

# TECHNICAL COMMITTEE 82

## Solar photovoltaic energy systems

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TECHNICAL COMMITTEE 82  
Solar photovoltaic energy systems

**WORKING GROUP 2 – MODULES, non-concentrating**

1. IEC 60891 Ed. 2: PROCEDURES FOR TEMPERATURE AND IRRADIANCE CORRECTIONS TO MEASURED I - V CHARACTERISTICS OF CRYSTALLINE SILICON PHOTOVOLTAIC (PV) DEVICES. This is ready to be circulated as a CDV.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- 2. IEC 60904-4 Ed. 1: PROCEDURE FOR ESTABLISHING THE TRACEABILITY OF THE CALIBRATION OF PHOTOVOLTAIC REFERENCE DEVICES. This document is in process of being circulated as a CDV. Closing date for vote is expected to be around January 2009.
- 3. IEC 60904-5 Ed. 2: PHOTOVOLTAIC DEVICES - PART 5: DETERMINATION OF EQUIVALENT CELL TEMPERATURES (ECT) OF PHOTOVOLTAIC (PV) DEVICES BY THE OPEN-CIRCUIT VOLTAGE METHOD. This document will be submitted as a CDV to the Central Office in November, with voting expected to close around February or March of 2009



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- 4. IEC 60904-7 Ed. 3: PHOTOVOLTAIC DEVICES - PART 7: COMPUTATION OF THE SPECTRAL MISMATCH CORRECTION FOR MEASUREMENTS OF PHOTOVOLTAIC DEVICES. This document has been submitted as an FDIS to the Central Office in September, with voting expected to close around February or March of 2009.
- 5. IEC60904-8 Ed. 2: PHOTOVOLTAIC DEVICES –PART 8: GUIDE FOR THE MEASUREMENT OF SPECTRAL RESPONSE OF A PHOTOVOLTAIC (PV) DEVICE. The draft is prepared –was reviewed at the WG2 meeting in Busan, Korea earlier this month and will be sent to Central Office in November.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- 6. IEC 60904-10 Ed.2: PHOTOVOLTAIC DEVICES – PART 10: METHODS FOR LINEARITY MEASUREMENTS. This has been submitted to the Central Office as a CDV and is expected to be circulated in August with closing date for vote in January 2009.
- 7. IEC 61215 Ed. 3: CRYSTALLINE SILICON TERRESTRIAL PHOTOVOLTAIC (PV) MODULES – DESIGN QUALIFICATION AND TYPE APPROVAL. This standard will be changed to include retest guidelines, improved hot spot endurance test, maximum power requirements and making it consistent with IEC 61646. CDV in July 2009.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- 8. IEC 61701 Ed. 2: SALT MIST CORROSION OF PV MODULES. This standard is in process of being revised and will be circulated as CDV in May pf 2009.
- 9. IEC 61730-1 Ed. 2: PHOTOVOLTAIC (PV) MODULE SAFETY QUALIFICATION - PART 1: REQUIREMENTS FOR CONSTRUCTION. This standard along with its counterpart IEC 61730-2 Ed. 2: PHOTOVOLTAIC (PV) MODULE SAFETY QUALIFICATION - PART 2: REQUIREMENTS FOR TESTING are in process of being revised to include some test methods as well as correcting references. Corrigendum to be circulated by November 2008; CDV by May 3009.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- 10. IEC 61853-1 Ed.1: PHOTOVOLTAIC (PV) MODULE PERFORMANCE TESTING AND ENERGY RATING - Part 1: Irradiance and temperature performance measurements and Power Rating. Will be submitted as CDV after translation into French, by January 2009.
- 11. IEC 61853-2 Ed.1: PHOTOVOLTAIC (PV) MODULE PERFORMANCE TESTING AND ENERGY RATING - Part 2: Performance testing and energy rating of terrestrial photovoltaic (PV) modules. This document is ready for translation and will be circulation as a CDV in January 2009.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- 12. IEC 61853-3 Ed. 1: PHOTOVOLTAIC (PV) MODULE PERFORMANCE TESTING AND ENERGY RATING - Part 3: Energy rating. This is a new work item proposal and will be worked on by Working Group 2.
