institute of Advanced Industrial Science and Technology
Member, Standards Committee for PVs, Semiconductor Equipment and Materials International, Japan

PV Standard, Testing Technology, Traceability in Chinese Taipei

Mr. Jimmy YEH

Deputy Director of Electrical Appliance Test Division,
TERTEC, Chinese Taipei

Questions and Answers

12:30 p.m. – 1:30 p.m. Lunch Break

1:30 p.m. – 3:00 p.m.

Session 2

Technical Studies of PV Material Reliability

This session will explore the technical data, research, and field studies behind the issue. The panelists will share research studies, testing methods, case studies from the field, and collaborative activity being undertaken to identify the appropriate materials and components in various applications and environments.

Moderator:

Panelists:

Method and System for Shortening Module Light Soaking Test

Ms. Londia HSIANG

Manager of R&D Sec. All Real Technology Co., Ltd, Chinese Taipei

PV Reliability and accelerated tests

Liang JI,

Senior Researcher of R&D Dept., Underwriters Laboratories, Inc., United States

Dr. Xiaohong GU

Materials Research Engineer, Polymeric Materials Group,
Materials and Construction Research Division, National
Institute of Standards and Technology, United States

Mr. Allen ZIELNIK

Senior Consultant, Weathering Science, Atlas Material
Testing Technology LLC, United States

Questions and Answers

3:00 p.m. - 3:30 p.m.

Tea Break

3:30 p.m. – 5:00 p.m.

Session 3

Implications of PV Materials Reliability for the Investment Community

Various stakeholders from the investment community will discuss the PV module reliability, the investment model for projects, and practices they have installed to fight reliability issues. Project developers will address equipment and project evaluation and project lifetime, venture capitalists will discuss investment recuperation and mechanisms for project assurance, and insurance companies will outline the identification of variables for specific projects and how they are used for developing comprehensive policies. Having information on reliability would help government invest in solar.

Moderator:

Panelists:

Mr. Kevin WALSH

Managing Director, Power and Renewables, GE Financial Services, United States

Mr. Kevin STEVENS

Vice President, Asia Pacific Zone Clean Tech and Technology Insurance Specialty Manager, Chubb Insurance Company of Australia Ltd/Chubb Group, Australia

Speaker 3:

Questions and Answers

Day 2 – October 13, 2011

8:30 a.m. – 9:00 a.m. Registration

9:00 a.m. – 9:10 a.m. Introduction and Welcome

9:10 a.m. – 10:30 a.m. Session 4

Best Practices for PV Supply Chain

This session will focus on the best practices being implemented by the supply chain to assure quality materials are being used in PV modules and related components. End manufacturers, testing laboratories, and component manufacturers will discuss the tools and mechanisms they have implemented in their process and with their suppliers to maintain quality, reliability, and safety.

Moderator:

Panelists:

Dr. Oakland FU

Technical Service Leader, PV Fluoromaterials, DuPont PV Solutions, China

Mr. Yasuhiro SAKUMA

Assistant Director, Technical Regulations, Standards and Conformity Assessment Policy Division Industrial Science and Technology Policy and Environment Bureau Ministry of Economy, Trade and Industry, Japan

Mr. Paxon LEE

Chinese Taipei Office, Semiconductor Equipment and Materials International, Chinese Taipei

Questions and Answers

10:15 a.m. – 10:30 a.m. Break

10:30 a.m. - 11:30 a.m. Session 5

Solutions for PV Materials Reliability

Stakeholders will discuss various solutions to the safety, reliability, and durability of PV materials and systems at-large. Panelists will introduce tiered certification processes,

more stringent standards development, quality management systems, or new investment models in the face of downward cost pressures and technology innovation.

Moderator:

Panelists:

Mr. Edwin YANG,
Senior Research Scientist, Corporate Research,
Underwriters Laboratories Inc., United States/Pravin
GANDHI, Business Development Director, Underwriters
Laboratories, Inc., United States

Global PV Material Reliability Standards and Programs

Mr. Sunny RAI
Program Director, Business Line Leader PV, Intertek
(Potential Backup: Rhett WANG), United States

Speaker 3:

Questions and Answers

11:30am - 12:30pm

Closing Session
Outcomes and Next Steps

This final panel will discuss the outcomes of the workshop and next steps for collaboration amongst public and private sector.

Laboratory Tour of TERTEC

1:30pm – 2:00pm

Board Bus to Chinese Taipei Electrical Research and Testing Center (TERTEC)

No. 6-6 Ronggong S. Road, Guayin Township, Taoyuan County 328, Chinese Taipei

2:00pm - 5:00pm

Tour of Chinese Taipei Electrical Research and Testing Center

Return to the Howard Plaza Hotel