Utility External Disconnect Switch (UEDS)

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Background UEDS

- Standards have changed since the “Gardner” PV systems 1980’s
- UEDS always an issue at State Rulemaking proceedings
- What is a UEDS?
- Current status of controversy
- NEC requirements
- Non-use UEDS during grid outages
Overview

- Technical Issues
- Practical Considerations
- Legal Reasons
- NEC
- OSHA Safety
UEDS location
Safety and UEDS

- OSHA 1910.269 and lockout/tagout rules
- UL 1741
- NEC
- Non-use during grid outages
Other Issues

• Legal and Jurisdictional issues
• Cost of the UEDS
• IEEE 1547 Isolation Device
• Technical Issues
Cost of UEDS

- Florida testimony by Progress Energy cost at $1,253.13
- Installers site cost of running cable to outside walls and repairing walls as significant cost adder
- 2008 National Repair and Remodeling Estimator
IEEE 1547-2003

• Section 4.1.7 states
  “when required by area EPS operating practices, a readily accessible lockable visible-break isolation device shall be located between the area EPS and the DR unit.”

**Bottom line:** Information only not required by 1547
UEDS not required

- UEDS not a requirement in eight states
- In 2007 over half of install PV system did not have UEDS requirement
Best Practice

“The recommendation of the report is to eliminate the requirement for UEDS for all small, inverter-based systems in all jurisdictions. With the inherent safety features built into all UL-listed PV inverters, the UEDS is functionally unnecessary and provides little, if any, additional safety”.

Questions?

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