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The 2014 PV Distribution System Modeling Workshop: Welcome and Purpose

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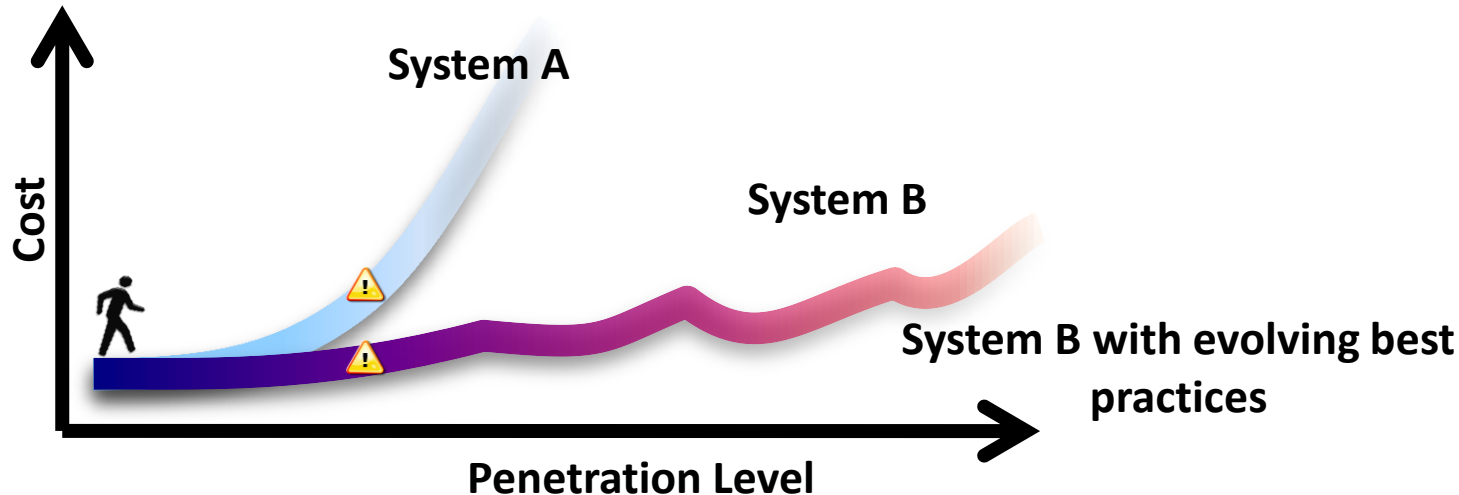
May 6, 2014 Santa Clara, CA

2014 PV Systems Symposium

2014 PV Systems Symposium Events

- May 5: PV Performance Modeling Workshop
- **May 6: PV Distribution Modeling Workshop**
- May 7: PV Operations and Maintenance Workshop (EPRI Headquarters)
- May 7: EPRI Smart Inverter Workshop (Biltmore)
- May 8: ASTM International subcommittee E44.09 Photovoltaic Electric Power Conversion (EPRI Headquarters)

Grid Integration Challenge



- An important measure of success for the DOE SunShot initiative will be the amount of solar generation that can be cost-effectively and reliably installed on the grid by 2020.
- A critical barrier to grid integration is the inability of current interconnection screens to adapt to the proliferation of high PV deployment scenarios and differentiate high risk interconnections from those not needing interconnection studies.
- Understanding and modeling high PV deployment scenarios and their impacts on the electric distribution system and mitigating the impacts with cost effective and reliable solutions.

History of the Distribution System Modeling Workshops

- The 1st Distribution System Modeling Workshop was held in La Jolla, CA July 2012 sponsored by NREL, Sandia and EPRI.
- 2nd Distribution System Modeling Workshop was to be held in Portland in October 2013 but was cancelled due to government shutdown.

Gaps Identified

Gaps and next steps identified in the La Jolla workshop:

1. How to model the grid of the future that utilizes advanced control strategies?
2. What are the guidelines/best practices for implementing advanced control functions on the distribution system?
3. How to provide accurate models, tools and data resources for use by utility engineers and consultants to efficiently analyze interconnection impacts and mitigate them cost effectively?

2014 Workshop Program

- **8:15 - 10:00 AM: Current Interconnection and Screening Practices (rules of the road)**
- **10:15 - 12:00 PM: Advanced Inverters: Capabilities and Functionality (future pathways)**
- **12:15-1:15: Working Lunch**
- **1:15-3:00: Details for Using Advanced Inverters in DER Applications (deep dive)**
- **3:15- 5:15 PM: Modeling Challenges to Consider for Advanced Inverters (implementations)**
- **5:30-6:30 PM: Buffet Dinner offered by Biltmore (\$20?)**
- **7-9 PM: Special Evening (“Traffic Buster”) Session on Modeling Software Updates and IEA-PVPS Task 14 update.**

Thank You!

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<http://solar.sandia.gov>

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