

Global PV Standards Roadmap



Status Report August/September 2008

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SEMI



Outline

- The Need for PV Standards
- Global PV Committee Charter
- Updates from
 - Europe
 - N. America
 - Taiwan
- Global PV Standards Roadmap Status

The Need for PV Standards

- The PV industry has few standards to support the manufacturing process and module assembly
 - The PV market is already large and is growing rapidly, with many new companies entering now
 - Different applications and processes lead to diverse manufacturing challenges – and this is where industry standards can play a critical role by
 - Bringing the global supplier and customer communities together
 - Collectively reducing the number of options in a given process
 - Agreeing on common parameters and terminology
 - Etc.
- Standards are urgently needed

The Need for a Global PV Standards Roadmap

- SEMI, our member companies and their customers operate globally
 - Developing regional standards that only apply to specific countries make no sense in a global environment
- A global PV Standards Roadmap can be a powerful tool for designing and forecasting your company's future in PV
 - Participation and active contribution will ensure that your company's interests are heard and addressed

Global PV Standards Roadmap Core Team

- Team consists of cross-functional segments of solar cell/module manufacturing.
- Charter:
 - With Executive PV-PCS Team support PV Global Standards Roadmap roll-out
- Mission:
 - Caucus on approach, objectives, content depth and timeline of Roadmap
 - Provide technical expertise, guidance & credibility to PV Standards Initiatives
 - Help communicate Roadmap development and recruitment of key stakeholders

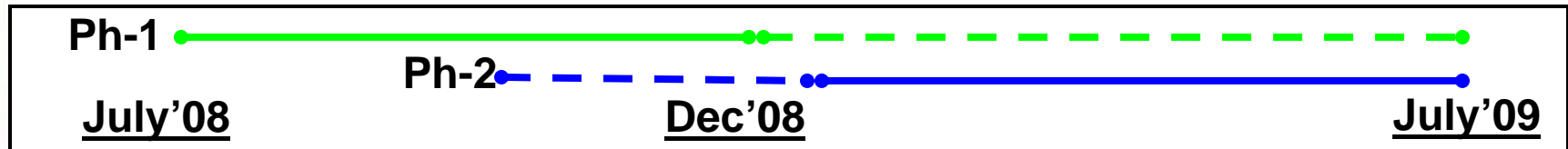
PV Standards Roadmap – Current Status

- Project start: May 2008
- Duration: 18 months max.
- 2 teleconferences, 1 face-to-face meeting to date
- Current and short-term activities
 - Core Team formed to
 - Assess current Standards landscape
 - Leverage existing SEMI Standards and Safety Guidelines
 - Identify areas unique to PV manufacturing
 - Deliver first Standards guidance document by December 2008
 - Guide activities in Phase 2 of detailed Roadmap development with broader expert teams worldwide
 - Development of communication mechanisms to ensure global input from PV industry stakeholders and regular updates from SEMI on status

PV Standards Roadmap – Plan

- Important considerations
 - Input, guidance, ideas and suggestions are needed from all PV stakeholders in all regions
 - SEMI will put emphasis on communicating progress and inviting feedback on a regular basis
 - Global review of drafts planned every 3-4 months
 - Interested parties can join mailing list for regular updates

Global PV Standards Roadmap



- **Phase 1 – Dec '08**

- **Develop a Guidance Document**

- **As related to PV Technology Roadmap - based on high level assessment of IC ITRS (International Technology Roadmap for Semiconductors)**
- Purpose, scope, limitations, what elements to cover, how far to go in terms of supply chain issues addressed

- **Phase 2 – July '09**

- **Present Initial PV Global Standards Roadmap**

- Detailed development with broader teams

PV Standards Roadmap Core Team – Participating Companies

- Advanced Energy
- Applied Materials
- BayTech Group
- Brooks Automation
- Caerus Systems
- Dow Corning
- Fraunhofer-IPA
- Linde Group
- Matheson-TriGas
- Oerlikon
- Q-Cells
- SolarWorld USA
- Ulvac
- Underwriters Laboratories
- **SEMI Support:**
 - **Global PV Standards Initiative**
- Bettina Weiss
 - NA: Kevin Nguyen
 - EU: Saviour Alfino
 - Taiwan: Leon Huang
 - Korea: tbd
 - China: Min Hua

Global and Regional PV Contact Information

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