- 13. IEC 61853-4 Ed. 1: PHOTOVOLTAIC (PV) MODULE PERFORMANCE TESTING AND ENERGY RATING - Part 4: Standard days. This is another new work item proposal being worked on by Working Group 2.
- Will also be working on a materials standard. This is in preliminary stage and New Work Item will probably be ready in spring 2009.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- **WORKING GROUP 3 – SYSTEMS**
- 1. IEC 61829 Ed.2: CRYSTALLINE SILICON PHOTOVOLTAIC (PV) ARRAY - ON-SITE MEASUREMENT OF I-V CHARACTERISTICS. This revision is about twelve months away from submittal as a CDV.
- 2. IEC 62253 Ed.: EQUIPMENT AND SAFETY SPECIFICATIONS FOR DIRECT COUPLED PHOTOVOLTAIC (PV) – PUMPING SYSTEMS. This document, after extensive revisions, will be submitted as a CD to the Central Office in November 2008. Closing date for comments will be in April 2009.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- 3. IEC 62446 Ed.1: GRID CONNECTED PV SYSTEMS - MINIMUM SYSTEM DOCUMENTATION, COMMISSIONING TESTS AND INSPECTION REQUIREMENTS. This document is in the final throes of being submitted to the Central Office as an FDIS (Final Draft International Standard). It should be ready for vote around the end of 2008.
- 4. IEC 62548 INSTALLATION AND SAFETY REQUIREMENTS FOR PHOTOVOLTAIC (PV) GENERATORS. This document is being transformed from a Technical Specification (IEC 62257-7-1) into an International Standard. It is expected to go through several Committee Drafts as it is considered to be rather controversial, and it must also be coordinated with TC 64, the committee responsible for Electrical Installations and Protection Against Electrical Shock.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- **WORKING GROUP 6 – BALANCE OF SYSTEMS**
- 1. IEC 62109-1, -2 and -3 (PWI) Ed. 1: SAFETY OF POWER CONVERTERS FOR USE IN PHOTOVOLTAIC POWER SYSTEMS.
- -1 will be sent to Central Office as FDIS in early fall. Expect closing date and vote by end of 2008 or early 2009.
- -2 will also be sent to Central Office as a CDV in early fall. Expect closing date and vote in early 2009.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- -3 very little progress on this document; it is in the PWI stage.
- -? For a safety of combiner box document. Suggested by Korea; they have rough draft Korean document; will provide draft for submission to Central Office after meeting in Busan, Korea in October 2008.
- 2. IEC 62116 Ed. 1: TESTING PROCEDURE – ISLANDING PREVENTION MEASURES FOR POWER CONDITIONERS USED IN GRID CONNECTED PHOTOVOLTAIC (PV) POWER GENERATION SYSTEMS. Document has been printed as a standard in mid-October.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- 3. IEC 62509 Ed.1: PERFORMANCE AND FUNCTIONING OF PHOTOVOLTAIC BATTERY CHARGE CONTROLLERS. Draft was circulated as CD with comments received on 23 May 2008. Comments will be resolved and document submitted as CDV to Central Office in early 2009 with expected closing date and draft in summer of 2009.



## TECHNICAL COMMITTEE 82

### Solar photovoltaic energy systems

- **WORKING GROUP 7**  
**CONCENTRATING PHOTOVOLTAICS**
- 1. CPV Module and Assembly Safety Qualification. This is a Proposed Work Item in the very beginning stages.
- 2. Tracking standard – being worked on and should be submitted as a New Work Item by year's end.
- *Acknowledgment: "This material is based upon work supported by the Department of Energy under Award Number DE-FC36-07GO17034."*



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