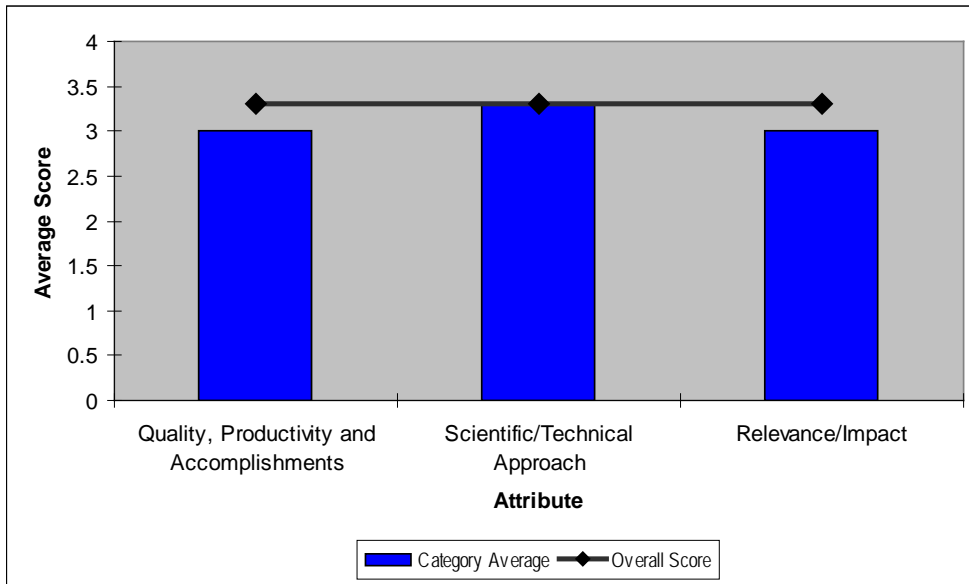


Southwest Regional Experiment Station Support
Principal Investigator: Bob Reedy, Florida Solar Energy Center (FSEC)



Quality, Productivity and Accomplishments (Average Rating 3.0)

Rating Comments

- 4.0 It appears that quality and quantity of work delivered by FSEC provides good value to the DOE investment.
- 3.0 Additional team members to spread out the work load would be beneficial to the activities. Given the large volume of work already done at FSEC, it may be beneficial to repackage and republish work that is now relevant once again.
- 2.0 The oral presentation was short on accomplishments. From the written project summary, it appears that “Tiger Team” activities have been limited and the primary activities have been focused on training, module testing and system engineering support for small PV systems in Florida.
- 3.0 As with the SW RES, FSEC sits in a unique position to positively shape the industry landscape. Overall quality of the work was good and generally in line with industry needs. Direct contact with the Tiger Teams appears to be very helpful in this regard. Close work exchanges with the integrator community should continue to drive improvements in the quality of individual initiatives.

Productivity based on invested dollars is strong. Efforts are highly useful in determining “in the wild” performance, and support the evaluation of the LCOE of PV systems. Quantifiable failure analysis here would be valuable to the general industry community.

Scientific/Technical Approach (Average Rating 3.3)

Rating	Comments
4.0	FSEC is a strong research and analytical team.
3.0	The approach to support of the stated objectives is sound but difficult to measure results. Some greater degree of key success measurement needs to be incorporated into the process. I think it would be more useful to evaluate inverters in field applications rather than a static test facility. Inclusion of solar thermal technology in training is relevant and has more energy reduction capacity for the funds spent. A focus on obtaining a greater cost share to leverage activities would be beneficial as well as evaluating cost burden of administrative and overhead charges by the provider.
3.0	The project approach emphasizes three primary activity areas.
3.0	The particular details on the technical approach were not reviewed in this presentation. However, it is clear that FSEC brings a technical perspective unique to its geographic area, specifically the American south. Expanding this approach to National level that enabled us to gain an intimate understanding of the performance of PV and the impact on LCOE across differing geographic areas would be very valuable. I think the focus on lightning impacts on PV could serve as a model for this type of broader approach.

Relevance/Impact (Average Rating 3.3)

Rating	Comments
4.0	FSEC has been a leading organization in the solar area. They have been a lead in the area of training and equipment testing. Efforts in solar thermal are important and the tiger team participation is an important component of building confidence at the local level.
3.0	The education of policy and regulatory decision makers on the big picture issues, countering special interest efforts for “old fuels and models” and coordination with other groups to avoid too much overlap are key areas for improvement.
2.0	<ul style="list-style-type: none">• Overall, the accomplishments seem minor for the level of funding, but perhaps the accomplishments were not very well communicated.• An expanded PV module and system component testing program for Southeast locations could provide important data and information for the PV industry, including project developers, module manufacturers and utilities.
4.0	An area of research that warrants much greater attention is the performance of systems in high lightning environments. As the US PV market expands, this research will be invaluable in understanding the impact of lightning on the LCOE of PV systems in these areas. Given the correlation of lightning to emergent US markets for PV, this research is critical, and a strong discipline focused on “in the wild” performance tracking will have a material impact on tracking specific issues. This is very important for broader adoption in these markets, and will serve to get ahead of the curve for certain objections that will emerge from service providers considering PV in their resource planning.

Overall (Average Rating 3.0)

Rating	Comments
4.0	- Is this the only group looking at PV for Disaster Response? What type of work is being done? Equipment development?

- Looking at “train the trainer” as opposed to individual training workshops.
- In addition to the development of mobile training tools [trucks or shipping pods] for training code officials, consider developing an equipment list and curriculum for training and then work with the accredited training programs around the US to implement.
- Are there lessons being learned as part of the Tiger team participation that can be applied to future efforts – both in training and the preparation of documentation? There might also be useful information from the Cities that can be passed on to the ABC program.

none [none]

2.0 Solar energy represents the prominent renewable energy resource for the Southeast region. As such, this project could be improved with better structure and definition, including identification and focus on key regional needs and activities. A broader outreach effort to the Southeast region outside of Florida is warranted.

3.0 Overall I believe the work of FSEC is sound and contributes positively to the development of the industry. Educational outreach efforts and long term studies are both highly conducive to the rapid transformation of the market from the “early adopter” stage to a dynamic, self propelled market.