

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC.
1791 Tullie Circle, N.E./Atlanta, GA 30329
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TC/TG/TRG MINUTES COVER SHEET

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

TC/TG/TRG NO.: 1.8 DATE: July 2, 1997

TC/TG/TRG TITLE: Owning and Operating Costs

DATE OF MEETING: June 30, 1997

LOCATION: Boston, MA

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Kirk Bond	94			Carl Hiller
Wayne Robertson	95			Peter Elton
Peter Rojeski	94			Alex Sleiman
Bill Thomaston	93			Karl Stum
Joe Watson	93			Dave Underwood
Wayne Webster	96			J.B. Singh
Dave Guckelberger	96			Jose Reig
Terry Cornell	96			Nance Lovvorn
Christi Kjellman	96			
Sheila Hayter	96			

DISTRIBUTION:

ALL MEMBERS OF TC/TG/TRG

R&T SECTION HEAD: Van D. Baxter

ALL COMMITTEE LIAISONS AS SHOWN ON TC/TG/TRG ROSTERS:

Program Committee: Sally McInerny

Journal: Alice Riddle Belt

Handbook: Ron Shelton

Staff (Research): Bill Seaton

Staff (Standards): Jim Heldenbrand

Staff (Tech. Services): Clarie Ramspeck

ADDITIONAL DISTRIBUTION: TC 1.8 corresponding members not attending meeting

ASHRAE TC/TG/TRG ACTIVITIES SHEET

DATE: July 2, 1997

TC/TG/TRG NO.: 1.8 TC/TG/TRG TITLE: Owning and Operating CostsCHAIRMAN: Wayne RobertsonVICE CHAIRMAN: Wayne WebsterSECRETARY: Sheila Hayter

TC/TG/TRG MEETING SCHEDULE				
Location-Past 12 Months	Date	Location-Planned Next 12 Months	Date	
San Antonio, TX	6/25/96	Toronto, ON	6/22/98	
Philadelphia, PA	1/29/97	San Francisco, CA	1/19/98	
TC/TG/TRG SUBCOMMITTEES				
Function	Chairman			
Handbook	David Guckelberger			
Program	Peter Rojas			
Research	Joe Watson			
RESEARCH PROJECTS-CURRENT				
Project Title	Contractor	Monitoring Comm. Chpt.	Report Made At Meeting	
Impact of Staff Training on Operating and Maintenance Costs	Engineering Interface, Ltd.	Wayne Webster	Final report accepted, technical paper submitted	
RP 929, HVAC Maintenance Costs	ADM Associates	Joe Watson	Will provide data under revised format before January meeting	
LONG RANGE RESEARCH PLAN				
Rank	Title	W/S Written	Apprv.	To R&T
1.	HVAC Operating Costs	Draft completed	TC to vote by letter ballot to approve work statement	Will be sent to R&T before their fall 1997 meeting
2.	HVAC Systems Installed Costs	No	No	No
3.	Service Life	No	No	No
3.	The Impact of Commissioning HVAC Systems on Life-Cycle Costs	No	No	No

(OVER PLEASE)

HANDBOOK RESPONSIBILITIES					
Year & Volume	Chapter	Title	No.	Deadline	Handbook Subcom Liaison
1999 Applications	33	Owning and Operating Costs		1/98 TC to give final approval for chapter changes at the January meeting	Ron Shelton
STANDARDS ACTIVITIES-List and Describe Subjects					
none					
TECHNICAL PAPERS from Sponsored Research-Title, when presented (past 3 yrs. present & planned)					
Impact of Staff Training on Operating and Maintenance Costs - submitted for review, summer 1996					
HVAC Maintenance Costs - submit for review, summer 1998					
TC/TG Sponsored Symposia-Title, when presented (past 3 yrs. present & planned)					
TC/TG Sponsored Seminars-Title when present (past 3 yrs. present & planned)					
Optimizing HVAC Life-Cycle Costs Using Predictive Performance Algorithms - January 1995, Chicago, IL					
The Impacts of Building Commissioning on Owning and operating Costs - June 1995, San Diego, CA					
Community Energy Systems - Infrastructure that Pays - June 1995, San Diego, CA					
Electric Utility Deregulation and Its Impact on Users - February 1996, Atlanta, GA					
Rebuild America, Opportunities in a New Federal Energy Program - June 1996, San Antonio, TX					
Avoiding Other's Mistakes in Performance Contracting - January 1997, Philadelphia, PA					
Life-Cycle Costing and Deregulation - June 1998, Toronto, ON					
Existing Building Commissioning - January 1998, Chicago, IL					
TC/TG Sponsored Forums-Title, when presented (past 3 yrs. present & planned)					
Why Isn't Life-Cycle Cost Analysis Widely Used? - February 1996, Atlanta, GA					
JOURNAL PUBLICATIONS, when published (past 3 yrs. present & planned)					
Article on service life versus age at death of HVAC equipment will be submitted					

