

Inverter Energy Metering Certification

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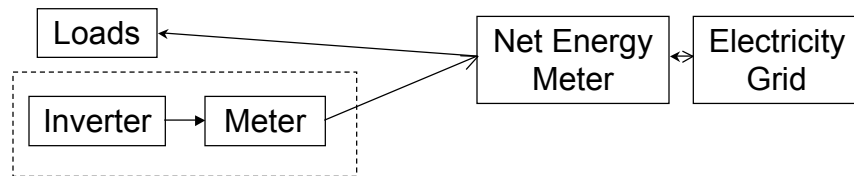


Summary

- Intent is to provide for recording of generated energy from PV systems at reduced accuracy (5%) for reduced cost
- Gap: No standard exists for verifying any accuracy of inverter-integrated energy metering
- Looking for advocates and technical participants
 - Renewable Energy Credit Brokers
 - Installers
 - Inverter Manufacturers
 - Test Agencies



One-Line Diagram



Background

- California CPUC is adopting a test procedure required if installations wish to report generation for PBI using inverter-integrated energy metering
 - Limited experience base implementing test
 - Narrow market requirement
 - Draws heavily from ANSI C12.1 for metering performance evaluation and UL1741/IEEE1547.1 for test conditions

Current Status

- California Energy Commission and CSI Program Administrators have proposed a test procedure to be included in the January 2010 edition of the CSI Program Guide (http://www.pge.com/notes/rates/tariffs/tm2/pdf/ELEC_3506-E.pdf)
- Procedure has had limited application to actual inverters
- SolarABCs coordinating input from a wider audience for submittal to a national standards organization



Audience – End Users

- Incentive programs
 - PBI programs Where net metering accounts for \$\$
- REC trading
- Utilities
 - If inverter metering accuracy can achieve revenue-grade 2%, can this apply to feed-in tariffs?
- Installers or System Owners
 - Desire to coordinate with above participants



Audience - Technical

- Technical input from inverter manufacturers needed
 - Several manufacturers have indicated interest, a few have declined
 - Testing and constructive feedback!
- Testing organizations
 - Anyone currently testing to UL1741/IEEE1548.1



Schedule

- Requirements Definition
 - Consumers of data (Incentives, RECs, Utilities, Installers, Owners) voice needs
 - Inverter manufacturers, Test agencies as audience
 - Stakeholder teleconference tentatively planned for first week of December
- Technical meetings regularly through February
 - Primarily Inverter manufacturers, Test agencies
- Present to standards organization Spring 2010



Conclusions

- Standards effort will succeed or fail due to participation
 - Contact jeff.newmiller@bewengineering.com
- Standard will define tests needed to demonstrate inverter-integrated metering accuracy
 - Leverage existing environmental exposure testing for inverters for mfr acceptance
 - Leverage existing metering verification methods for energy industry acceptance

