

Standardizing Derate/Loss Factor Definitions Working Group

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Today's Agenda

Agenda for the Working Group

– Geoff Klise

Recap of symposium with regards to derate/loss factors

– Chris Cameron

Contribution of performance monitoring on derate/loss factors

– Sarah Kurtz

Presentation of model matrix changes – group exercise

– Geoff Klise & Chris Cameron

Break from 10:30 to 10:45

Derate/Loss factors definitions

– Geoff Klise & Josh Stein

Wrap-up discussion and next steps

– Geoff Klise & Chris Cameron

Adjourn around 12:30



Ground Rules

- **Focus on brainstorming. All ideas are welcome!**
- **We want industry feedback. The labs role is to *facilitate*, not guide the process to a pre-determined end**
- **If someone needs more clarification, please speak up but be brief**
- **Please take turns when talking**



What is a Loss or Derate Factor?

Consider what you've heard in the past two days. Has your idea of loss/derates changed?

- Are these terms the same, or should they be defined separately?
- Is it an input to a model, or something post-processed?
- Is it a waterfall chart showing reductions to the energy produced?
- Is it an input parameter?
- Is the parameter 'physical' since it is measured, or is it an estimate?



Current Practice

- Some models are meant to be simple, some strive for more complexity
- Not all physical process are separated well enough to measure. Some losses are therefore ‘lumped’ based on our **current** understanding and measurement of PV systems
- Can current limitations be overcome with better measurement and validation?
- What is the role of field measurement of derate/loss factors?
 - Do they *define* the losses, or
 - Validate our ability to *estimate* and *model* the losses?



Future Practice

What does the future look like with regards to derate/loss factors in PV performance models?

- Is it the same as it is now?
- Will there be standard definitions or best practices agreed upon, shared, and understood by all?
- Will it be possible to physically measure and validate all losses in a PV system?

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