



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

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DRAFT

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 4.1 DATE 1/31/2021

TC/TG/MTG/TRG TITLE Load Calculation Data & Procedures

DATE OF MEETING Monday 1/31/2022 LOCATION Hybrid

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
JingJuan Feng	2020			Jeffrey Spitler
Rolando Legarreta	2021			Mini Malhotra
Rachel Spitler	2018			Bryan Morris
Glenn Friedman	2019			Justin Wong
Steven Bruning	2018			Chip Barnaby
Larry Sun	2020			Vance Payne
Robert Doeffinger	2019			Natascha S Milesi Ferretti
Brian Rock	2020			Ed Janowiak
Chris Wilkins	2021			Wes Davis
Som Shrestha	2019			Matt Akins
				James Pegues
				Eric Peterson
				Alex Ponts

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

TAC Section Head: Vance Payne	SH4@ashrae.net
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	Research: natascha.milesi-ferretti@nist.gov ; Handbook: datadigm-analytics@outlook.com Staff: shammerling@ashrae.org
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.



ASHRAE Technical Committee 4.1

ASHRAE TC 4.1 Load Calculation Data & Procedures Full Committee Agenda 2021 ASHRAE Summer Meeting Hybrid Conference

1. **Call to order** Jingjuan (Dove) Feng
- Called to order at about 2:36 PM PST.

2. **ASHRAE Code of Ethics Commitment** Jingjuan (Dove) Feng
- “In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, integrity and respect for others, and we shall avoid all real or perceived conflicts of interests.”* (See full ASHRAE Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>)

3. **Roll call** Rachel Spitler
- All voting members are present and accounted for.

JingJuan “Dove” Feng	06/30/2024	Robert Doeffinger	06/30/2023
Rachel Spitler	06/30/2022	Brian Rock	06/30/2024
Rolando Legarreta	06/30/2025	Chris Wilkins	06/30/2025
Glenn Friedman	06/30/2023	Larry Sun	06/30/2024
Steven Bruning	06/30/2022	Som Shrestha	06/30/2024

4. **Introductions** All
- There was an online sign-in sheet for the virtual attendees and a physical sign-in sheet for the in-person attendees.

5. **Review Scope and Vision Statement** Jingjuan (Dove) Feng
- Scope (draft): TC 4.1 is concerned with the identification and compilation of engineering data and the development of procedures for calculating heating, cooling, refrigeration, and ventilating loads of structures.
 - Vision Statement (draft): Load calculation procedures for the design of resilient buildings
 - Jim Pegues believes that we have developed more of a mission statement instead of a vision statement; he recommends looking at ASHRAE’s statements for comparison. Jingjuan Feng made the decision to take further revision and discussion to email to preserve time for the other items on the agenda.
 - Chip Barnaby asked if the TC had ever done anything with refrigeration loads. Jim Pegues thinks there might be a separate committee that includes refrigeration loads; the general consensus was that refrigeration loads were not under TC 4.1’s purview. Refrigeration loads will be removed from the scope statements.

6. **Agenda additions** All
- No agenda additions were noted.

7. **Liaison reports (as they arrive)** Liaisons
- a. Section Head Vance Payne



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- Reminder to fill out functional group workbook and activity form.
- 2022/2023 rosters are due February 15. Do not use "DV" to delete voting members, just change them to "CM", as there is a bug in the system that will mess up the roster by using "DV".
- RTARs are due March 15; send in a rough draft ASAP to the Research Liaison.

- b. Chapter Technology Transfer Christopher Adams
- c. Research Natascha Milesi Ferretti
 - Continue the good work on developing research.
 - There are 28 projects in the hopper that will be evaluated in spring along with March 15 submissions.
 - There is training available on the basecamp site for research subcommittee chairs.
- d. Handbook Bass Abushakra, PhD
- e. Staff, Research/Tech Services Steve Hammerling
- f. TAC Chairman Larry Smith

8. Chair's Report Jingjuan (Dove) Feng

- a. Chair's Goal
 - i. Encourage new member involvement
 - Support subcommittee chairs to complete tasks
 - TC leadership path: serve as Subcommittee Chair – Secretary – Vice Chair -- Chair
 - ii. Establish TC's MBO (see number 12)
- b. Announcement from TC Chairs Breakfast Meeting
 - i. ASHRAE's Task Force and Committee
 - International Standards Interaction Task Force
 - Task Force Building Decarbonization
 - Residential Building Committee
 - Government Affair Committee (GAC)

9. Approval of minutes from 2021 Virtual Summer Meeting Jingjuan (Dove) Feng

- Brian Rock moved to approve the minutes and Rolando Legaratta seconded. Minutes were approved, 10-0-0-0-CV.