Submitted By: Sheila J. Hayter, secretary for TC 1.8

TC 1.8, Owning and Operating Costs
Meeting Minutes
June 30, 1997
Boston, MA

Action Items

Person Responsible	Action Item
Sheila Hayter	Make corrections to last meeting's minutes and resubmit minutes to ASHRAE Headquarters
All members	Review list of nomenclature and key words for handbook chapter and submit comments to Dave Guckelberger by August 1, 1997
David Guckelberger	Incorporate comments into handbook chapter draft and redistribute revised draft to all committee members
Kirk Bond	Begin coordinating a seminar about determining life cycle costs during and after utility deregulation
Joe Watson, Terry Cornell, Kirk Bond	Review outline and short course presentation material for Life-Cycle Costing short course (currently being developed by the ASHRAE Continuing Education Committee)
All members	Give ideas for case study presentations on existing building commissioning to Karl Stum (TC 9.9)
All members	New program subcommittee chair needed, anyone who is interested should speak to Wayne Webster (incoming chair) <i>Kirk Bond</i>
Terry Cornell	Revise deliverable section of the "HVAC Operating Costs" work statement by the end of July
Joe Watson	Submit the revised "HVAC Operating Costs" work statement to the ASHRAE Research Activities Committee before their fall meeting
Joe Watson, Jim Schlachter	Draft a work statement for "HVAC Systems Installed Costs" before the next ASHRAE meeting (January 1998, San Francisco)
Nance Lovvorn	Provide recommendations of people Joe Watson can contact to lead a discussion statistical analysis techniques appropriate for estimating service life of HVAC components at the next TC 1.8 meeting
Joe Watson	Coordinate a discussion with an invited expert on HVAC equipment service life at the next TC 1.8 meeting

Meeting Minutes

Wayne Robertson (TC 1.8 chair) called the meeting to order at 2:15 PM.

Ed Gut, the Technical Activities Committee section 1.0 section head, started the meeting by congratulating Wayne for a job well done as chair of TC 1.8 and presented Wayne a plaque from ASHRAE thanking him for the time he volunteered to the committee.

Committee members discussed minor corrections to the minutes from the previous meeting. The minutes were then approved (10-0-0) as revised. Sheila Hayter (TC 1.8 secretary) will make the corrections and resubmit the minutes to ASHRAE Headquarters.

Handbook Subcommittee Report

David Guckelberger (handbook subcommittee chair) summarized the activities of the handbook subcommittee meeting. He distributed a draft list of nomenclature and key words to the committee and asked members to review the list and give him comments by August 1, 1997.

Dave will incorporate the comments he received during the subcommittee meeting into the draft and redistribute the draft to all committee members.

Items the subcommittee decided to postpone for the next revision of the handbook include:

- Creating a new check list to accompany Table 1
- Address the issue of determining which equations and derivations should be considered to be removed.

The TC members voted (10-0-0) to tentatively accept the revised handbook chapter. A second vote will be taken at the next meeting in January 1998 to accept the final version of the revised handbook chapter.

Program Subcommittee Report

Pete Rojeski (program subcommittee chair) reported on the program activities. A technical paper from the subcontractor who completed RP-771, "Impact of Staff Training on Owning and Operating Costs of O&M," has been submitted and is currently going through the ASHRAE review process. It is expected this paper will be presented in the near future. Wayne Webster, the monitor of this research project, added that a final report for the research has been accepted. Wayne is unsure how research reports are distributed and recommended members call ASHRAE Headquarters if they wish to receive a copy of the report.

The committee members discussed sponsoring a seminar on the life-cycle cost of system as utility deregulation takes affect. For example how do designers determine the best mix of gas and electric building equipment for the lowest operating costs after deregulation takes affect. Kirk Bond volunteered to begin coordinating this seminar. The TC members did not determine which future ASHRAE meeting to submit this seminar for presentation.

