



1791 Tullie Circle, N.E./Atlanta, GA 30329
404-636-8400

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 25, 2019

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

DATE OF MEETING June 25, 2019 LOCATION Kansas City, KS, USA

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Khalid Nagidi (VM)	2018	Mike Case (VM)	2016	John Karakesh
Konstantinos Kapsis (phone) (VM)	2018			Yoon Ko
Tim Merrigan (phone) (VM)	2016			Steven Faulkner
Svein Morner (VM)	2018			Theodore Reinhart
Cary Smith (phone) (VM)	2016			Gerardo Agonso
Marija Todorovic (VM)	2017			Nelson James
Costas Balaras				John Karakash
Janice Means				Chris Gaul
Gaylen Atkinson				Mark Herberg
				Dennis Coop

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

TAC Section Head: Dennis Lu	SH6@ashrae.net
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	Sl6@ashrae.net ; rl6@ashrae.net ; ctt6@ashrae.net ; hbr6@ashrae.net ;
Mike Vaughn, Manager Of Research & Technical Services	MORTS@ashrae.net

MEETING MINUTES
ASHRAE TC 6.7 – SOLAR ENERGY UTILIZATION
Annual Meeting – June 25, 2019
Atlanta, GA, USA

1. Call to order & Introductions. The meeting was called to order by Chair Khalid Nagidi at 1 pm, June 25, 2019 and introductions were made. Chair referred members to the ASHRAE code of ethics and Manual of Procedures.

2. Quorum. It was determined that 4 of 7 voting members were present at the beginning of the meeting. A quorum was present.

3. Agenda Review. Chair reviewed the agenda. Janice Means suggested that an agenda item be added about combining TC 6.7 with another TC.

4. Approve minutes

a. The minutes from the winter meeting in Atlanta, January 15, 2019 were reviewed. Svein Morner moved to accept as written. Tim Merrigan Seconded.

VOTE: Orlando minutes were approved 4-0-0-3-CV

5. Announcements

a. Chair reviewed the current roster. Gaylen Atkins noted that he has been removed from the roster but is still a corresponding member (CM). Chair will ask ASHRAE to add him back to TC 6.7 roster as a CM.

b. Chair discussed online roster update form and ASHRAE Basecamp 3. Refer to agenda for information.

5. Old Business.

a. Chair reported that more than 20 people signed up for the ASHRAE Learning Institute "[Solar PV & Thermal Systems Analysis and Design](#)" Course and that it was very successful.

6. Subcommittee Reports

a. Handbook – Marija Todorovic

- 2020 ASHRAE Handbook-HVAC Systems and Equipment, Chapter 37-Solar Energy Equipment (Costa Kapsis to lead the review process as well as compiling all inputs from TC6.7 members).
 - Delayed due to the amount of feedback
 - Costa hopes to extend the deadline so we have a month to review the chapter
 - Costa has contacted ASHRAE to see if we can get another extension
 - Costa will add electrical storage if we have time, basic understanding for mechanical engineers

b. Program - Costa Kapsis

- Seminar 59 - Energy Systems Integration and Smart Grid-Ready Buildings: All You Need to Know to Be a Good Grid Citizen, chaired by Janice Means, Wednesday, June 26 (8:00 am – 9:30 am); KCCC, Room 2105, (1st Floor).
- Orlando program ideas
 - BIPV
 - Wind 101 (small wind for building)
 - Solar cooling (Khalid and Costas). Add a presentation about “solar cooling” that does not work – commercials/advertisements. Case study would be beneficial.
 - Batteries/storage for PV (possibly inc. thermal storage) (Svein)
 - Combined these to “Urgent Issues in Solar energy systems” if we cannot find enough speakers
 - Costa will circulate this info to the member this week
- Future:
 - Geothermal systems, high temperature (Iceland)
 - Thermal storage and Stratification. Controls and efficiency of system.

c. Research - James Leidel

- RTAR - Solar PV Design Guide for the Building Professional: Including HVAC and Building Interactions.
 - Omar said it is not on the agenda for the meeting tomorrow. He has the latest RTAR. We can submit the RTAR later and it will be reviewed in 4 months. If approved, it could be bid out in spring 2020.

d. Standards - Mike Case- Unable to attend/No Report

e. Website - Svein Morner

- Technical FAQ page
 - Existing question – has been there for a long time (>20 years) on the ASHRAE web page (not the TC web page). We can provide input to update this solar FAQ if we would like.
- Material for TC6.7 website
 - E-mail and Svein will post on our TC web page after Khalid approves. If he doesn't get them they will not be posted (obviously).
- Links
 - Quite a few new links have been added to our TC web page.

7. New Business

a. Combining with other TCs

- Combine with TC2.8? Good and bad. Would be beneficial to get more connected to sustainability. Drawback might be that TC is less focused on renewable energy. Subcommittee of 2.8 is an option.

- The initial idea was from ASHRAE central was to combine quickly. Now it has been slowed down and it is more of a bottom up approach.
- b. Remote participation of main committee meeting– should use and ASHRAE has the tool.
- c. Have subcommittee meeting ahead of time to reduce length of conference attendance.
- d. YEA
- e. ASHRAE special publication asked us what we want to do with two publications. Khalid will review and get back to them.
 - District/Central Solar Hot Water Systems Design Guide (2013)
 - Operation and Maintenance for Active Solar System (1990)
- f. Wood is also renewable – include this for renewable energy presentations; John Karakash is interested in cooperating with one of the presentations. Combined heat and power for wood pellets/chips. Size: 180 kW – 360 kW for heat
- g. Geothermal heat (not ground source) is a part of the geothermal heat pump chapter. Should this be moved to a different chapter or be a separate chapter? Why is it part of ground source heat pump chapter?

9. Adjourn. Chair adjourned at 3:25 pm.

Respectfully submitted,
Mike Case, TC 6.7 Secretary

[Roster as of June 1, 2019](#)

Chair: Khalid Nagidi (**VM**) – Term Ends: 06-30-2020

Vice Chair/Webmaster: Svein Morner (**VM**) – Term Ends: 06-30-2021

Secretary/Standards Subcommittee Chair: Michael Case (**VM**) – Term Ends: 06-30-2021

Handbook Subcommittee Chair: Marija Todorovic (**VM**) – Term Ends: 06-30-2021

Program Subcommittee Chair: Konstantinos Kapsis (**VM**) – Term Ends: 06-30-2022

Research Subcommittee Chair: James Leidel (**NVM**)

Other Voting Member (VM): Timothy Merrigan – Term Ends: 06-30-2020

Other Voting Member (VM): Cary Smith – Term Ends: 06-30-2020

Members Non-Quorum: None

Changes (As of June 1, 2019):

New provisional CM: Chitra Nambiar; Mr. Steve Rudy; Mr. Fatih Sorgulu; Dr. Andrew I Lowenstein; Ms. Kimberly Mitchell