

Monday	Tuesday	Wednesday	Thursday	Friday
Morning				
Standards	Materials & Modules	Materials & Modules	Detection & Systems	EPRI Inverter FMEA
TC 82 meetings	<p>7:30 – 8:00: Continental breakfast</p> <p>Session1 <i>Welcome & field experience</i></p> <ul style="list-style-type: none"> DOE PV reliability overview, Dana Olson, DOE Impact of PV performance and technology on Power Plant Financial Success, Jenya Meydbray, Cypress Creek Renewables Uncertainty reduction of Performance Loss Rate Estimates, Philip Ingenhoven, EURAC, Italy Key results from the All India Survey of PV Module Reliability:2016, Rajeev Dubey, IIT, India Annual degradation rates of recently produced c-Si PV modules under subtropical coastal climate conditions Japan, Tetsuyuki Ishii, CRIEPI, Japan <p>9:45: Discussion 10:05: Break</p> <p>Session 2 <i>Stability and reliability of high efficiency modules.</i></p> <ul style="list-style-type: none"> Improved Reliability and Output from Solar Modules by Reduced Operating Temperature, Martin Green, USNW Modern x-Si cell reliability, Ryan Desharnais, DNV GL PV Lifetime Project - Measuring PV Module Degradation in the Lab and Field, Joshua Stein, Sandia The search for root cause: status LeTID in PERC modules, Mallory Jensen, MIT <p>11:40: Discussion 12:00: Lunch</p>	<p>7:30 – 8:00: Continental breakfast</p> <p>Session5 <i>Standard developments</i></p> <ul style="list-style-type: none"> Harmonization of international standards, John Wohlgemuth New IEC 61215 overview, Ingrid Repins, NREL IEC 62892 extended thermal cycling, Nick Bosco, NREL IEC 63126 - guidelines for higher temperature Kent Whitfield UL IEC 61730-module safety Nancy Phillips, Dupont <p>9:30: Discussion 10:05: Break</p> <p>Session 6 <i>PVQAT updates</i></p> <ul style="list-style-type: none"> 10:20: Activities & goals of PVQAT, Tadanori Tanahashi, AIST, Japan. 10:35: TG3, PID and combined stress testing, Peter Hacke, NREL 10:50: TG4-diodes Vivek Gade, Jabil 11:05: TG5 UV, David Miller, NREL 11:20: Sayuri workshop report, Keiichiro Sakurai, AIST, Japan 11:30: The Development and Research of PVQAT TG13, Qui Wang, Jinko Solar <p>11:40: Discussion 12:00: Lunch</p>	<p>7:30 – 8:00: Continental breakfast</p> <p>Session9 <i>PV monitoring & performance guarantees</i></p> <ul style="list-style-type: none"> Key performance indicators & Investor/Off-taker compliance, Pramod Krishnani, S-Power Smart Data and monitoring, Kate Trono, SunLink PV monitoring & diagnostics, Antonio Chamblin, Southern CO. Single Framework Characterization - Full loss tree characterization of measured and predicted production, Steve Voss, Power Factors <p>9:20: Discussion 9:45: Break</p> <p>Session10 <i>Soiling</i></p> <ul style="list-style-type: none"> Quantifying and mapping PV soiling at scale, Leo Micheli/Michael Deceglie, NREL Soiling modeling and dust repelling, Bing Guo, Qatar Waterless outdoor soiling loss monitoring, Mani, ASU Soiling in the Middle East, Jim John, Dubai Electricity & Water Authority New Discoveries in Soiling of PV Modules, Lin Simpson, NREL <p>11:40: Discussion 12:00: Lunch</p>	<p>Inverter Roundtable What: Optimizing inverter maintenance via lessons learned</p> <p>Why: Is preventative maintenance the right approach for PV plants?</p> <p>When: 8am – Noon</p> <p>Where: Denver West Sheraton Lakewood, Colorado</p> <p>Cost: \$0</p> <p>RSVP: Email Michael Bolen (mbolen@epri.com) and Patti Gordon (pgordon@epri.com)</p> <p>NREL Tours RSVP: Email: dirk.jordan@nrel.gov</p>

Afternoon

<p>13:00: Poster session 1</p> <p>Session 3 <i>Duramat 1: materials characterization</i></p> <ul style="list-style-type: none"> Decoupling Optical, Recombination, and Resistive Losses with Luminescence Measurements, Kris Davis, FSEC Multi-scale defect characterization of degraded Si, CdTe, and CIGS modules, Steve Johnston, NREL Reliability Testing for Electrically Conductive Adhesives Used as Solar Cell Interconnections, Katherine Han, Sunpower Materials forensics for understanding PV module material durability, Laura Schelhas, SLAC <p>15:20: Discussion</p> <p>15:40 Break</p> <p>Session 4 <i>Duramat 2: Module design & simulation</i></p> <ul style="list-style-type: none"> Water content imaging in PV module packaging materials, Mihail Bora, LLNL Module scale simulation group, James Hartley, Sandia Automatic detection of clear sky periods using ground and satellite based solar resource data, Ben Ellis, LBNL PV in Extreme Environments – USVI after the hurricane – Eliza Hotchkiss, NREL <p>17:15: Discussion</p> <p>17:30: Adjourn</p>	<p>13:00: Poster session 2</p> <p>Session7 <i>Field & accelerated testing</i></p> <ul style="list-style-type: none"> Correlation of field & accelerated test, John Trout, Dupont Correlation of field performance and artificially aged modules due to IEC 61215 & Qual plus, Cara Libby, EPRI Factory excursion and lifetime prediction, Mike Kempe, NREL. <p>15: 00: Discussion</p> <p>15:30 Break</p> <p>Detection & Systems</p> <p>Session8 <i>Field detection</i></p> <ul style="list-style-type: none"> 15:40: Defect detection in > 5GW PV, Rob Andrews, Heliolytics, Canada 16:00: Modulated PL imaging, Ziv Hameiri, USNW, Australia 16:30: El & hot-spots, Stefan Wendlandt, PI Berlin, Germany 16:50: The relevance of controlling the quality of PV-systems, Claudia Buerhop, ZAE Bayern, Germany <p>17:10: Discussion</p> <p>17:30: Adjourn</p>	<p>13:00: Poster session 3</p> <p>Session11 <i>Inverter reliability</i></p> <ul style="list-style-type: none"> Degradation and Failure Mechanisms of Power Conversion Electronics – An Introduction, Peter Hacke, NREL Inverter scorecard, Michael Mills-Price, DNV GL PV Component Reliability Distributions – Database and Insights, Geoff Klise, Sandia Improvements in design and commissioning of inverter/ISU transformer skids in utility scale projects, Peter Bostock, VDE <p>15: 10: Discussion</p> <p>15:30 Break</p> <p>Session12 <i>Safety</i></p> <ul style="list-style-type: none"> UL3741 PV Hazard Control Reducing Hazards for Firefighters, Tim Zgonena, UL UL PV and firefighter safety, Olga Lavrova, Sandia Microgrid resiliency, Phil Untercuffler, Outback Sunspec/SMA/Fronius/Tigo collaboration, Gal Bauer, Tigo <p>17:10: Discussion</p> <p>17:30: Adjourn</p>	
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