Codes and Standards: Solar ABCs

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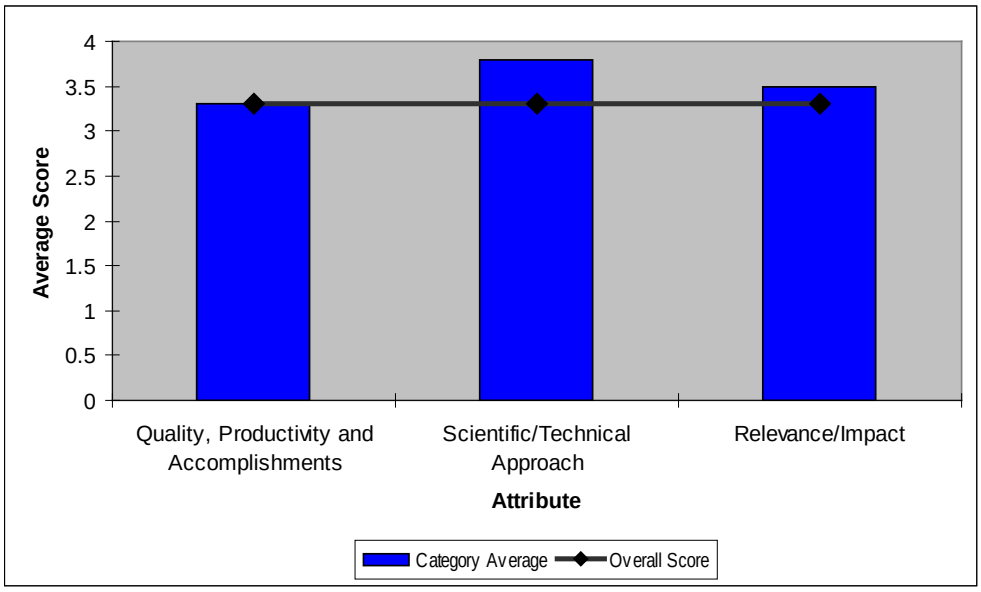

The Solar America Board for Codes and Standards (Solar ABCs) is a collaborative effort among experts to gather and prioritize input from PV stakeholders including policy makers, manufacturers, installers, and consumers and to use that feedback to develop recommendations to codes- and standards-making bodies.

Quality, Productivity and Accomplishments (Average Rating 3.3)

Rating	Comments
4.0	The project is addressing many of the market barriers that could hinder the widespread deployment of photovoltaics.
3.0	The assembly of resources in people, and the publications produced are valuable for industry and regulators to come to common ground on an understanding of Photovoltaics. I would like to see more links to other resources in the web site, papers and publications so there is greater understanding of where existing work underway and subjects are studies and publications listed.
3.0	The project has succeeded in building an extended network of collaborators and stakeholder groups, and in convening stakeholder meetings and delivering important study reports.
3.0	Overall the quality of the presentation and supporting documentation was very good. A number of questions that came up during the presentation we're clearly addressed in the supporting documentation. The only potential area of quality improvement would be in the construction of the presentation itself. Given that SABC's are a bit dry, it might be helpful to have three or four standard visuals of different types of systems. For example: - a commercial rooftop system - a residential rooftop system - a fixed ground mount - a tracking ground mount Then use these standard visuals to highlight areas of focus for the SABC's initiatives. In this way, abstract standards can be tied to specific component level functions. This would greatly simply presentation of information on standards, enhance the quality of the presentations, and

shorten the time to come up to speed on specific gaps.

Scientific/Technical Approach (Average Rating 3.8)

Rating	Comments
4.0	The project team has reached out to a broad number of stakeholders to assess areas needed further research to insure that the activities are relevant. They communicate to any interested party via emails and reports to establish an on-going dialogue.
4.0	Excellent approach and execution.
4.0	• Activities should continue to focus on the purely technical aspects of codes & standards to build credibility in this area and not venture into other analysis areas, such as the proposal for a "Rate Impact of Net Metering" analysis. • It wasn't clear whether there is a rigorous process for building consensus around the codes and standards being developed, other than review by target audience representatives. Does this present any issues for general industry acceptability of the standards?
3.0	In general the issues addressed in Solar ABCs reflect more heavily on the installation component (initial capacity) and less so on the ongoing generation and service component (delivered lifetime energy). The technical approach I believe reflects this perspective. I think the team might benefit from the perspective of a energy service provider model, where the focus is less on standards as they pertain to construction, and more on standards as they pertain to energy delivery. While this will not likely radically change the methodology, it will likely change the engaged organizations – so focus on communications, security, etc.

Relevance/Impact (Average Rating 3.5)

Rating	Comments
4.0	The reports coming out of the program address critical issues.
3.0	The work is timely and relevant. To continue the be so will require observation of systems deployed and an understanding of what went wrong if anything and a means of continuous process improvements. I would like to see some tracking of what are the top issues (request for assistance) and where the gaps are. Hopefully the gaps keep changing and they become footnotes to what were barriers.
4.0	Need to develop mechanisms to gauge the usefulness of the information and products to the industry.
3.0	The work of the team is very important and I think will help tremendously in driving the growth of the industry as a whole. I think the team should consider a few other areas of research to extend their impact. - The team should consider standards in the area of Validation, Estimation and Editing (VEE) for onsite generation data and energy offset. Adoption of standardized VEE protocols here would be very valuable in establishing solar as a viable complementary energy delivery solution to traditional utility delivery. - In regards to monitoring and SCADA applications for DG PV, the team should begin immediate investigation around standardized security protocol's for "smart grid PV" type solutions. As more systems come online this will become a very important issue for service providers and system operators.

Overall (Average Rating 3.3)

Rating	Comments
4.0	The challenge will be to provide the information to the decision makers and other parties directly involved in the PV market but who are not part of the PV industry. There could be value in cross communication with other Market Transformation contractors. NARUC, for example, would be a prime conduit for the standards and codes information to flow back to their constituency. It was not clear from the presentations if this sort of cross fertilization was taking place on a strategic and regular basis.
3.0	As it relates to overall strategy and societal benefits, I think it is important to keep the relative importance of photovoltaic in prospective to conservation, efficiency, solar thermal technology and site-specific applicability. So often resources are squandered by using photovoltaics when a greater financial, climate change reducing and physically smaller technology would have yielded much more of a return. I know all of the people reading this know it however it is our responsibility to make sure the end users know the relative impact to the desired results photovoltaic technologies will have relative to other technologies and practices. *General comment not specific to this review - It is somewhat confusing and factually incorrect to use the broad description of “solar energy technologies” when ALL of the work is “photovoltaic technologies.” This is a comment relative to almost all of the peer review sessions.
3.0	• The project appears to have achieved good results and external coordination for its first year.
3.0	The overall presentation was very, very solid. The work is consistent and strong in helping to facilitate broader acceptance of PV as a viable solution to energy delivery.