Shaping Tomorrow's Built Environment Today

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CC: Omar Abdelaziz, Research Liaison Section 6.0, omar.abdel.aziz@gmail.com

FROM: Michael Vaughn, MORTS, mvaughn@ashrae.org

DATE: November 5, 2019

SUBJECT: Research Topic Acceptance Request (1885-RTAR), "Solar PV Design Guide for the Building Professional Including HVAC and Building Interactions"

During their fall meeting, the Research Administration Committee (RAC) reviewed the subject Research Topic Acceptance Request (RTAR) and voted to accept it with comments for further development into a work statement (WS) provided that the key comment(s) and question(s) below are addressed to the satisfaction of your Research Liaison, Omar Abdelaziz, omar.abdel.aziz@gmail.com, or RL6@ashrae.net, in the work statement draft.

1. Need to check first to make sure that the scope is not over lapping with other design guides. Check with Cindy Michaels in Publications.
2. Approach and budget need more clarity to develop a Work Statement.
3. Approach is not well defined as to how it is going to be different from other efforts in the literature.

The work statement draft must be approved by the Research Liaison prior to submitting it to RAC.

An RTAR evaluation sheet is attached as additional information and it provides a breakdown of comments and questions from individual RAC members based on specific review criteria. This should give you an idea of how your RTAR is being interpreted and understood by others. Some of these comments may indicate areas of the RTAR and subsequent WS where readers require additional information or rewording for clarification.

The first draft of the work statement should be submitted to RAC no later than **August 15, 2021,** or it will be dropped from display on the Society's Research Implementation Plan. The next likely submission deadline for a new work statement on this topic is **May 15, 2020** for consideration at RAC's 2019 Annual meeting. The submission deadline after that for work statements is **August 15, 2020** for consideration at the RAC's 2020 fall meeting.

Project ID	**1885**	
Project Title	**Solar PV Design Guide for the Building Professional Including HVAC and Building Interactions**	
Sponsoring TC	TC 6.7, Solar and Other Renewable Energies; co-sponsored by TC 1.9, Electrical Systems	
Cost / Duration	$149,500 / 24 Months	
Submission History	**1st Submission**	
Classification: Research or Technology Transfer	Basic/Applied Research	
RAC 2019 Fall Meeting Review		
Essential Criteria	**Voted NO**	**Comments & Suggestions**
Background: The RTAR should describe current state of the art with some level of literature review that documents the importance/magnitude of a problem. References should be provided. If not, then note it in your comments.		**#2** - solar installations are a common feature of buildings, but potentially outside of ASHRAE scope. Perhaps a partnership with IEEE or a DOE lab? **#1** - Although included in the references "Building Integrated PV", description of these efforts not included in the background.
Research Need: Based on the background provided is the need for additional research clearly identified? If not, then the RTAR should be rejected.		**#3** - would like to see greater justification of research need. There are lots of system issues that involve how PV systems are designed and integrated. **#7** - It is a publication, not a research. **#2 -** not research, but a practitioners handbook. **#1** - The need of the research is not clear.
Relevance and Benefits to ASHRAE: Evaluate whether relevance and benefits are clearly explained in terms of: a. Leading to innovations in the field of HVAC & Refrigeration b. Valuable addition to the missing information which will lead to new design guidelines and valuable modifications to handbooks and standards. Is this research topic appropriate for ASHRAE funding? If not, Reject.		**#2** - valuable information used by practicing engineers. **#11** - this is a where does you power come from, not ASHRAE work.
IF ABOVE THREE CRITERION ARE NOT ALL SATISFIED - MARK "REJECT" BELOW & CONTINUE REVIEW BELOW		
Other Criteria	**Voted NO**	**Comments & Suggestions**
Project Objectives: Based on the background and need, evaluate whether the project objectives are: 1. Aligned with the need 2. Specific 3. Clear without ambiguity 4. Achievable If not, then appropriate feedback should be provided.		**#8** - These need to also state how, and sources to be utilized, for gathering the required data and content. Will there be guidance that helps a designer to decide on which buildings./locations/situations are likely to benefit from a PV solution or contribution? **#2** - handbook outline provided. **#5**- Deliverables are not specific enough to develop a Work Statement. **#1** - Objectives are not setup clearly.
Expected Approach and Budget: Is there an adequate description of the approach in order for RAC to be able to evaluate the appropriateness of the budget? If not, then the RTAR should be returned for revision. Anticipated funding level and duration:		**#8** - Why such a large budget for what is essentially a compiled guidebook? This needs justification. **#7T** - The expected approach section is very brief and generic. The meaning of the second sentence is not clear. **#5** - Approach and budget needs more clarity to develop an Work Statement. **#1** - Approach is not well defined as to how it is going to be different from other efforts in the literature
References: Are the references provided?		
Decision Options	**Initial Decision?**	**Final Approval Conditions**
ACCEPT AS-IS		**#8** - This is about the development of a reference guidebook, and may qualify for the PTAR route. However, until the PTAR route is finalized, we should treat this as an RTAR. A methodical search of reference sources needs to be conducted, guided by the contents, to arrive at a rigorous and adequately comprehensive guidance document. Will there be guidance that helps a designer to decide on which buildings / locations / situations are likely to benefit from a PV solution or contribution? **#3** - would like to see research need clarified and give further examples of why this additional research is clearly needed. **#7** - Submit as a publication request and clarify and expand the expected approach. **#2** - coordination with NREL and IEEE needed. **#5** - Approach and budget needs more clarity to develop an Work Statement. **#11** - full disclosure, I put solar panels on my home 5 years ago… BUT, this is a where does you power come from, this is not ASHRAE or building envelope work. This could be considered construction perhaps. **ADDITIONAL COMMENTS**: Need to check first to make sure that the scope is not over lapping with other design guides. Check with Cindy Michaels in Publications.
ACCEPT W/COMMENTS		
REJECT		

ACCEPT Vote - Topic is ready for development into a work statement (WS).
ACCEPT W/COMMENTS Vote - Minor Revision Required - RL can approve RTAR for development into WS without going back to RAC once TC satisfies RAC's approval condition(s)
REJECT Vote - Topic is not acceptable for the ASHRAE Research Program