



**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. TC 1.9 DATE 2/6/2024

TC/TG/MTG/TRG TITLE Electrical Systems

DATE OF MEETING 1/23/2024 LOCATION Chicago, IL & Hybrid – Teams

MEMBERS PRESENT (VM's in bold , YEA)	YEAR APPTD	MEMBERS ABSENT (VM's in bold , YEA)	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Gerardo Alfonso	2017	<i>Beatriz Salazar</i>	2021	Jason Atkisson (Section 1)
Daryl Collerman (virtual)	2019	John Nix (MNQ)	2007	Jim Earley
Randall Higa	2016	Steven Faulkner	2006	Frank Li
Jamie Lian	2023	Zach DeLuke	2022	Fabio Oavijo
Larry Markel (virtual)	1997	Ala'a Mohammed Abu Shawish (PCM)	2023	Frank Pucciano (virtual)
Farhad Omar (PCM)	2023	Ibrahim Assi (PCM)	2022	
Tom Pollard (PCM)	2023	Stephen Duda (PCM)	2023	
Michael Poplawski (PCM)	2024	Jacob Edmondson (PCM)	2022	
Steve Rosenstock	2005	John Houdek (PCM)	2022	
Michael S. Todd	2011	<i>Abrar Hussain (PCM)</i>	2023	
		Scotty Hutto (PCM)	2022	
		<i>Angel Lopez (PCM)</i>	2023	
		<i>Kyle C Mullins (PCM)</i>	2023	
		Abiodun Olatokunbo Abiola	2021	
		Ricson Chude	2017	
		Robert Crosby	2004	
		Chad Dorgan	2000	
		Armin Hauer	2011	
		Robert Helt	1994	
		Joseph Lunsford	1995	

		Ken Luther	1990	
		Ram Narayanamurthy	2013	
		Timothy Patrick O'Leary	2022	
		Glenn Remington	2017	
		John Richardson Jr.	2007	
		<i>Pavithra Santhanam</i>	2018	
		Colleen Smith	1994	
		Leo Stambaugh	1994	
		John Stoops Sr.	2003	
		Marvin Thedford Jr.	1990	
		Gary Throckmorton	2000	
		Russ Tiffany	1998	
		Marija Todorovic	2005	
		William Warren Jr.	1983	
DISTRIBUTION: <i>All Members of TC/TG/MTG/TRG plus the following:</i>				
TAC Section Head:		SH1@ashrae.net		
All Committee Liaisons as Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)		TACchair@ashrae.net CTTC1@ashrae.net RL1@ashrae.net HBS3@ashrae.net SL1@ashrae.net		
Mike Vaughn, Manager of Research & Technical Services		MORTS@ashrae.net		

Note: These draft minutes have not been approved and are not the official, approved record until approved by the TC.

1. CALL TO ORDER

Introduction of Members and Guests

Technical Committee 1.9 was called to order at 3:35 PM (CST). Technical committee member introductions were made online. Absent members are identified on the cover sheet.

Gerardo Alfonso, Chair, reviewed the membership list and determined that a quorum was present (5 of 7 VMs). Gerardo reviewed with everyone the ASHRAE code of ethics, which is presented on the agenda.

2. APPROVAL OF MINUTES AND REVIEW OF ACTION ITEMS

Motion: Steven Rosenstock/Daryl Collerman 5-0-0-2-CV (PASS) – Steven Rosenstock made a motion to approve the December 2023 hybrid meeting minutes (Draft 1) as distributed with a second from Daryl Collerman. There was no additional discussion and the motion passed unanimously.

Report Action Items:

None.

3. TC MEMBERSHIP AND COMMITTEE APPOINTMENTS

Frank Pucciano still no longer appears on our roster, but ASHRAE is working on resolving by adding him back as a CM. Since the last interim meeting in December, there was one provisional corresponding member (PCM) added to the roster.

- Michael E Poplawski

Thank you, Michael, for attending today's meeting! Welcome to our TC!

Due to participation at past committee meetings, the following PCMs should be considered to add to our roster as CMs.

- Stephen Duda
- Scotty Hutto
- Farhad Omar

Larry stated that he will resign as VM and be replaced with Jamie Lian (both folks are from the same company). Tom Pollard also wants to roll on as VM. Michael Todd needs to roll off as VM to CM.

Committee positions for the ASHRAE 2024/2025 year will remain the same. A summary of the positions for the upcoming year are shown below.

Chair – Gerardo Alfonso
Vice Chair – Daryl Collerman
Secretary – Michael Todd
Handbook Subcommittee – Beatriz Salazar
Program Subcommittee – John Nix & Frank Pucciano
Research Subcommittee – Larry Markel
Standards Subcommittee – Steven Rosenstock
Webmaster – Steven Faulkner
Member Non-Quorum – John Nix

4. CHAIR REPORTS: Gerardo Alfonso

- Global Technical Interactions Committee (GTIC) started 7/1/23 with a focus on globalization. Presentation from the breakfast is on Basecamp and in the Appendix.
- Taskforce for decarbonization will likely dissolve into a design center soon.
- Program statistics (roughly 50% approval) as shown in the breakfast presentation.
- Roster update delayed due to another tool update and will be due shortly after the winter meeting.
- There is a desire to thin out the handbook with proper referencing (especially using our design guides and standards). Gerardo has posted two forms on Basecamp for folks to help sign up for reviewing. Handbook (Ch 57) update due in 2025 for 2026 publication.

