

Solar America Board for Codes and Standards



Solar America Board for Codes and Standards

Andrew L. Rosenthal

New Mexico State University

Principal Investigator, Solar ABCs

Solar ABCs Stakeholder Meeting

July 11, 2013

Solar America Board for Codes and Standards



Solar America Board for Codes and Standards

Larry Sherwood

Project Administrator, Solar ABCs

Solar ABCs Stakeholder Meeting

July 11, 2013

Solar ABCs

The basic operating tenets of the Solar ABCs that are embedded in all of its work:

- Commitment to consensus
- Inclusion of all stakeholder groups
- Technology and policy neutral

Solar ABCs is NOT a standard or code development organization.

Acknowledgement

This material is based upon work supported by the Department of Energy under Award Number DE-FC36-07GO17034.



Solar ABCs Partner Organizations and Steering Committee Members

- U.S. Department of Energy: Kevin Lynn, Holly Thomas
- New Mexico State University: Andrew Rosenthal, John Wiles, Gabriella Cisneros
- Arizona State University: Govindasamy Tamizh-Mani
- Nat. Ren. Energy Laboratory: Michael Coddington, John Wohlgemuth
- PowerMark Corporation: Alex Mikonowicz
- Brooks Engineering: Bill Brooks
- Underwriters Laboratories: Tim Zgonena, Chris Flueckiger, Larry Emrie
- Interstate Ren. Energy Council: Michael Sheehan, Jane Weissman
- Sunset Technologies Inc.: Howard Barikmo
- Sandia Nat. Laboratories: Jay Johnson, Jennifer Granata
- Florida Solar Energy Center: Dave Click, Bob Reedy, Stephen Barkaszi
- North Carolina Solar Center: Tommy Cleveland
- Sherwood Associates: Larry Sherwood
- DNV/BEW Engineering: Greg Ball, Jeff Newmiller



Solar ABCs Advisory Committee Members

- **Chair:** Donald B. Warfield *
 - Ezra Auerbach, DragonSun Consulting
 - John Berdner, SolarEdge Technologies, Inc.
 - Jon Bertolino, SMUD
 - Alex Bradley, Dupont
 - Neal Burdick, City of Tampa
 - Joannie Chin, NIST
 - Christine Covington, SEIA
 - Marv Dargatz *, SolarEdge
 - Wolfgang Fritz, Schletter Inc.
 - Ryan Gaston, Dow Chemical Co.
 - Garen Grigoryan, Pacific Gas & Electric
 - Smita Gupta, Itron, Inc.
 - Lee Kraemer, First Solar
 - Jean Posbic, MEMC
 - Jacques Roeth, NYSERDA
 - Patrick Saxton, CEC
 - Mike Taylor, Solar Electric Power Association
 - Maura Yates, Arizona Public Service
- * Representatives from Advisory Committee on Solar ABCs Steering Committee



Solar ABCs

List of Major Research Activities

- Gap Analysis identified the following research topics for implementation by Solar ABCs:
 - Rooftop PV fire research testing and rating
 - Standardization of module power ratings
 - Accelerated life testing
 - PV Grounding issues
 - Updates to FERC interconnection screens
 - Ground-Fault Protection Improvements to Prevent Fires



Ground-Fault Blind Spot Detection



**INVERTER GROUND-
FAULT DETECTION
"BLIND SPOT" AND
MITIGATION METHODS**

Prepared by
Greg Ball
DNV KEMA

Bill Brooks
Brooks Engineering

Jay Johnson
Jack Flicker
Sandia National Laboratories

Andrew Rosenthal
John Wiles
Southwest Technology Development Institute

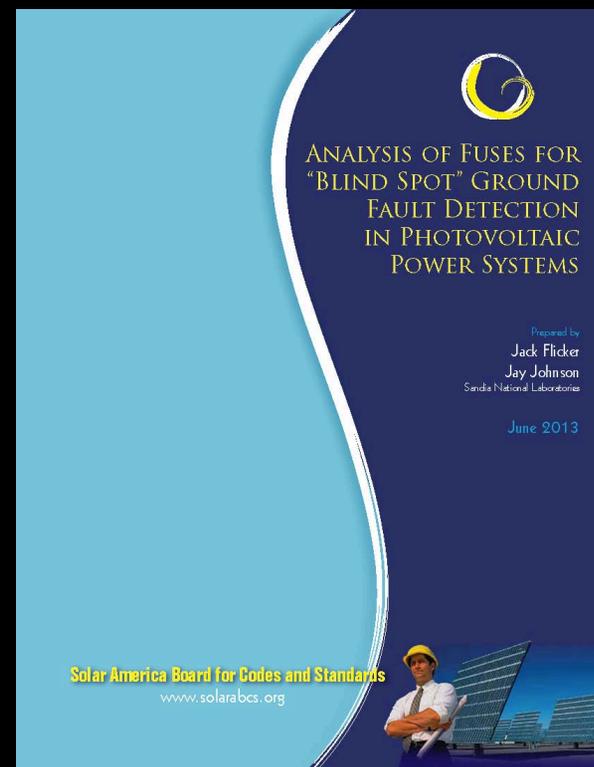
Larry Sherwood
Sherwood Associates

Mark Albers
SunPower Corporation

Tim Zgonena
Underwriters Laboratories, Inc.

June 2013

Solar America Board for Codes and Standards
www.solarabcs.org



**ANALYSIS OF FUSES FOR
"BLIND SPOT" GROUND
FAULT DETECTION
IN PHOTOVOLTAIC
POWER SYSTEMS**

Prepared by
Jack Flicker
Jay Johnson
Sandia National Laboratories

June 2013

Solar America Board for Codes and Standards
www.solarabcs.org

Solar ABCs Record of Accomplishments

- 2,000 stakeholders engaged (30% growth in last year)
- 30 published reports
- 15 on-site stakeholder meetings
- 18 telephone and webinar stakeholder meetings
- 2 industry-wide, major research projects completed
- 2 full gap analyses conducted plus one gap update
- Web site with full Solar ABCs' publications plus summary information of other pertinent standard and code development
- Solar ABCs members individually participate in development of critical codes and standards:
 - IEC, UL, NFPA, ICC, IEEE



Solar ABCs Future

- The Solar ABCs Cooperative Agreement with DOE ends in July 2013
- Potential for continuation through Solar ABCs “Lite”
 - Convene Stakeholders
 - Conduct Gap Analyses
 - Communications



For more information

www.solarabcs.org

Solar America Board for Codes and Standards

