

Grand Challenges for Advances in Photovoltaic Technologies and Measurements

May 11-12, 2010 • Denver Airport Marriott at Gateway Park • Denver, Colorado

AGENDA

Monday, May 10, 2010

5 – 6:30 pm Welcoming Reception – *light snacks & cash bar*

Tuesday, May 11, 2010

7:30 am Registration and Continental Breakfast

Welcome and Opening Remarks

- 8:15 am
- **Pat Gallagher**, *Director, National Institute of Standards & Technology*
 - **Roger Little**, *Chairman and Chief Executive Officer, Spire Corporation*
 - **Rob Collins**, *Distinguished University Professor and NEG Endowed Chair of Silicate and Materials Science, University of Toledo*

Plenary Speakers

- 8:45 am
- Wafer-Based Crystalline Silicon PV – **Ethan Good**, *Director Research and Development, SolarWorld*
 - Amorphous Silicon and Polycrystalline Thin Film PV – **Bob Birkmire**, *Director, Institute of Energy Conversion, U. of Delaware*
 - III-V Multi-Junction PV – **Jim Ermer**, *Director CPV Products, Spectrolab, Inc.*
 - *Breakout Instructions*

10:15 am Break

Plenary Speakers

- 10:30 am
- Excitonic and Quantum-Structured PV – **David Ginley**, *Research Fellow & Group Manager, National Renewable Energy Laboratory*
 - State-of-the-Art Measurements for PV – **Keith Emery**, *Manager for Device Performance, National Renewable Energy Laboratory*
 - *Instructions for Breakouts*

11:45 pm Lunch and Speaker Session

- **Travis Bradford**, *Prometheus Institute*

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AGENDA (CONTINUED)

BREAKOUT SESSIONS: TOPICAL PANEL AND FACILITATED DISCUSSION **Future Drivers and Characteristics Discussion Questions**

1:30 pm

- What will be the most important drivers for advancements in PV technology development and use over the next two decades? (any driver – economic, technical, societal, political)
- What is our vision for the future? Where do we want to be in 20 years?
- What radical advances/improvements do we want to achieve in the future? (e.g., In the future, we will be able to... or technology will have advanced to the state where...)
- What are possible goals for the future?

BREAKOUT SESSIONS: **Broad Technology Challenges and Barriers Discussion Questions**

2:20 pm

- What are the broad technical barriers (i.e., general technology barriers, not measurement barriers) to development and adoption of critical technologies and systems integral to advances in PV technologies?
- What are the key technical issues preventing technology from moving forward and reaching PV industry goals?

3:30 pm

Break

BREAKOUT SESSIONS: **Technology-Measurement Issues & Grand Challenges Discussion Questions**

3:45 pm

- Considering the major technology barriers, what do we need to measure that we can't measure now?
- What are the major barriers preventing key measurements?
- Where do you think the lack of measurement could most likely impede technology progress?
- Considering critical technology barriers, where are the measurement 'showstoppers?'

4:30 pm

Day One Report Outs (Main Session Room)

5:00 pm

Adjourn

5 – 7:00 pm

Networking Reception – *appetizers & cash bar*

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AGENDA (CONTINUED)

Wednesday, May 12, 2010

7:30 am	Continental Breakfast
8:30 am	<p>BREAKOUT SESSIONS: Technology-Measurement Issues & Grand Challenges Discussion Questions</p> <p>Previous day's session continues.</p> <ul style="list-style-type: none"> • Continuation of above questions. • What are the technology-measurement priorities that must be addressed?
10:00 am	Break
10:30 am	<p>BREAKOUT SESSIONS: INTERACTIVE SMALL GROUP EXERCISE Priority Technology-Measurement Grand Challenges</p> <p>Identify key elements for each of the high priority issues:</p> <ul style="list-style-type: none"> • Major barriers to the measurement solution • Performance targets or aspects • Applications – to what sectors or technologies can it be applied • Activities, R&D, etc. that need to be done • Timing (near, mid, long) of approaches • Potential stakeholders and roles • Benefits/ advantages of the approach
11:45 pm	<p>Lunch and Speaker Session:</p> <ul style="list-style-type: none"> • John Lushetsky, <i>U.S. Department of Energy</i>
1:30 pm	<p>BREAKOUT SESSIONS: Identification of Major Themes and Report-Out Preparation</p>
2:00 pm	Day Two Report Out (Main Session Room)
3:15 pm	Adjourn