



**1791 Tullie Circle, N.E./Atlanta, GA 30329  
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TC/TG/MTG/TRG MINUTES COVER SHEET**

**(Minutes of all Meetings are to be distributed to all persons listed below within 60 days following the meeting.)**

TC/TG/MTG/TRG No. 6.7 DATE June 26, 2018

TC/TG/MTG/TRG TITLE Solar and Other Renewable Energies

DATE OF MEETING Jun 26, 2018 LOCATION Houston, TX

VOTING MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Costas Balaras	2016	Svein Morner	2017	Katherine Hammack (rep 90.1)
Maria Todorovic	2016	Jim Leidel	2014	Omar Abdelaziz (Research)
Mike Case (remote)	2016	Cary Smith	2016	Khalid Nagidi
Janice Means	2016	Vinay Ananthachar	2017	Costa Kapsis (remote)
Tim Merrigan (remote)	2016	Reda Djebbar	2017	Jojo DeCastro
Gaylen Atkinson	2014			Madison Schultz
				Jin Jin Huang
				Rob Risley
				Yanfei Li
				Dawn Lu (Section 6 Chair)
				John Karakash

**DISTRIBUTION: All Members of TC/TG/MTG/TRG plus the following:**

TAC Section Head: Mark Hegberg	<a href="mailto:SH6@ashrae.net">SH6@ashrae.net</a>
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	Mr. Erick Phelps (Standards) <a href="mailto:sl6@ashrae.net">sl6@ashrae.net</a> Mr. Omar Abdelaziz (Research) <a href="mailto:RL6@ashrae.net">RL6@ashrae.net</a> Mrs. M Maggie Moninski (CCTC) <a href="mailto:ctt6@ashrae.net">ctt6@ashrae.net</a> Mr. Lynn F Werman (2019 HVAC APPLICATIONS) <a href="mailto:lynnwerman@yahoo.com">lynnwerman@yahoo.com</a> Mr. Nicolas Lemire (2020 HB Systems & Equipment) <a href="mailto:nlemire@pageaumorel.com">nlemire@pageaumorel.com</a>
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**MEETING MINUTES**  
**ASHRAE TC 6.7 – SOLAR ENERGY UTILIZATION**  
**Annual Meeting – June 26, 2018**  
Houston, TX, USA

1. Call to Order: The meeting was called to order by Chair Costas Balaras at 1:09 pm, June 26th, 2018 and introductions were made.
2. Code of Ethics: Chair read from the ASHRAE code of ethics. Chair noted that the agenda contains a link to the code as well as to the Technical Committee Manual of Procedures (MOP).
3. Quorum: 6 of 9 voting members were present. The meeting had a quorum.
4. Agenda: Chair reviewed agenda and requested Mike Case to track action items.
  - 4.a. Chair added visit by Ms. Katherine Hammack to agenda, representing SSPC 90.1 Renewables Working Group.
  - 4.b. Chair requested Mike Case (on telephone) and Khalid Nagidi to keep track of action items.
5. Approval of Minutes:
  - 5.a. Janice Means moved to approve minutes. Marija Todorovic seconded. **Minutes were approved 6-0-0-1-CV.**
  - 5.b. Mike Case reported that minutes from the 2016 Winter meeting in Orlando are still not complete and draft would be completed by Winter meeting in Atlanta.
6. Announcements from the Chair.
  - 6.a. From Chairs breakfast. The 2020 meeting will be ASHRAE's 150<sup>th</sup> anniversary. Program abstracts are due December 7, 2018.
  - 6.b. Went over the upcoming changes to the TC 6.7 roster (see SY 2018019 in agenda). Costas and Janice are rolling off of the committee as voting members. Khalid Nagidi will become Chair.
  - 6.c. Basecamp is now set up. See agenda for screen shot. Discussion on increasing use of Basecamp for committee activities.
  - 6.d. ASHRAE President is willing to send thank you letter to employers; look for an email coming in July with a link to be used to request a letter.
  - 6.e. ASHRAE offers a telephone/web conferencing option for Technical Committees and subcommittees. <https://www.ashrae.org/technical-resources/technical-committees/option-for-tc-subcommittee-meetings-via-conference-calls-and-web-meetings-new>. Marija and Costa discussed their experience in using the service for a Handbook subcommittee meeting.
7. Old Business

7.a. Update Action Items (numbering from Chicago minutes)

