



**180 Technology Parkway NW, Peachtree Corners, GA 30092**

**404-636-8400**

TC 6.7, 10 February, 2025

Solar and other renewable energies

2:30 PM to 4:30PM EST, Orlando FL, USA, Hybrid meeting, Hilton Orlando Lake Sheen

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| MEMBERS PRESENT   | YEAR APPTD | MEMBERS ABSENT                               | YEAR APPTD     | EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE |
|---|------------|--|----------------|--|
| Véronique Delisle (VM), Chair   | 2024       | Ahmed Elatar (CM),<br>Vice-chair             | 2024           | Doug Reindl (Guest)                          |
| Costas Balaras (VM)   | 2022       | Marija Todorovic (CM),<br>Standards SC chair | 2024           | Geoffrey Sanderson (Guest)                   |
| Khalid Nagidi (VM)  | 2024       |  |                | David Bowman (Guest)                         |
| Tim Merrigan (VM)   | 2021       |  |                | Paula Hernandez (Guest)                      |
| Anna-Maria Sigounis (VM)  | 2024       |  |                | Michael Vogel (Guest)                        |
| Stranos Rounis (VM), Secretary  | 2024       |  |                |  |
| Costa Kapsis (CM), Research SC<br>Chair                               | 2024       |  |                |  |
| Svein Morner (CM), Webmaster  | 2023       |  |                |  |
| Mehrad Poursadeh (CM)   |            |  |                |  |
| Jimmie Smith (PCM)  | 2025       |  |                |  |
| Ryan Danks (PCM)  | 2024       |  |                |  |
| Stephen Duba (PCM)  | 2024       |  |                |  |
| Erin Gaucher-Loksts (PCM)   | 2023       |  |                |  |
| Caroline Hachem-Vermette (PCM)  | 2024       |  |                |  |
| Andrew Shore (PCM)  | 2023       |  |                |  |
| Zelalem Abebe (PCM)   | 2024       |  |                |  |
| Kelsi Zhang (PCM)   | 2024       |  |                |  |
| <b>DISTRIBUTION: All Members of TC/TG/MTG/TRG plus the following:</b> |            |  |                |  |
|   |            |  | SHx@ashrae.net |  |
|   |            |  |                |  |

|                   |  |
|-------------------|--|
| Steve Hammerling, |  |
|-------------------|--|

**List of Attendees**

| <b>First Name</b> | <b>Surname</b>  | <b>Initials</b> |
|-------------------|-----------------|-----------------|
| Véronique         | Delisle         | VD              |
| Jimmie            | Smith           | JS              |
| Ryan              | Danks           | RD              |
| Doug              | Reidell         | DR              |
| Costas            | Balaras         | CB              |
| Costa             | Kapsis          | CK              |
| Khalid            | Nagidi          | KN              |
| Tim               | Merrigan        | TM              |
| Geoffrey          | Sanderson       | GS              |
| Stephen           | Duba            | SD              |
| David             | Bowman          | DB              |
| Mehrdad           | Poursadeh       | MP              |
| Svein             | Morner          | SM              |
| Anna-Maria        | Sigounis        | AMS             |
| Paula             | Hernandez       | PH              |
| Erin              | Gaucher-Loksts  | EGL             |
| Caroline          | Hachem-Vermette | CHV             |
| Stratos           | Rounis          | SR              |
| Andrew            | Shore           | AS              |
| Michael           | Vogel           | MV              |

**1. Welcome (V. Delisle)**

Meeting was called to order at 14.30 EST by VD (chair)

**2. Review Scope (All)**

VD presented the scope of TC 6.7

**3. ASHRAE Value Statement (V. Delisle)**

VD presented the ASHRAE Value Statement.

**4. Roll Call and Introductions (All)**

- Roundtable of introductions (Name, affiliation, membership status)

- Meeting minutes: Stratos Rounis (Secretary, voting)
- Determination of quorum based on voting members (quorum is the larger of 4 or exceeds ½ of the total number voting members, both present and absent)

|                                     |                      |            |                                     |                     |            |
|-------------------------------------|----------------------|------------|-------------------------------------|---------------------|------------|
| <input checked="" type="checkbox"/> | Véronique Delisle    | (June '26) | <input checked="" type="checkbox"/> | Khalid Nagidi       | (June '28) |
| <input checked="" type="checkbox"/> | Stratos Rounis       | (June '28) | <input checked="" type="checkbox"/> | Anna-Maria Sigounis | (June '28) |
| <input checked="" type="checkbox"/> | Constantinos Balaras | (June '26) |                                     |                     |            |
| <input checked="" type="checkbox"/> | Tim Merrigan         | (June '25) |                                     |                     |            |

All voting members present, quorum reached.

