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**DRAFT 1**

**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 2/14/2020

TC/TG/MTG/TRG TITLE Electrical Systems

DATE OF MEETING 2/4/2020 LOCATION Orlando, FL

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
<b>Gerardo Alfonso</b>	2017	<b>Larry Markel</b>	1997	
<b>Steven Faulkner</b>	2006	<b>Ram Narayanamurthy</b>	2013	
Charles Foster	2001	Daryl Collerman	2019	
<b>Armin Hauer</b>	2011	Mohammad Daoud	2019	
<b>Robert Helt (MNQ)</b>	1994	Joao Manoel Delcidio	2020	
<b>John Nix (MNQ)</b>	2007	Olman Joaquin Ledezma Unzueta	2020	
<b>Frank Pucciano</b>	2001	Kyle Mullins	2019	
<b>Steven Rosenstock</b>	2005	Shadi A. A. Nejem	2019	
Michael S. Todd	2011	Florin Daniel Popa	2020	
		Pavithra Santhanam	2018	
		Ricson Chude	2017	
		Robert Crosby	2004	
		Chad Dorgan	2000	
		Charles Frazell	1997	
		Randall Higa	2016	
		Joseph Lunsford	1995	
		Ken Luther	1990	
		Glenn Remington	2017	
		John Richardson	2007	

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

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 3:38 PM. Technical Committee Member introductions were made. Absent Members are identified on the cover sheet.

Steven Faulkner, Chair, reviewed the membership list and determined that a quorum was present.

## 2. APPROVAL OF MINUTES AND REVIEW OF ACTION ITEMS

**Motion: John Nix/Armin Hauer 6-0-0-3-CV** John Nix made a motion to approve the June 2019 Kansas City minutes with a second from Armin Hauer. There was no additional discussion and the motion passed unanimously.

### Report Action Items:

None.

## 3. TC MEMBERSHIP AND COMMITTEE APPOINTMENTS

Committee positions for the ASHRAE 2020/2021 year were discussed. A summary of the positions for the upcoming year are shown below.

Chair – Steven Faulkner  
Vice Chair – Frank Pucciano  
Secretary – Michael Todd  
Handbook Subcommittee – Armin Hauer  
Program Subcommittee – John Nix & Frank Pucciano  
Research Subcommittee – Larry Markel  
Standards Subcommittee – Steven Rosenstock & Geraldo Alfonso  
Webmaster – Steven Faulkner  
Member Non Quorum – Robert Helt  
Member Non Quorum – John Nix

The following members will be rolling off as voting members:

Armin Hauer

The following members will roll on as voting members:

Michael Todd

The online roster update was completed during the meeting and submitted.

Since the Kansas City meeting, there were four provisional corresponding members added to the roster.

- Joao Manoel Delcidio
- Olman Joaquin Ledezma Unzueta
- Kyle Mullins
- Florin Daniel Popa

#### 4. CHAIR REPORTS: Steven Faulkner

Steven reported as follows:

- a. Steven attended the TC chair breakfast and program subcommittee chair training.
- b. Highlights were:
  - i. Please ensure your TC is following the latest MOP, has a succession plan, and is maintaining the minimum number voting members (6).
  - ii. TC re-org committee is now using performance indicators (updating handbook and submitting programs) to determine “active” status. Those not “active” will be merged with another TC.
  - iii. Austin program submittals are due 2/10/2020.

**Up and coming meetings:** Austin, TX – June 27 to July 1, 2020

#### 5. SUBCOMMITTEE REPORTS

a. **Standards: Steven Rosenstock**

90.1 was published in late October, progress indicator showed 4.7% savings since 2016 edition, 37.2% energy cost savings between 2004 to 2019, goal was 40% – 45%. By 2022, want 45 – 50%. Flat rate vs. time of use can be used for analysis. Mandate for on-site renewables possibly coming in 2022 version.

90.2 wants to expand scope.

90.4 publishing more addenda this year.

100 looking at RTAR to update tables.

105 measuring energy performance, going through PPR comments.

189.1 will be published later this year.

227 is just starting.

ICC 2021 was lagging ASHRAE, but now more stringent than ASHRAE 90.1.

b. **Research: Larry Markel**

None.

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

Targeting Chicago (also try quick for Austin):

Impacts of fossil fuel bans on electric systems and/or in buildings (maybe two separate programs)

Forum for Austin, workshop for Chicago

Potential co-sponsors: 6.10 & 7.6

Steven Rosenstock to be chair and find speakers

Audience to be design engineers

Do fossil fuel bans mean zero buildings?

d. **Handbook: Armin Hauer**

Chapter 56, next update to be published in 2023, so we need to start now. Plan is to submit first revised version by FY2021 and finalize by FY2022. Chapter is posted in Basecamp and Armin is not aware of any errors.

What about addressing SCCR as it is currently not discussed at all (may coordinate with TC 1.11 on this topic)? What about SMART grids? Revise/update sections about utility rates?

Please start sending Armin updates/changes with tracked changes. Armin to send out a reminder email.

e. **Membership: Larry Markel**

Total TC membership stands at 36 at this meeting. 7 VM, 2 MNQ, 8 PCM, 19 CM

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

ASHRAE starting to review all courses for profitability. Ideal model is a week of training with a test/certification at the end of the week.

PDC new name is Training and Education Committee (TEC), margin target of 8%, takes effect July 1, 2020. Publication's margin is 30%. eLearning is now being included. Hour seminars are being pushed (3 times a year), called Tech Talk.

6. **WEBSITE: Steven Faulkner**

Website is up to date.

## 7. LIAISON REPORTS

Section Head: None.

RAC: None.

TAC: None.

Handbook (Mathur Gursaran): Armin brought up the fact that public comments are not making it back to the authors (meaning the TC). Mathur will look into this issue.

## 8. OLD BUSINESS

None.

## 9. NEW BUSINESS

Discussion about possibility of TC merging, possibly with 1.11 (Electric Motors and Motor Controls). Idea arose about the possibility of a joint meeting in Austin (i.e. we come early, they stay late, see if we like each other). Armin to explore and reach out to TC 1.11.

## 10. ANNOUNCEMENT OF NEXT MEETING

Chairman Steven Faulkner announced that the next meeting would be held in Austin, Texas in June 2020 at the same time on Tuesday.

Steven thanked everyone for attending the meeting.

## 11. ADJOURNMENT

**Motion: Robert Helt/John Nix 7-0-0-2-CV** Robert Helt made a motion to adjourn with a second from John Nix at 5:43 PM. There was no additional discussion and the motion passed unanimously.

Respectfully Submitted,

Michael S. Todd  
Secretary

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Appendix I – Section 1 Breakfast Presentation & Program Subcommittee Chair Training



2020\_ASHRAE TAC  
TC breakfast Ver 2\_a



TC Pgm Subcommittee  
eChair Training - Orlando