

2nd European American Solar Deployment Conference PV Rollout

**Boston, USA
February 9th/10th, 2012**

www.pvrollout.us

Wednesday, February 8th, 2012

**Workshop – PV Module Testing beyond IEC and UL
14.00 – 17.30 hrs**

Opening Remarks

Christian Hoepfner, Fraunhofer CSE

Certification Standards development from the research perspective

John Wohlgemuth, NREL, Golden, USA

**Current certification requirements and experiences from the North
America market**

Brij Aggarwal, CSA, Cambridge, USA

Industry perception of certification standards and future needs

Arnd Roth, VDE, Offenbach, Germany

Coffee Break

Correlations between accelerated testing and real world reliability

Claudio Ferrara, Fraunhofer ISE, Freiburg, Germany

**PVDI - A durability program providing bankability and marketing
leverage**

David Meakin, Fraunhofer CSE, Cambridge, USA

**Test methods and equipment for advanced durability and certification
testing**

Martin Plass, CFV, Albuquerque, USA

Panel Discussion

Christian Hoepfner, Fraunhofer CSE, Cambridge, USA

Closing Remarks

Christian Hoepfner, Fraunhofer CSE, Cambridge, USA

Thursday, February 9th, 2012

08.00 **Registration and Continental Breakfast**

Opening Session

Chair: Eicke Weber, Conference Chairman, Fraunhofer ISE, Freiburg, Germany

09.00 **Opening Address**

Gabriele Struthoff-Müller, OTTI, Regensburg, Germany

Eicke Weber, Conference Chairman, Fraunhofer ISE, Freiburg, Germany

Juris Kalejs, Conference Co-Chairman, American Capital Energy, North Chelmsford, USA

09.25 **Welcome Speeches**

Barbara Kates-Garnick, Executive Office of Energy and Environmental Affairs, Commonwealth of Massachusetts; USA

Benno Bunse, German American Chamber of Commerce, Inc., New York, USA

Winfried Hoffmann, Vice President EPIA, Brussels, Belgium

09.40 **Key Plenary Opening Talk: Sunshot Initiative USA**
Ramamoorthy Ramesh, Department of Energy, USA

PV Markets

Chair: Winfried Hoffmann, Vice President EPIA, Brussels, Belgium

10.00 **Impact of a Rapidly Changing Global PV Market on the Global PV Manufacturing Supply Chain**

Bettina Weiss, SEMI Global Headquarters, San José, USA

10.15 **Insights on the Topic of Grid Parity and its Implications**

Daniela Schreiber, EuPD Research, Bonn, Germany

10.30 **Forecasting Solar in an Era of Declining Subsidies**

Matt Feinstein, LUX Research, Boston, USA

10.45 **SREC Impact on Utility-Scale PV in Massachusetts**

Bill Fitzpatrick, American Capital Energy, North Chelmsford, USA

11.00 **Discussion**

11.20 **Coffee Break**

Modules

Chair: Tom Surek, Surek PV Consulting, USA

Nolan Browne, Fraunhofer CSE, Cambridge, USA

12.00 **Closing the Gap between Laboratory Cells and Modules**

Martha Symko-Davies, NREL, USA

12.15 **What can we learn from Testing and Certification?**

Claudio Ferrara, Fraunhofer ISE, Freiburg, Germany

12.30 **OEM-related Cost Reduction in PV Manufacturing**
Dough Urban, Hanwha SolarOne, Ismaning, Germany

12.45 **PV Durability Initiative -
A new Program for Quantitative Assessment of PV Module Durability**
Christian Höpfner, Fraunhofer CSE, Boston, USA

13.00 **Reliability and Quality Assurance of PV Module - Japanese experience
and activity**
Michio Kondo, Research Center for Photovoltaic Technologies, AIST
IST, Japan

13.15 **Discussion**

13.30 **Lunch**

Power Conditioning

Chair: **Charles Hanley**, Sandia National Laboratories, Albuquerque, USA
Olivier Stalter, Fraunhofer ISE, Freiburg, Germany

14.45 **Overview on module integrated electronics**
Olivier Stalter, Fraunhofer ISE, Freiburg, Germany

15.00 **Impact of Silicon Carbide Power Transistors on PV Inverters Today and
in the Future**
Jeffrey B. Casady, SemiSouth Laboratories, Inc, USA

15.15 **Interfacing Grids and Renewables Through Power Electronics**
Leo Casey, Satcon Technology Corporation, USA

15.30 **Achieving Smart Energy through a Smart Grid, Smart Premises and
Smart Inverters**
Steve Steffel, Pepco Holdings, Inc, USA

15.45 **Discussion**

16.05 **Coffee Break**

Grid Integration

Chair: **Juris Kalejs**, Conference Co-Chairman, American Capital Energy,
North Chelmsford, USA

