

## **PV Module Reliability Workshop – Discussion Notes**

**Wednesday, February 25, 2015**

### **International PV Quality Assurance Task Force (PVQAT) QMS Audit and QMS Rating Discussion**

- Report shows that 6 percent of the modules fail 200 thermal cycles.
- The audit should be able to consider objective evidence whenever possible.
- Need:
  - Guidance on the execution of the audit (e.g., a checklist or report template, but also care enough to ask probing questions that go beyond the checklist, and walk the floor).
  - Qualifications for the auditors.
- Some people recommend fingerprinting materials; others feel that there are other ways of ensuring that materials are supplied appropriately.
- Who pays for the audit? This can determine a lot about the outcome of the audit, and it can determine access to the report in a lawsuit.
- Some customers do due diligence on the auditor.
- Consensus of the discussion (through a vote):
  - Guidance is needed to better define the audit.
  - No support for a checklist that just has yes-no answers.
  - Strong support for a checklist that has yes-no answers.
  - Strong support for adding more detailed probing questions.
- The guideline is not clear about how to implement across multiple lines – how do you qualify the full site? Sampling could be used to look at multiple lines.
- What if a line is currently closed?
- What is documented in the full report should be very helpful, including the strengths and weaknesses.