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404-636-8400

**DRAFT 2**

## 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 \_\_\_\_\_ 2/7/2023 \_\_\_\_\_

TC/TG/MTG/TRG TITLE \_\_\_\_\_ Electrical Systems \_\_\_\_\_

DATE OF MEETING \_\_\_\_\_ 2/7/2023 \_\_\_\_\_ LOCATION \_\_\_\_\_ Atlanta, GA / Hybrid – Teams \_\_\_\_\_

MEMBERS PRESENT (VM's in <b>bold</b> )	YEAR APPTD	MEMBERS ABSENT (VM's in <b>bold</b> )	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Gerardo Alfonso	2017	<b>Robert Helt (MNQ)</b>	1994	Moe Alahmud (Guest)
<b>Daryl Collerman</b> (Teams)	2019	Abiodun Abiola (PCM)	2021	Juan Alfonso (Guest)
<b>Zach DeLuke</b> (Teams)	2022	Ibrahim Assi (PCM)	2022	Jojo DG. Castro (Guest)
Steven Faulkner (Teams)	2006	Jacob Edmondson (PCM)	2022	Jim Earley (Guest)
<b>Randall Higa</b>	2016	John Houdek (PCM)	2022	Cesar Wis Lim (Guest)
Jamie Lian (PCM Teams)	2023	Scotty Hutto (PCM)	2022	Andrea Markel (Guest)
Larry Markel	1997	Timothy O'Leary (PCM)	2022	Sharon Mitzel (Guest)
<b>Frank Pucciano</b> (Teams)	2001	Ricson Chude	2017	John Peterson (Guest)
<b>Steven Rosenstock</b>	2005	Robert Crosby	2004	Daniel Villa (Guest)
Beatriz Salazar (PCM Teams)	2021	Chad Dorgan	2000	Corey Metzger (Section Head)
<b>Michael S. Todd</b>	2011	Charles Frazell	1997	
		Armin Hauer	2011	
		Joseph Lunsford	1995	
		Ken Luther	1990	
		Ram Narayanamurthy	2013	
		John Nix	2007	
		Glenn Remington	2017	
		John Richardson Jr.	2007	
		Pavithra Santhanam	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	
<b>DISTRIBUTION: <i>All Members of TC/TG/MTG/TRG plus the following:</i></b>				
TAC Section Head:		<a href="mailto:SH1@ashrae.net">SH1@ashrae.net</a>		
All Committee Liaisons as Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)		<a href="mailto:TACchair@ashrae.net">TACchair@ashrae.net</a> <a href="mailto:CTTC1@ashrae.net">CTTC1@ashrae.net</a> <a href="mailto:RL1@ashrae.net">RL1@ashrae.net</a> <a href="mailto:HBS3@ashrae.net">HBS3@ashrae.net</a> <a href="mailto:SL1@ashrae.net">SL1@ashrae.net</a>		
Mike Vaughn, Manager of Research & Technical Services		MORTS@ashrae.net		

Note: These draft minutes have not been approved and 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 3:44 PM (EDT). Technical committee member introductions were made both in person and online. Absent members are identified on the cover sheet.

Frank Pucciano, Chair, reviewed the membership list and determined that a quorum was present (6 of 6 VMs). Frank 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/Geraldo Alfonso 6-0-0-0-CV** – Steven Rosenstock made a motion to approve the June 2022 hybrid meeting minutes as distributed with a second from Geraldo Alfonso. There was no additional discussion and the motion passed unanimously.

### Report Action Items:

None.

## 3. TC MEMBERSHIP AND COMMITTEE APPOINTMENTS

Since the 2022 annual meeting, there were five provisional corresponding members (PCM) added to the roster.

- Ibrahim Assi
- Jacob Edmondson
- John Houdek
- Scotty Hutto
- Jianming Lian

The committee is presently at the minimum threshold of VMs (six). Frank went over the rollover roster for FY2023. After the summer meeting, Frank and Robert Helt (MNQ) will roll off as VM. Geraldo will roll on as VM since he will become chair. It would be good to add John Nix as a MNQ. Beatriz Salazar needs to be added as a CM.

Committee positions for the ASHRAE 2023/2024 year were discussed. A summary of the positions for the upcoming year are shown below.

Chair – Geraldo 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: Frank Pucciano**

See appendix I for notes from TC chair's breakfast meeting.

**Up and coming meetings:** Tampa, FL – June 24 to 28, 2023

#### **5. SUBCOMMITTEE REPORTS**

##### **a. Standards: Steven Rosenstock**

###### ASHRAE

90.1 – Published the (latest) 2022 version in January 2023, with significant changes for energy credits and prescriptive requirements for on-site renewable energy systems. Under the proposed work plan, the standard will require zero-net emissions by 2031.