16.45 **Grid Integration of Distributed Photovoltaics (DPV)**
Tom Key, The Electric Power Research Institute (EPRI), Knoxville, USA

17.00 **An Overview of Distribution Grid Integration PV Studies at NREL with
Selected Results**
Jason Bank, NREL, Golden, USA

17.15 **Integration of Photovoltaic Systems into Distribution Networks**
Thomas Degner, Fraunhofer IWES, Kassel, Germany

17.30 **N.N.**

Enel Green Power North America, Inc., Andover, USA

- 17.45 **Ancillary Services of the Solar Inverter for more PV in the Grid**
Bernd Engel, SMA Solar Technology AG, Niestetal, Germany
- 18.00 **Grid Stability and Grid Control with PV inverters:
Grid Codes, Requirements and the Capability of Power Electronics**
Sönke Rogalla, Fraunhofer ISE, Freiburg, Germany
- 18.15 **Discussion**
- 18:30 **End of the first Conference Day**

Poster Session

Chair: Martha Symko-Davies, NREL, USA

- 18.40 **Comparative Analysis of the Spanish PV Market in the European context**
Felipe Diaz, Universidad de Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, Spain

Description and Assessment of a Small Scale PV- Fuel Cell System
Fabian Deniz, Universidad de Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, Spain

New Innovative Cable Driven Low Profile Solar Tracking System
Klaus Pless, TecnoSun Solar USA Inc., Toledo, Ohio, USA
Integrated PV Farm Design, Impact Studies, Commissioning and Operations
A. P. Meliopoulos and G. J. Cokkinides, Georgia Institute of Technology.

Friday, February 10th, 2012

- 07.30 **Continental Breakfast**

PV-Power Plants

Chair: Tom Key, The Electric Power Research Institute (EPRI), Knoxville, USA
Sönke Rogalla, Fraunhofer ISE, Freiburg, Germany

- 08.30 **Quality Assurance of Large-Scale, Commercial PV Power Plants**
Nils Reich, Fraunhofer ISE, Freiburg, Germany
- 08.45 **Availability for PV Power Plants: is it a useful metric?**
Tassos Golnas, Belmont, Sun Edison, USA
- 09.00 **Calculation of PV-Power Plants' Electrical Characteristics according to Grid Code Compliance**
Frederik Kalverkamp, Zertifizierungsstelle der FGH, Aachen, Germany
- 09.15 **Advanced Utility-Scale PV plant Control Systems for Effective Grid Integration**
Mahesh Morjaria, First Solar, Tempe, USA

09.30 **Discussion**

09.50 **Coffee Break**

Concentrating Photovoltaics (CPV)

Chair: Vahan Garbushian, Amonix , USA

10.30 **CPV Demonstration at the Solar Technology Acceleration Center: Background, Status and Developments**
Nadav Enbar, EPRI, Boulder, CO, USA

10.45 **Certification Testing of CPV Modules**
Martin Plass, CFV Solar Test Laboratory, Inc., Albuquerque, USA

11.00 **CPV - Commercial Breakthrough**
Clark Crawford, Soitec Solar, Inc., La Jolla, USA

11.15 **30 MW of Utility Scale CPV installation In Colorado**
Vahan Garboushian, Amonix, USA

11.30 **Opportunities for PV, CPV and CSP in the Current Market Environment**
Paula Mints, Navigant Consulting, Palo Alto, USA

11.45 Discussion

12.10 Lunch

Risk Management, Yield Protection and Financing

Chair: David Williams, Clean Path Ventures, San Francisco, USA

13:30 **Risks and Opportunities in entering the North American Market: Lessons Learned**
Christian Wentzel, KBRacking, Toronto, Canada

13:45 **Sandia's Photovoltaics Reliability Performance Model (PV-RPM)**
Jennifer Granata and Joshua Stein, SANDIA, Albuquerque, USA

14.00 **Risk Management in PV Mounting System Design**
John van Winkle, Schletter Inc., Tucson, USA

14.15 **Review of Utility Solar Business Models**
Nadav Enbar, EPRI, Boulder, CO, USA

14.30 **Mounting System Impact on Risk Management of Solar PV Arrays on Commercial Buildings**
Mark Gies, PanelClaw, Inc., North Andover, USA

14.45 **Differentiating PV Projects Through Risk**
Jesse Jones, Clean Path Ventures, San Francisco, USA

15.00 **Discussion**

15.30 **Closing Remarks**

Eicke Weber, Conference Chairman, Fraunhofer ISE, Freiburg, Germany

Juris Kalejs, Conference Co-Chairman, American Capital Energy, North
Chelmsford, USA

15.45 **End of the Conference**