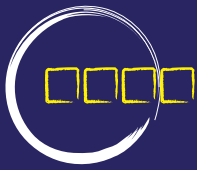


Solar America Board for Codes and Standards



COMPARISON OF THE FOUR LEADING SMALL GENERATOR INTERCONNECTION PROCEDURES

Jason B. Keyes and Kevin T. Fox
Interstate Renewable Energy Council

Comparison of the Four Leading Small Generator Interconnection Procedures

Study Report Overview

This overview summarizes a study report from the Solar America Board for Codes and Standards (Solar ABCs). The full report reviews four sets of interconnection procedures that regulators often consider when developing state and local procedures. As a framework for review, the report uses the grading criteria developed by the Network for New Energy Choices (NNEC) and used that organization's review of state interconnection procedures.

Why the Report is Important

Distributed generation is far more likely to be deployed if developers and utility customers can readily discern the costs of interconnection and the length of time for the interconnection approval process. While regulators have a challenging task in formulating interconnection procedures, the benefits of implementing procedures that function effectively are substantial.

Issue

Growing demand for solar energy and other distributed generation systems is prompting calls for federal and state legislation that streamlines procedures for interconnection of these systems to the electric utility grid. In many cases, existing interconnection requirements are inadequate, because they present burdensome bureaucracy, lengthen the time required to complete a project, and increase project costs. In effect, they discourage solar projects. In response, utility regulators at the state and local levels are actively revising interconnection procedures and will continue to do so into the future. The report serves as a guide for those regulators.

Four different interconnection procedures now in wide use are presented in the report as convenient starting points for utility regulators to build upon in configuring their own regulations. The four sets of interconnection procedures are:

1. The Federal Energy Regulatory Commission's Small Generator Interconnection Procedures (SGIP) and Small Generator Interconnection Agreement (SGIA)
2. California's Rule 21 (CA Rule 21), under which the majority of solar facilities and other distributed generation facilities in the United States have been interconnected
3. The Mid-Atlantic Demand Resource Initiative procedures
4. IREC's Model Interconnection Standards and Procedures for Small Generator Facilities.

Solar America Board for Codes and Standards Recommendation

Each of these four sets of procedures present a suitable framework for effective regulations, though the report authors find that the Interstate Renewable Energy Council's (IREC's) Procedures (presented in detail in the report) provide the most comprehensive model.



Key Findings of the Report

The procedures reviewed in this report have similar provisions on three essential points:

- They employ one standard for all technologies
- They apply to systems up to at least 10 MW
- They rely on national engineering standards.

All of the procedures except the SGIP/SGIA contain a fourth point in common, the elimination of a requirement for insurance for most systems. The authors of the report recommend that insurance not be required. In addition, all but CA Rule 21 use the basic format of the SGIP/SGIA. The authors consider this uniformity a valuable benefit, because industry and utilities are already familiar with these federal procedures. Of the four sets of procedures, the IREC procedures are preferred.

The IREC procedures:

- Eliminate requirements for an external disconnect switch
- Provide for a generous system size limit for interconnection to spot and area networks
- Adopt effective, simplified processes to interconnect systems that cannot export power to the electric grid beyond local loads (CA Rule 21 also includes this provision).

IREC believes that these issues have been viewed with excessive caution by utilities in the past and have developed their procedures accordingly.

For More Information Contact:

Larry Sherwood, Solar ABCs Project Administrator
Larry@sherwoodassociates.com, 303-413-8028

Download the Full Report:

www.solarabcs.org/interconnection

For more information, visit the Solar ABCs Web site:

www.solarabcs.org

Solar America Board for Codes and Standards

The Solar America Board for Codes and Standards (Solar ABCs) is a collaborative effort among experts to formally gather and prioritize input from the broad spectrum of solar photovoltaic stakeholders including policy makers, manufacturers, installers, and consumers resulting in coordinated recommendations to codes and standards making bodies for existing and new solar technologies. The U.S. Department of Energy funds Solar ABCs as part of its commitment to facilitate wide-spread adoption of safe, reliable, and cost-effective solar technologies.

**Solar America Board
for Codes and Standards**

www.solarabcs.org