90.2 – Residential “leadership” standard. Going to incorporate GHG emissions requirements into the next version of the standard.

90.4 – Data centers. Going to incorporate emissions and ESG items in the next version.

100 – Existing buildings. Going to incorporate emissions targets in the next version of the standard.

189.1 – Green Commercial Buildings. Going to publish the next version in the fall of 2023 and includes changes to the EV charging language and updates to source energy and emissions estimates. It also includes language for long-run marginal emissions rates for electricity.

221 – Energy audits. Going to incorporate emissions into the standard.

228 – Measuring net zero energy. It is about to be published for the first time, and they have included some emissions estimates that are different from Standard 100 and 189.1 (and 90.2).

240P – Building life cycle emissions standard. It started in January, and they want to publish a draft by April of 2023 to go out for public review.

###### IECC

-IECC is making big changes to its commercial and residential energy codes through their revised process which is more consensus based. It is likely that the final version of the 2024 IECC will be published by fall of 2023 (and subject to appeals). Key changes include requirements for EV charging and on-site renewable energy systems and “electric ready” infrastructure when gas appliances are installed.

## Federal Government

-CEQ released a building performance standard for all existing federal government buildings. It requires agencies to cut energy use and electrify equipment and appliances to achieve zero scope 1 emissions in 30 percent of their buildings by square footage by 2030.

-DOE released a proposed rule to require new and renovated federal buildings to reduce their fossil fuel energy usage by 90% (compared to 2003) by 2025 and by 100% by 2030. Comments are due to DOE by February 202~~31~~.

-DOE is accelerating its publication of new appliance energy efficiency standards. Recent rules require only condensing gas furnaces (residential) and boilers (commercial), along with requiring very stringent standards for general service light bulbs and distribution transformers. DOE also issued a new proposed rule on gas and electric stoves, which was noticed due to a CPSC effort to look at the safety of residential gas stoves (one commissioner said that banning gas stoves due to safety concerns was a possibility, which created a political backlash).

b. **Research: Larry Markel**

See appendix II for notes from Research chair's breakfast meeting that Larry attended. He feels our committee is in good shape to be a leader by focusing on building resilience and decarbonization research.

c. **Program: John Nix & Frank Pucciano**

Frank announced that it is too late to formulate a program for Tampa.

d. **Handbook: Geraldo Alfonso**

The handbook subcommittee chair is currently open since Geraldo will be rolling on as chair in July. Frank stated that with ASHRAE's focus on decarbonization coming, this is an exciting time to make significant contributions to our handbook chapter. Beatriz Salazar volunteered to roll on as handbook subcommittee chair.

e. **Membership: Larry Markel**

Total TC membership stands at 38 at this meeting. 6 VM, 1 MNQ, 8 PCM, 23 CM, 3 YEA.

Larry attended a micro-grid program and invited lots of people to come to our TC today. 14 folks were present in the room today for this TC meeting. Thanks Larry!

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

None.

**6. WEBSITE: Steven Faulkner**

Website is up to date.

**7. LIAISON REPORTS**

Section Head: Corey Metzger – TC activity form is due tonight. Roster update link was received by Frank. Discussion at TAC with task force on decarbonization as there will be lots of impact to the grid and electrical systems. Research funding is back to pre-pandemic levels. Tampa program submissions are due 2/27. Geraldo brought up a question about committee balancing. Corey stated this will hopefully get better as the electronic roster improves over time.

RAC: None.

TAC:

Handbook: None.

**8. OLD BUSINESS**

There was some discussion about potentially changing our meeting time; however, based on the Doodle poll results, it is best to keep our TC meeting at the same time on Tuesdays from 3:30 – 5:30pm.

**9. NEW BUSINESS**

Frank suggested to have an interim meeting in April to discuss potential research and programs for Chicago.

See appendix III for a PPIB on Building Electrification from Daryl Collerman.

**10. ANNOUNCEMENT OF NEXT MEETING**

Chairman Frank announced that the next meeting will be held in Tampa, FL in June 2023, hopefully at our usual time on Tuesday.

Frank thanked everyone for attending the meeting.

**11. ADJOURNMENT**

The meeting was adjourned at 5:05 PM (EDT) with a motion by Daryl and a second by Randall. **The motion passed 6-0-0-0-CV.**

Respectfully Submitted,

Michael S. Todd  
Secretary

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### Appendix I – TC Chair’s breakfast slides



TC Chairs Breakfast  
Agenda\_Feb 2023.pdf



TC Chairs breakfast  
Feb 2023\_Final.pdf



FG Breakfast  
Reminder Handout W

### Appendix II – Research breakfast slides



Research  
Administration Comm



Murphy - Writing  
RTARs.pptx



Research Submission  
Deadlines.docx

### Appendix III – PPIB on Building Electrification



approved-ppib---buil  
ding-electrification.pdf