THESE DRAFT MINUTES HAVE NOT BEEN APPROVED AND ARE NOT THE OFFICIAL, APPROVED RECORD UNTIL APPROVED BY THIS COMMITTEE.

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.

1791 Tullie Circle, N.E./Atlanta, GA 30329 USA

TC/TG/TRG MINUTES COVER SHEET

(Minutes of TC/TG/TRG Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/TRG No.: \_TC 1.09\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE: June 19, 2017

TC/TG/TRG TITLE: \_Electrical Systems\_\_\_\_\_\_\_\_\_

DATE OF MEETING: \_Tuesday, January 31, 2017 LOCATION: \_ Las Vegas, Nevada \_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| MEMBERS PRESENT | YEAR  APPT’D | MEMBERS ABSENT | YEAR  APPT’D | EX-OFFICIO MEMBERS AND  ADDITIONAL ATTENDANCE |
| **Voting Members**  Steven Faulkner  Charles Foster  Armin Hauer  Larry Markel  John Nix  Michael Todd  **Corresponding Members**  Steve Rosenstock |  | **Voting Members**  Robert Crosby (NQ)  Kenneth Luther (NQ)  Robert Helt  **International Members**  **Corresponding Members**  Frank Puciano  Subhash Brahmavar  Curtis Crane  Dr Alexander Domijan  Dr Chad Dorgan  Fred Doughtery  Carlos Estrada  Norman Fowler  Wayne Frazell  Joe Hague  Rodney Lewis  Joseph Lunsford  Janet Lynch  Dr Ralph Muehleisen  T. Nagiah  Ram Narayannamurthy  Rex Noble  Janice Peterson  Thomas Piwinski  John Richardson  Richard Rundus  Colleen Smith  Leo Stambaugh  Dr John Stoops  Marvin Thedford  Gary Throckmorton  Russell Tiffany  Dr Marija S Todorovic  William Warren Jr. |  | **Section Head**  Amir Jokar  **RAC**  **Visitors** |

**DISTRIBUTION;**

|  |  |
| --- | --- |
| ALL MEMBERS OF TC/TG/TRG (and meeting guests)  TAC Section Head: Amir Jokar  Chapter Tech Transfer: Alexander Weiss  Research Liaison: Art Giesler  ALI/PDC: Darin Nutter  HB Applications: Francis Mills | ASHRAE Special Publications: Daniel Pettway  TAC Chairman: Eric Adams  Standards Liaison: Arsen Melikov  Manager of Standards: Stephanie Reiniche  Staff Liaison/Resch./Tech Svcs: Michael Vaughn |

**ASHRAE TC/TG/TRG ACTIVITIES SHEET**

MEETING DATE: June 26, 2016 \_

TC/TG/TRG NO.: TC 1.09\_ TC/TG/TRG TITLE: Electrical Systems\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CHAIR: Larry Markel VICE CHAIR: Michael Todd SECRETARY: Charles Foster

**TC/TG/TRG MEETING SCHEDULE**

|  |  |  |  |
| --- | --- | --- | --- |
| Location – Past 12 Months | Date | Location – Planned Next 12 Months | Date |
| **St. Louis, Missouri** | **6/26/16** | **Long Beach, California** | **6/27/17** |
| **Las Vegas, Nevada** | **1/31/17** | **Chicago, Illinois** | **1/23/18** |

**TC/TG/TRG SUBCOMMITTEES**

|  |  |
| --- | --- |
| Function | Chair |
| Standards  Research  Program  Handbook  Webmaster | Ken Luther  Larry Markel  John Nix  Armin Hauer  Steven Faulkner |

**RESEARCH PROJECTS – CURRENT**

|  |  |  |  |
| --- | --- | --- | --- |
| Project Title | Contractor | Monitoring Committee | Report Made At Meeting |
| 1607: Use of thermal  energy storage to mitigate  variability of as-available renewable energy | U. of Wisconsin | Frank Pucciano | Contract was signed  the spring of 2015 |

**LONG RANGE RESEARCH PLAN**

|  |  |  |  |
| --- | --- | --- | --- |
| Rank Title | W/S Written | Approved | To RAC |
| None |  |  |  |

