



180 Technology Parkway NW, Peachtree Corners, GA 30092
404-636-8400

Reply To: Danny McGrail, P.E.
Danny.McGrail@hendersonengineers.com
913-742-5419

February 3, 2026
TC-9.1 Large Building Air Conditioning Systems
Program Committee Meeting

Minutes (Approved in Austin TX)

Call to Order

1) Meeting called to order at 1:02pm by Chair

2) Administrative

- a. **ASHRAE Code of Ethics** - In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity, and respect for others, and we shall avoid all real or perceived conflicts of interests.
(<https://www.ashrae.org/aboutashrae/ashrae-code-of-ethics>.)
- b. **Scope** - TC 9.1 is concerned with the general design concepts of the HVAC systems that are utilized for the conditioning of large buildings, including the integration of components into centralized and decentralized systems.

3) Attendance

- a. Voting Members
 - i. Ken Warren
 - ii. Mark Fly
 - iii. Lee Millies
 - iv. Dennis Wessel
 - v. Maddison Schultz
- b. Non-Voting
 - Suzane Sun-Yuan
 - Jerson Sanchez
 - Jesse Buckley
 - John Sustar
 - Doug Cochran
 - Danny McGrail
 - Phil Trafton
 - Charlie Henck
 - Gary Shamsioian
 - Kwang Ho Lee

4) **Quorum results 5 of 7 in attendance, quorum established.**

5) Roster

- a. Ken – Chair, Voting

- i. Research Subcommittee chair
- b. Maddison – Vice Chair, Voting
- c. Danny – Secretary, NonVoting
- d. **Sub Committee**
 - i. **Lee – Standards, Voting**
 - ii. **Jay – Handbook, Voting**
 - iii. **Dennis – Programs, Voting**
 - 1. **Project Sub-committee chair of URP**
- e. **Voting Non Subcommittee**
 - i. **Mark Fly**
 - ii. **Kelley Cramm**
- f. **Roster updates for officers today.**
 - i. **Need to update Danny to Secretary on website and Madison to Vice Chair**
- g. **Durations**
 - i. **Dennis rolling off 6/27**
 - ii. **Lee – rolling of 6/27**
 - iii. **Mark 6/29**
 - iv. **Kelley – 6/26**
 - v. **Jay – 6/26**
- h. **Suggested roling on voting**
 - i. **Phil, Suzane and Danny**
- i. **Zehui - removed from 9.1 at request.**

6) TC Subcommittee Reports:

- a. Handbook – Eldridge
- b. Research – Warren/Wessel
- c. Standards – Millies
- d. Honors and awards – Fly
- e. Website – Primeau
- f. Programs – Wessel

Sub-Committee Reports

- Handbook – Got 10 people for review of handbook chaters.
- Research – Need to review 6 chapters of book – HVAC Simplified. Researchers just started to update it. Danny suggested engage Julia Keen as she did use it to help on a coarse. Charlie volunteered to help.
- Doug reported ASHRAE is hiring AI consultant.

- Programs
 - Critical – Feb 25 critical date for proposals due.
 - Forum – Guideline 36 – Phil – Submitted for Austin.
 - Program on optimizing chiller plant sizing – Chicago.
 - Multifamily - Chicago – Phil, Suzane, Duda and TC9.12
 - 9.12 to be cosponsor.
 - Dennis to Chair
 - Solar Energy – Phil
 - AI Panel – Ken to chair or participate - Chicago
 - New Orleans
 - Building Code developed in.... Phil
 - Energy and operating cost comparison....
 - Large system multizone
 - AEDG
 - Specific applications
 - Healthcare Patient Centered Design
 - Design Recommendations for Flexible Spaces
 - Flexibility, Redundancy, and Sustainability in AHU Design
- Standards - Lee
 - Lee said no updates
- Honors - Mark
 - Doug and Ken were mentioned

7) ASHRAE Liaison Reports:

a. TAC and TC Breakfast Update (Warren)

- i. Roster updates are due Feb 3 and go into effect after March 16
- ii. Need Minimum 6 voting members
- iii. Provisional Corresponding Members might need to be changed to Corresponding members
- iv. This is a good time to email all committee members
- v. **March 1 is Austin programs deadline**
- vi. TAC asks for the Activity Form after all committee meetings. Might be automating this process in the future if funding is available. Add any ideas to the Notes section of the existing form.

