Highlights from ASTM Photovoltaic Subcommittee Meeting in November 2008

ASTM Subcommittee E44.09 (Photovoltaic Electric Power Conversion) met on November 18 and 19, 2008, in St. Louis, MO with 8 members and visitors present.

WK21327 New PV installation practice — Jim Katsaros presented a new draft for PV roof installation requirements intended to be useful for PV installers, and could be required by manufacturers for roof-mounted applications. The draft was developed by a new task group, which was formed in September 2008. The Scope specifically excludes "building integrated", and focuses on water-shedding integration, sealing of roof penetrations, and sufficiency of anchors to roof structures. It does not include any electrical aspects of PV system design, which are subject to the National Electric Code. Minimum requirements are established for the module-structure interface, and the structure-roof interface; existing applicable standards will be referenced as much as possible. The initial draft was discussed at the meeting and many recommendations about directions and changes identified. The task group will continue to develop the installation practice between now and the next subcommittee meeting.

E 1596 Solar weathering revision/reinstatement — E 1596 was automatically withdrawn by ASTM in early 2008 because was not reapproved within the required 5-year span (reapproval was blocked by several negative votes). Kurt Scott has generated a new draft that attempts to resolve the technical issues that will be sent for subcommittee ballot.

New test method for reporting system PTC power — Carl Osterwald presented a new draft test method intended to be the flat-plate equivalent of E2527 for concentrator performance using regressions to performance test conditions (PTC). A key application of the standard would be acceptance testing of new PV systems. The PTC regressions have historically since the PVUSA days been with respect to 1000 W/m2 irradiance, 20°C ambient temperature, and 1 m/s wind speed. Because these conditions are not always appropriate because of local conditions or system topology (especially flat roof systems), the standard requires the user to select the reporting conditions.

A number of good suggestions were incorporated into the draft during the meeting. The draft is nearly complete, but two issues remain unresolved. First, BEW Engineering has been working on a new regression equation that could replace the PVUSA equation (Eq. 1 in the draft), so it doesn't make sense to ballot the document with the wrong regression equation. Second, the LI-COR LI200 silicon pyranometer is commonly used with systems testing because of their low cost, but questions about how these devices should be calibrated were raised. Carl Osterwald will try to see if a suitable calibration standard exists. The document could be ready for ballot before the next meeting.

People can participate by joining ASTM and requesting membership in E44 and E44.09 ($85 per year, http://www.astm.org/). Membership gives full voting rights and access to all the ballots. The subcommittee meets once per year in November.

Contact Carl Osterwald (carl_osterwald@nrel.gov) if you have any questions.