**HANDBOOK RESPONSIBILITIES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Year & Volume | Chapter Title | No | Deadline | Handbook Liaison |
| 2019 HVAC Applications | Electrical Systems | 56 | 2018 | Bryan Holcomb |

|  |
| --- |
| **STANDARD ACTIVITIES** – List and Describe Subjects  None |
| **TECHNICAL PAPERS** from sponsored research – title, when presented (past 3 years,  present and planned)  None |
| **TC/TG/TRG SPONSORED SYMPOSIA** – title, when presented (past 3 years, present,  and planned)  None |
| **TC/TG/TRG SPONSORED SEMINARS** – title when presented (past 3 years, present,  and planned)  None |
| **TC/TG/TRG SPONSORED FORUMS** – title, when presented (past 3 years, present,  and planned)  None |
| **TC/TG/TRG SPONSORED WORKSHOPS** – title, when presented (past 3 years, present, and  planned)  1/15 Smart Inverter Standards, to Manage Your Smart Building While Connected to the Smart Grid |
| **JOURNAL PUBLICATIONS** – when published (past 3 years, present and planned)  None |

Submitted By: Chuck Foster

Secretary

**ASHRAE TC 1.9 Electrical Systems**

**Minutes for Meeting at**

**Las Vegas Convention Center, Las Vegas, Nevada**

**Tuesday, January 31, 2017**

1. **CALL TO ORDER**

**Introduction of Members and Guests**

Technical Committee 1.9 was called to order at 3:45 pm at the Convention Center in Las Vegas, Nevada. Technical Committee Member introductions were made. Absent Members are identified on the cover sheet.

Michael Todd, Chair, reviewed the membership list and determined that a quorum was present.

1. **APPROVAL OF MINUTES AND REVIEW OF ACTION ITEMS**

**Motion:** Robert Helt made a motion to approve the January 2016 Orlando minutes with a second from Steve Faulkner. There was no additional discussion and the motion passed unanimously.

**Report Action Items:**

None.

1. **TC MEMBERSHIP AND COMMITTEE APPOINTMENTS**

Mike Todd is the new Chair. Steve Faulkner is the new Vice Chair.

Randall Higa is now a corresponding member.

Armin Hauer will roll on as a voting member next year.

Steve Rosenstock is now a corresponding member and will move to voting member next year.

1. **CHAIR REPORT: Michael Todd.**

Michael reported as follows:

1. He attended the Chair breakfast
   1. Highlights were Hightower and Lindal award.
   2. John Huber received the Ashrae Research Award.
   3. The new Ashrae tech portal provides easier member access

**Up and coming meetings:**  Long Beach, – June 22 to June 28, 2017.

1. **SUBCOMMITTEE REPORTS**
   1. **Standards:**
   2. **Research: Larry Markel**

Larry reported on his attendance to the Research Committee breakfast.

* 1. **Program: John Nix**

John reported the deadline for submitting a proposal for a program in Chicago is June. Ideas for a paper include Grid of the Future and/or the Impact of Requiring Renewables in Buildings. He asked for ideas for programs – maybe reviewing the Handbook for ideas.

* 1. **Handbook: Armin Hauer.** Armin reported that we have no changes to propose to the handbook. He also reported that there is a new author’s portal for file sharing. Committee members are urged to review the handbook for needed changes.
  2. **Membership: Larry Markel.**
  3. **Professional Development Committee (PDC Coordinator): John Nix.** Next steps include revisiting the course outline (John, Steven, Larry and Frank). New course ideas include Understanding Rates and Utility Bills and How to Maximize Benefits from Utility Programs.

1. **WEBSITE: Steven Faulkner.** Steve Faulkner reported all websites are converted to new format.
2. **LIASON REPORTS**

Section Head: reported on the updated website format. There was a discussion about people that attend the TC meetings but who don’t register for the conference. One idea was to charge a small fee for registration that would not allow general admission to seminars, etc.

RAC: None.

TAC: may want to consider marriage with TC 1.11 that has a growing membership (electric motors/motor controls). Also may want to consider remote participation.

1. **OLD BUSINESS**

None.

1. **NEW BUSINESS**

None.

1. **ANNOUNCEMENT OF NEXT MEETING**

Chairman Larry Markel announced that the next meeting would be held in Long Beach, CA in June 2017 at the same time on Tuesday.

Michael thanked everyone for attending the meeting.

1. **ADJOURNMENT**

**Motion:**  John Nix made a motion to adjourn at 5:55 pm with a second from Steven Faulkner. Motion carried unanimously.

Respectfully Submitted,

Chuck Foster