- vii. Subcommittee Meetings are eliminated. Please do Virtual Meetings prior to TC meeting. Concern about new and walk-ins will not be able to attend as they may not be signed up for the conference and SC meeting may have already occurred.

b. Meeting Minute Review

- a. Dennis motioned to approve, Maddison seconded. All in favor.**

c. Liaison Reports

- a. TC 4.3 -Ventilation and Filtration
 - i. No updates
- b. TC 5.1 - Fans
 - i. No updates
- c. TC 5.7 – Evap Cooling
 - i. No updates
- d. TC 7.9 – Building Commissioning
 - i. No updates
- e. TC 9.8 – Large Building Applications
 - i. No updates
- f. TC 9.3 – Transportation Air Conditioning (Ken)
 - i. Standard 161 released next year – air quality on commercial air craft – going through review and back out.
 - ii. GPC 23 is becoming a standard. Air quality on train.
- g. TC 9.9 Mission Critical
 - i. No updates.
 - ii. 90.4 was standing room only.
 - iii. 160 people in attendance
- h. TC 9.10 Laboratory Systems (Danny)
 - i. Meets later today
- i. TC 9.12 Tall Systems (Dennis)
 - i. Ton of programs.
- j. Standard 15
 - i. No updates
- k. CEBD (Doug)
 - i. Doug working to get copy of slides.
 - ii. Decarb roadmap for 2050, data centers are priority
 - iii. Course for certified decarb professional exam. Multi day thing.
 - iv. AEE exam is right after course.
 - v. Working to get building code officials trained.
 - vi. Gamification is also a focus.
 - vii. Suggested tour/seminar of the airport with Decarb conference in Seattle.
- l. Society Planning Committee (Madison)
 - i. Take off next agenda. No updates.
- m. Website (Liz)
 - i. Ken made lots of updates on Basecamp.
 - ii. John, Suzane, Jesse all requested to be added to Basecamp.
 - iii. Next meeting in Austin on website.

8) Las Vegas Program:

Seminar: Impact of the Clark County Moratorium on Evaporative Cooling on Our
Energy and Water Shortage Future
8:00 AM, Monday, February 2, 2026

a. Dennis – chaired and gave update.

9) Old Business

a. None.

10) New Business

- a. Chair Breakfast
 - i. QR code on sheet uploaded to Basecamp – research strategy plan – 8-9 on Sunday. Can still provide comments.
 - ii. Research – need to look at next required review dates.
- b. Shared current publications needed a TC to review. None seemed to apply to 9.1
- c. TCLS Status
 - i. Guideline – 0 we are saying we aren't cognizant tc.
 - ii. Guideline 16 – Dennis to review. 9.1 is cognizant.
 - iii. Guideline 22 – 9.1 is cognizant. Hopefully Duda will review.
 - iv. Guideline 34 – should be refrigerant TC.
 - v. Std 15- TC 9.1 is support
- d. Need to set up meeting to discuss how we want to do subcommittee meetings.

11) Next Meeting

12) For Good & Well Being

13) Adjourn

1. Sub-Committee Reports (refer to minutes)

- a. Handbook (Jay)
 - i. Looking for editors for 2028 edition. Need 2 editors per chapter minimum.
 - ii. Chapter 1-5 of Systems and Equipment Handbook, Suzan Sun-Yuan, Ken Warren, Danny McGrail, Phil Trafton,
 - iii.

- iv. Refer attached schedule
 - v. There is an online portal to facilitate collaboration. Jay will give access to editors.
- b. Research (Wessel)
 - i. There is no current research.
- c. Standards (Lee)
 - i. Guideline 16 needs to be reviewed since this TC is cognizant of it.
 - 1. Motion: Reaffirm Guideline 16 2022 version. Vote: 4-0-0 CNV to approve.
- d. Programs (Dennis)
 - i. Dennis is going to resubmit on the prohibited evaporative cooling topic
 - ii. Dennis is going to resubmit on the right sizing topic
 - iii. See attached minutes
- e. Honors and Awards (Mark Fly)

January 30, 2026

TC-9.1 Las Vegas Committee Meeting

Page 7

- f. Website (Liz)
 - i. Approved 2024 Annual Conference (Indianapolis) minutes, Orlando? are on website
 - ii. Next meeting in Las Vegas is on the website