10. Subcommittee reports

- a. Programs Rachel Spitler
 - i. New programs proposed
 - Refer to Programs report.
 - Steve Bruning recommended splitting into two seminars; one general for Toronto, and one diving into details in Atlanta.
 - Glenn Friedman recommended covering very general heat balance methodology with sensitivities and not moving towards BIM for Toronto.
 - Glenn Friedman, Steve Bruning, Russ Taylor, Liam Buckley, and Jim Pegues agreed to further discuss and assist in putting a seminar together for Toronto.
 - Glenn Friedman moved to approve both seminar options and Brian Rock seconded. Motion passed, 10-0-0-0-CV.
 - ii. Other program ideas from attendees?



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- None were noted.

b. Research

Som Shrestha

i. Ongoing research activities

- Refer to Research report.
- Chip Barnaby recommends drafting an RTAR for an update to residential chapter if there is still no word from the residential committee within a few weeks.
- There was discussion and interest in the research topic of calculating heat gain from refrigeration equipment.

ii. Other research ideas from attendees?

- None were noted.

c. Handbook

Jim Pegues

- Refer to Handbook report.
- There is a new liaison for Handbook, Eric Granzow (egranzow@olsson.com).
- Rob Hodley from ASHRAE Publications reached out and asked if we would do a new Load Applications manual, as they had done a survey that indicated this would be helpful. Jingjuang Fen has connected Jim Pegues with Rob Hodley; Jim will find out what ASHRAE Publications has identified, and Chris Wilkins will help Jim with reviewing, if needed.

d. Standards

Glenn Friedman

- Refer to Standards report.

e. Web site

Jim Pegues

- Web site is up-to-date.

11. Old Business

Jingjuan (Dove) Feng

- None were noted.

12. New Business

Jingjuan (Dove) Feng

a. Review and approve TC 4.1 MBO for 2022 – 2023

i. [ASHRAE 2019-2025 strategic plan](#)

ii. Review draft MBO organized by responsible subcommittee

MBO #	Description	Metric (how do we determine success?)	Responsible Subcommittee
1	Identify the challenges and research needs	Number of research RTAR/Wok Statement	Research
2	Improve the load calculation procedures, tools and update the data to advance the art & science of load calculations	Number of research project sponsored/cosponsored	Research
3	Provide essential knowledge about load calculations data and procedures through training.	Number of programs at conferences	Program



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4	HBK: Convey current state of the art for Non-Residential and Residential Load calculations	Number of total research projects and TC 4.1 sponsored or co-sponsored projects whose data is incorporated in 2025 chapters.	Handbook
5	HBK: Convey pertinent results of ASHRAE Research to the membership and industry	Number of total research projects and TC 4.1 sponsored or co-sponsored projects whose data is incorporated in 2025 chapters.	Handbook
6	HBK: Provide effective instruction to experienced HVAC engineers. (by providing effective examples of load calculation processes)	Number of chapter reviews by mid-career engineers. Number of recommendations implemented in chapter.	Handbook
7	HBK: Provide effective instruction to early career HVAC engineers.	Number of chapter reviews by early-career engineers. Number of recommendations implemented in chapter.	Handbook
8	HBK: Source of procedures and data for tool developers.	Number of chapter reviews by tool developers. Number of recommendations implemented in chapter.	Handbook
9	Respond to standards recommended to be created by TC4.1	Standard creation. Number of reference cases for new standards that have software	Standard
10	Respond to ASHRAE for Standards Update/Renewal	Update or renew standard	Standard

- Chris Wilkins recommended having both the Section Head and the executive portion of the committee (along with the subcommittee chairs) review the MBOs. After those reviews, there could be a full committee vote.
- There is no specific timeline on when the MBOs are due back, so the committee will continue to review and vote on in June.

13. Adjourn

Jingjuan (Dove) Feng

- Meeting adjournment was moved by Chris Wilkins and seconded by Som Shrestha. Meeting was adjourned at 4:28 PM PST.



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Meetings

TC 4.1 Load Calculation Data and Procedures

Monday 1/31/2022, 2:30 - 4:30 PM PDT

In person: Caesars Palace in the Tarranto (E)

Remote: <https://ashrae.webex.com/ashrae/j.php?MTID=m06c55377bd0ff7a70aab0e9de112740f>

Meeting number: 2346 657 8771 Password: TC4.1

TC 4.1 Subcommittee Meeting:

Wednesday 1/26/2022, 9:00 - 11:00 AM PDT
Virtual meeting

Programs

None

Membership/Roster

Starting August 1st: 2022 (All voting members and/or subcommittee chairs)

Name	Role	Voting
Rolando Legarreta,	Chair	Yes
Rachel Spitler	Vice Chair/ Programs Subcommittee Chair	No
Stephen Roth	Secretary	Yes
James Pegues	Webmaster/Handbook Subcommittee Chair/BIM Liaison	Yes
Glenn Friedman	Standards Subcommittee Chair	Yes
Som Shrestha	Research Subcommittee Chair	Yes
Larry Sun		Yes
Robert Doeffinger		Yes
Brian Rock		Yes
Jingjuan "Dove" Feng		Yes
Chris Wilkins		Yes