

PV Module Reliability Workshop – Discussion Notes

Wednesday, February 25, 2015

Utility-Scale Inverter Workshop

- Degradation in the first few years is most important from a financial perspective.
- However, today's lower interest rates allow higher value for production in later years; today's residential markets are looking at 30+ year projects.
- When a system over-performs, it is a lost opportunity for the banks (they make their money before the system is installed).
- Would like to be able to predict the losses associated with soiling.
 - Both permanent and temporary.
 - Non-uniform soiling can lead to hot spots and degradation.
- Degradation rates tend to be higher in hotter climates.
- When doing quantitative predictions of lifetimes:
 - Be careful that mechanisms don't change.
 - Be careful of extrapolations.
 - Test more samples with slightly accelerated stress levels.
- Should we use anti-reflective (AR) coatings?
 - If they are tested for durability, they are useful. Otherwise, not.