#### 5. **Vote on approval of the meeting agenda** (V. Delisle)

There were no comments on the agenda

The motion to approve the agenda was moved by CB and seconded by TM

#### 6. **Vote on approval of last meeting's minutes**

[TC 6.7 meeting minutes](#), ASHRAE Annual Conference 2024, Indianapolis

There were no comments on the last meeting's minutes.

The motion to approve the minutes was moved by CB and seconded by KN.

S. Rounis, C. Balaras, T. Merrigan, K. Nagidi and A.-M. Sigounis all voted to approve the minutes.

#### 7. **Chair's report** (V. Delisle)

VD informed about the ASHRAE policy on AI. All AI input on ASHRAE publications / revisions is prohibited (even for comparing versions).

VD shared some updates for the chair breakfast:

- The Conferences and Expositions Committee has a standing request for future society meeting program track suggestions.
- The Professional Development Committee (PDC) is seeking ideas for new ASHRAE Learning Institute (ALI) courses.
- The ASHRAE Certification Committee is also seeking ideas from TCs for possible professional certification programs.
- The TAC is working on the strategic plan initiative, expected to kick off July 2nd 2025.
- Half of the submitted proposed seminars were accepted

**Action item:** VD to upload presentation from chair breakfast on Basecamp

CB provided an update on the Center of Excellence for Building Decarbonization. It has been approved by the board and will include 8 new projects (1.4 – 1.5M). It will have a

new format and will not follow the traditional ASHRAE path. CB highlighted that they will need expertise and support and urged people interested to reach out (visit CEBD website for further information). TCs will be informed. Ideas on what the market needs could be sent to CB and he will forward them to CEBD. CK suggested inclusion of material passports, LCA. CB replied that the idea of whole life analysis is very strong with these efforts

DR informed that technical papers would be going away. He urged to look into the strategic plan for 25-28 and see how TC 6.7 activities align with it.

## 8. Liaison reports

- Handbook (Paula Hernández)

The handbook liaison Paula Hernandez asked if there were going to be any changes in Chapter 36 of HVAC Applications. VD replied that several changes would be made.

**Action item:** VD will send reviewer names to PH

## 9. Membership/Roster

VD informed that Mehrdad Poursadeh would be the new Program SC chair starting July 2025. CK and MP will work together on the program submission for the summer 2025 conference to ensure transition.

**Action item:** CK to involve MP in the program submission for the summer 2025 conference

VD mentioned that the Vice Chair position needed to be filled. CB offered to be Vice-Chair and his offer was accepted.

Tim Merrigan will be rolling out as a voting member in June. Svein Morner will replace TM as a voting member as of July 2025.

## 10. Handbook Subcommittee meeting report (V. Delisle)

VD provided an update on the timeline for HVAC Applications and Systems and Equipment (Applications 2027 and System & equipment 2028) with this [presentation](#).

VD provided an update on the revision process. Applications is the main priority with 14 months remaining until the submission. The deadline for the Round 2 of revision is April 30, 2025.

There was a discussion about the incorporation of new figures. CK mentioned that a copyright process will be implemented for new figures.

KZ confirmed as a reviewer for solar water heating. SR confirmed as a reviewer for PV.

**Action item:** VD will send an email to all reviewers in Round 2 to provide instructions

VD discussed with Caroline proposed new section on other renewables. CHV said it might be too complicated the way it was proposed. VD commented that the proposed table of contents was too extensive. CB proposed to take small and conservative steps when introducing new material. CK agreed with CB on adding a small reference to other technologies which when fully developed will have dedicated chapters. CH suggested only adding a paragraph summarizing available technologies for the time being. VD highlighted that it is ok as long as these technologies are relevant to use in buildings. If they are on just at the experimental stage, they are not of interest.

**Action item:** VD will reach out to CHV to work on an alternative table of contents

CK is looking for ideas for PTAR, if CHV has sufficient material on wind turbines (for buildings), this could be developed as a separate guide. VD commented that the technology is not mature enough yet.

### 11. Program Subcommittee meeting report (C. Kapsis)

CK informed of the successful seminar submitted by TC 6.7: Seminar 31 Powering a Resilient Future with Microgrids.

CK informed that the seminar submission that was declined (BIPV design) was due to a misunderstanding as it was perceived as an advertisement. CK was encouraged to resubmit which he will do for the winter 2026 conference.

**Action item:** CK to add the seminar information on BIPV design to Basecamp and resubmit for the Winter conference coordinating with Mehrad for submission for the winter 2026 conference.

A seminar could be put together for the winter 2026 conference on the impacts of renewable energy on people and mitigation strategies (glare, noise for wind turbines, etc.). SM and RD could be part of that seminar. SR also suggested to reach out to Ted Stathopoulos with regards to wind turbines (noise, comfort).

**Action item:** CK and MP to follow up with RD and SM for a potential seminar on the impacts of renewable energy on people and mitigation strategies.

CHV suggested a seminar on community energy and microgrids for the Phoenix Conference.