Up and coming meetings: Indianapolis, IN – June 22 to 26, 2024

5. SUBCOMMITTEE REPORTS

a. Standards: Steven Rosenstock

Decarbonization is ASHRAE's focus!

Consensus was defined as 2/3 and could be changing to a simple majority with discussions with ANSI. Abstentions and absences don't count. Larry rebutted with majority of members needed to pass. More discussion will occur.

90.1 addendum L - operational carbon metrics, public review soon, potential TPS to include "carbon" and add electrical vehicle charging.

90.2 updated TPS to include carbon and adding EV language. PPR coming soon.

90.4 looking at adding carbon to their TPS.

100 just published (how to rate existing buildings). Added carbon as well.

189.1 working on new version for 2026.

227 (passive buildings) is out for PPR and reviewing comments.

228 is now a standing committee.

240P is going out for PPR in February (lifecycle carbon).

ICC did a lot of controversial things and there are 9 appeals.

DOE asking for comments for zero emission buildings definition.

Lots of controversy, 25 states have passed laws banning zero gas standards.

And even more...

b. Research: Larry Markel

RTAR #1960: Operating cost, energy, and carbon saving benefits of pre-cooling in district energy systems

Co-sponsor with TC 6.2.

RAC gave feedback to obtain co-funding. Larry will volunteer to help turn the RTAR into a work statement.

Frank can reach out to AFKEG (air force buildings). RTAR will be posted on Basecamp when found (also in Appendix).

c. Program: John Nix & Frank Pucciano

Indianapolis June 22-26, 2024. Dates:

- Feb 26, 2024, Seminar, Workshop, Panel, Debate, and Forum Proposals Due

"Will heat pumps blow up the grid?" - Randall Higa has presented in the past on this topic before. Randall to potentially chair this forum. Larry may be able to get someone from Oak Ridge to help present on electrification and decarbonization.

d. Handbook: Beatriz Salazar

Revision cycle restarts today! Draft completion target is April 2026 with TC approval vote in June 2026 for publication in 2027.

e. Membership: Larry Markel

Total TC membership stands at 44 at this meeting. 7 VM, 1 MNQ, 12 PCM, 24 CM, 6 YEA.

Larry noted that expanding the TC's scope may help bring in more members.

f. **Professional Development Committee (PDC Coordinator): John Nix**

Gerardo stated PDC is looking for training and education opportunities. Call to develop short videos with technical content. Gerardo asking to help evaluate our existing course and/or to develop a new course.

g. **WEBSITE: Steven Faulkner**

Website is up to date.

6. LIAISON REPORTS

Section Head: Jason Atkisson - New roster update tool, due sometime in February. Rosters should be balanced. ASHRAE strategic plan expires in 2025. Looking to generate a new plan and asking for everyone's feedback/comments (open until January 31). It is important for everyone with leadership positions to attend the correct breakfast for the latest information as tools are changing fast.

RAC: None.

TAC: None.

Handbook: None.

7. OLD BUSINESS

Committee Scope

This technical committee is concerned with electrical systems insofar as they interact with HVAC&R.

Website shows:

Agenda shows: "TC 1.9 is concerned with electrical systems insofar as they interact with the built environment."

Our TC voted in December 2023 to approve the expanded scope and was submitted to TAC for approval. TAC has provided the following feedback at this meeting: TAC believes that "the built environment" scope is too broad.

Larry proposed another scope, "TC 1.9 is concerned with electrical systems insofar as they interact with the built environment with a focus on HVAC&R."

Steven pushed back and explained that our proposed new scope better aligns with the ever-increasing scope of ASHRAE standards, and for example, refers to sites, not just buildings. Our TC was responding to ASHRAE pushing us to expand our TC's scope.

Jason will take our feedback to tomorrow's TAC meeting but may take some additional time for discussion (TAC meets every month).

Gerardo not sure if anyone is available to review climate change handbook.

8. NEW BUSINESS

Farhad made a comment that there seems to be a disconnect with ASHRAE's focus on demand (kW), but utilities are concerned with more than that, such as reactive power, harmonics, and frequency. This is an example that people seem to be working in silos. Tom stated this might be a good thing to add to the handbook to educate folks.

9. ANNOUNCEMENT OF NEXT MEETING

Chairman Gerardo announced that he will send out Doodle polls for interim meetings in March and May. The next Annual meeting will be held in Indianapolis, IN in June 2024, at our usual time on Tuesday.

Gerardo thanked everyone for attending the meeting.

10. ADJOURNMENT

The meeting was adjourned at 5:51 PM (CDT) with a motion by Steve and a second by Larry. **The motion passed 5-0-0-2-CV.**

Respectfully Submitted,

Michael S. Todd
Secretary

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Appendix I – TC Chair’s breakfast slides



TC Chairs Breakfast
Agenda_January 2024



TAC training - Chair
Breakfast Winter 2024



FG Breakfast
Reminder Handout W



TC Chairs Handout -
Program Committee -



CEC TC Breakfast
Training 2024 WC.pdf

Appendix II – RTAR 1960



1960-RTAR.pdf

Appendix III – Handbook



Handbook Winter
2024.pdf