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: January 31, 2017

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

DATE OF MEETING: \_Tuesday, June 26, 2016 LOCATION: \_ St. Louis, Mo \_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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** | **Las Vegas, Nevada** | **1/31/17** |
| **Orlando, Florida** | **1/26/16** |  |  |

**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  this spring |

**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**

**St. Louis Marriott**

**St. Louis, Missouir**

**Tuesday, June26, 2016**

1. **CALL TO ORDER**

**Introduction of Members and Guests**

Technical Committee 1.9 was called to order at 3:35 pm at the St. Louis Marriott in St. Louis, Missouri. Technical Committee Member introductions were made. Absent Members are identified on the cover sheet.

Larry Markel, Chair, reviewed the membership list and determined that a quorum was present.

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

**Motion:** Chuck Foster made a motion to approve the January 2016 Orlando minutes with a second from Steven 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 incoming Chair. Steve Faulkner is the incoming Vice Chair.

Randall Higa is now a corresponding member.

Armin Hauer is now new TC member.

Steve Rosenstock is now a non-quorum member and will move to voting member next years.

1. **CHAIR REPORT: Larry Markel.**

Larry reported as follows:

1. He had attended the Chair breakfast
   1. Tracks for the Long Beach meeting are available
   2. Bias forms is being revised but still needs work – seems to imply that signature on form is a binding commitment of the signer’s organization and may create uneasiness in membership without advice of counsel.
   3. Reviewers for Technical Papers and for Conference Papers are needed.
   4. May want to consider a Net Zero workshop for 1.9 that explores implications of NZ policy vs practical implications like reactive power.
   5. Larry handed out for review 3 documents;
      1. Tracks for Long Beach,
      2. Chair breakfast agenda, and
      3. Section TG breakfast agenda.

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

1. **SUBCOMMITTEE REPORTS**
   1. **Standards: Ken Luther**
   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 Las Vegas is 6-8-16. He asked for ideas for programs and for Long Beach tracks. One idea might be a workshop on connection to the grid that could include things like time dependent valuation of energy.

* 1. **Handbook: Armin Hauer.** Armin reported that we need to identify what additions to the handbook we would like. He also reported that there is a new portal for file sharing.
  2. **Membership: Larry Markel.**
  3. **Professional Development Committee (PDC Coordinator): John Nix. John is talking with Karen Murray about redoing course**

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

Section Head: None.

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 Las Vegas, Nevada in January 2017 at the same time on Tuesday.

Larry 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