- 11.1. Mike Case & Svein Morner – post approved version of Long Beach minutes – closed.
- 11.2. Mike Case to compile and circulate Minutes from the Orlando, January 25, 2016 – incomplete. Try for Winter meeting in Atlanta – open.
- 11.3 Costas Balaras to setup TC Basecamp - closed
- 11.4 Jim Leidel prepare RTAR draft and setup webex to discuss in August – open.
- 11.5 Marija Todorovic – write up BIPV standard proposal. Kathrine Hammack discussed approaches they were taking (see item 7.c. in these minutes). SSTC 90.1 WG would like TC 6.7 to review. – open.
- 11.6 Members that wish to provide material for TC website should send it to Svein Morner – keep open
- 11.7 Khalid Nagidi - Solar course for 2019 Winter Meeting – keep open
- 11.8 Khalid Nagidi & Cary Smith to act as liaisons to 90.1 WG – keep open
- 11.9 Marija Todorovic – prepare and circulate revision for Handbook A15-Ch35 – complete.
- 11.10 Submit two seminars for Houston – discussed - close.
- 11.11 Jim Leidel & Janice Means – Clarify with RAC the need for an RTAR to develop a Design Guide – open.
- 11.12 Subcommittee chairs send notes to Secretary – closed.

7.b. Discussed ASHRAE Learning Institute. Khalid to follow up with Karen and Brian.

7.c. Guest Ms. Katherine Hammack presented information on the activities of SSPC 90.1 Working Group on Renewables (RE).

- RE-WG Development Position to Date:
  - New Definition; Renewable energy resources: energy harvested from solar, wind, biomass, geothermal or hydro.
  - Modified Existing Definition: on-site renewable energy: energy generated from renewable resources produced/harvested at the building site.
  - Technology Agnostic Approach for a RE Requirement
  - Fixed Capacity Based on Conditioned Space, up to 3 FI Limit
  - Current Capacity Target at 0.5 W/SF (direct thermal equivalent)
  - Applies to (passes scalar) SZs 1-3, CZs 1-5B & 3C
  - Exceptions/Alternates Required for Both Applicable & Non-Applicable CZs.
  - We (SSPC 90.1 WG on RE) welcome your input and expertise to crafting a mandatory requirement for ASHRAE 90.1

## 8. Updates – Standing Committee Liaisons.

8.a. Omar Abdelaziz attending (research committee liaison). Reviewed RTAR procedures.

8.b. Chair discussed a TC 1.4 Proposal to TAC for A Catalog of Subsystems. See item 6.a in agenda and accompanying background material.

8.c. For RTARs, work backward from Dec 3rd. Only 3 RTARs considered. 1 accepted, 1 rejected. 3 Work statements were accepted. Guidelines on web to help PI succeed in ASHRAE research projects.

## 9. Subcommittee reports (subcommittee meeting notes attached)

9.a. Handbook - Marija Todorovic. Finished draft of A15-Ch35 SOLAR ENERGY USE. Marija Todorovic moves to vote to approve. **Motion to approve the draft handbook chapter was approved 6-0-0-1-CV.** No discussion. **Action – submit to handbook committee –** Costa will do. Chapter 37 review process is open now.

9.b. Program - Costa Kapsis. Seminar 62 to be held tomorrow. July 9<sup>th</sup> is the deadline for conference papers. Please indicate on submittal that 6.7 supports. One program is almost ready to submit for Atlanta.

9.c. Research - Jim Leidel. Jim uploaded RTAR, but will upload a revised version the evening of this meeting. Jim decided to strip out supporting TCs until RTAR moves forward. Want to move forward quickly. RTAR (Solar PV Design Guide) due date is December 03, 2018. Jim to work with Janice Means to finalize the first draft and send it to TC members for their review and comments no later than October 12. Also, He needs to send the Draft to Omar Abdelaziz (TAC) for his review and comments.

9.d. Standards - Mike Case. Subcommittee is still considering submitting a BIPV standard. Marija Todorovic to write up a draft.

9.e. Website – Costas Balaras, on behalf of Svein Morner, repeated request for members to send materials to Svein for the web site.

## 10. New business

10.a. Outgoing chair thanked everyone for two good years. Khalid Nagidi will be taking over as Chair. Khalid thanked Costas for his leadership to a round of applause.

## 11. Action Items

11.a. Mike Case to wrap up Orland minutes

11.b. Handbook. Costa Kapsis to submit chapter 35 to ASHRAE handbook committee.

11.c. Standards. Marija to write up BIPV standard draft idea.

11.d. Research. Janice Means to get together with Jim Leidel in the next month to discuss RTAR.

11.e. Web site. Member send materials to Svein Morner for website.

11.f. Khalid Nagidi & Cary Smith to act as liaisons to 90.1 WG

12. Adjournment. TC 6.7 adjourned at 3:05 pm.

Respectfully submitted,

Mike Case, TC 6.7 Secretary