**Action item:** CK and MP to follow up with CHV to coordinate a session on community energy and microgrids for the Phoenix Conference.

There was discussion on solar energy storage. CK attended TC 7.5 and informed that they want to put forward seminar on resilient energy systems for the Las Vegas conference.

**Action item:** CK and MP to reach out to TC 7.5 to offer co-sponsorship of such seminar in Las Vegas.

CK thanked KN and SM for the course on solar energy.

**Action item:** VD to change the title of the course on the agenda to *Solar Energy Systems: Design, Applications, and Best Strategies*.

## 12. Membership and Outreach Subcommittee meeting report (A.-M. Sigounis)

AMS provided an update on the subcommittee with a presentation available [here](#).

There has been one webinar since the last meeting from Véronique Delisle and Erin Gaucher-Loksts entitled Transforming building envelopes into power generators. The presentation has been uploaded on YouTube.

All presentations on YouTube should be referenced on the web page.

**Action item:** VD to coordinate with SV for the YouTube references on the webpage.

Upcoming webinars would include:

- Costa Kapsis in March on BIPV design
- Caroline Hachem-Vermette in September on solar communities
- Ryan Danks in November on solar glare or other topic

**Action item:** AMS to coordinate with CK for the March webinar including setting a date; CHV for the September webinar and RD for a November webinar.

CB highlighted the importance to fix dates for upcoming webinars in order to maintain the momentum. He suggested having three webinars in the pipeline.

There was a discussion on adding electronic evaluation and feedback for requested topics, which could be used as input for new webinar ideas. The importance of monitoring the success and impact of the webinars was highlighted. CHV mentioned she had an evaluation form she was using for her courses that she could share.

**Action item:** AMS to come up with evaluation system and template email to follow up with attendees to sign up as provisional corresponding members after each webinar. Reach out to CHV for the evaluation form that she is using for her courses.

## 13. Research Subcommittee meeting report (C. Kapsis & J. Means)

CK provided an update regarding the Solar PV Design Guide. The proposal for the guidebook on photovoltaics (PV) and building integrated PV (BIPV) was initially approved as a research project (RTAR), but since the funding stream was changed in ASHRAE, the proposal needs to be restarted as a publication proposal (PTAR).

**Action item:** CK to send PTAR draft to voting members for review by March 15, 2025.

CK welcomed any ideas for research proposals.

#### 14. Standards Subcommittee Meeting report (M. Torodovic)

No report from MT (absent).

**Action item:** VD to contact MT to discuss her interest in continuing as the standard subcommittee since she has not attended the last meetings.

VD informed that the Guide for active solar heating systems is on Basecamp and needs to be reviewed. TM and CB agreed to review it.

**Action item:** VD to send the link to the guide and the guidelines for review to TM and CB.

**Action item:** TM and CB to review the guide by the end of April

#### 15. Web Page Update (S. Morner)

**Action item:** VD to inform SM on material to be added or removed from the website.

**Action item:** VD to suggest a new structure on the website and get SM and CK's opinion.

#### 16. Old Business

None

#### 17. New Business

None

#### 18. Vote on meeting adjournment

TM moved a motion to adjourn the meeting. CB seconded.

Meeting adjourned at 16.34 ET.

#### Review of action items

- VD:
  - upload presentation from chair breakfast on Basecamp
  - send handbook reviewer names to PH
  - send an email to all handbook reviewers in Round 2 to provide instructions
  - will reach out to CHV to work on an alternative table of content for section 7
  - change the title of the course of KN and SM on the agenda to Solar Energy Systems: Design, Applications, and Best Strategies
  - coordinate with SV for the YouTube references on the webpage
  - contact MT to discuss her interest in continuing as the standard subcommittee since she has not attended the last meetings
  - send the link to the guide and the guidelines for review to TM and CB
  - inform SM on material to be added or removed from the website
  - suggest a new structure on the website and get SM and CK's opinion.

- CK:
  - involve MP in the program submission for the summer 2025 conference
  - add the seminar information on BIPV design to Basecamp and resubmit for the Winter conference coordinating with Mehrad for submission for the winter 2026 conference
  - send PTAR draft to voting members for review by March 15, 2025
- CK and MP:
  - follow up with RD and SM for a potential seminar on the impacts of renewable energy on people and mitigation strategies
  - follow up with CHV to coordinate a session on community energy and microgrids for the Phoenix Conference
  - reach out to TC 7.5 to offer co-sponsorship of such seminar in Las Vegas
- AMS
  - coordinate with CK for the March webinar including setting a date; CHV for the September webinar and RD for a November webinar.
  - Come up with evaluation system and template email to follow up with attendees to sign up as provisional corresponding members after each webinar. Reach out to CHV for the evaluation form that she is using for her courses.
- TM and CB
  - review the guide by the end of April