Karl Stum told committee members about a seminar planned for Chicago (January 1999) and sponsored by TC 9.9 titled, "Existing Building Commissioning." Case study presentations are needed for the seminar. If anyone is interested or knows of a possible presenter, please contact Karl Stum. He can be reached at (503) 248-4636.

Pete Rojeski is ready to retire as program subcommittee chair. Those interested in becoming the new chair should contact Wayne Webster.

Sally McInerny, the Section 1 ASHRAE Program Committee Liaison, presented an overview of the responsibilities of the program subcommittee chair. She also announced

that program packages for consideration at the next ASHRAE meeting are due at Headquarters by August 12.

Research Subcommittee Report

Joe Watson (research subcommittee chair) reported that there will not be information from RP-929, "HVAC Maintenance Costs," to include in the next revision of the handbook chapter. He is working with the subcontractor to finalize the format in which to present the final data. Joe expects the final report to be completed before the next ASHRAE meeting in January 1998.

With Terry Cornell's help, the work statement for "HVAC Operating Costs," is nearly completed. However, Joe recommended not submitting the work statement until the deliverables format is finalized. The deliverables should be in a format that can easily be integrated into the TC 1.8 handbook chapter. Terry will revise the work. Joe will submit the work statement in early August so that the ASHRAE Research Activities Committee can vote on it at their fall meeting. The committee voted 10-0-0 to go ahead with this plan of action.

Joe summarized the priority list of proposed research projects. This list is:

1. HVAC Operating Costs (work statement nearly completed)
2. HVAC System Installed Costs (Joe will assist Jim Schlachter in drafting a work statement for this proposed research before the January 1998 ASHRAE meeting.)
3. Service Life of HVAC Equipment (notes on committee discussion about this research follow this list)
4. Impacts of Commissioning of HVAC Systems on Life-Cycle Costing (Christie Kjellman is drafting a work statement. Christie recommends co-sponsoring the project with TC 9.9. The TC members feel this research is important because the information is missing from the handbook chapter.)

Several TC members feel it is very difficult to predict the true service life of HVAC system equipment. It was decided that an expert with a background in statistics should be invited to attend the next committee meeting (January 1998, San Francisco) to help the committee members determine if this is a viable research project. Nance Lovvorn volunteered to contact a number of experts in the San Francisco area who may be attend the next TC meeting. He will then forward the names of interested people to Joe Watson and Joe will finish coordinating preparations for the TC discussion.

Liaison Reports

Wayne Webster, TC 9.6, "Systems Energy Utilization" – The TC is working on two standards (62-89R and 90.1) and one guideline (14, Energy and Demand Savings). They have two handbook chapters, and one research project (RP-669, "Energy Savings Methodologies").

Alex Sleiman, TC 6.2, "District Heating and Cooling" – The TC is starting to rewrite chapter 11, they sponsored a forum at this meeting on how to coordinate terminology

between groups within ASHRAE (forum was well attended), and they plan to sponsor a symposium on district heating and cooling system renovations.

Kirk Bond, TC 1.9, "Electrical Systems" – The TC co-sponsored the public forum presented at this ASHRAE meeting and they sponsored a forum on deregulation.

Christie Kjellman, TC 9.9, "Building Commissioning" – The TC will begin drafting a guideline on total building commissioning. The committee has 15 programs slated for future meetings. Co-sponsors are needed.

Sheila Hayter, TC 9.1, "Large Building Air Conditioning Systems" – Their meeting will occur after the TC 1.8 meeting, no report given.

Sheila Hayter, TC 1.10, "Energy Resources" – TC sponsored 2 forums relating to sustainability at the current meeting. Both were well attended and produced several ideas for future research and program topics. The TC plans to sponsor 2 seminars at the next ASHRAE meeting, one on international activities on sustainability and the other on integrating energy efficient and renewable energy technologies into buildings.

Jose Reig, chair of TC 1.6, "Terminology," announced that the TC is in dire need of new members. He invited anyone interested in becoming a member to join the TC meeting planned to occur immediately after the TC 1.8 meeting.

New Business

A proposal from the ASHRAE executive bodies was sent to all technical committees describing a new schedule for ASHRAE Winter and Annual meetings. The proposal recommends having TC subcommittee meetings on Saturday and having TC meeting and programs occurring simultaneously on Sunday, Monday, and Tuesday. Several TC 1.8 members feared this proposed schedule would result in conflicts between TC committee meetings, programs, and the Exposition. Some members also noted that by having subcommittee meetings on Saturday may require travel on Friday and the total time spent at the ASHRAE meetings would not be reduced from what it is now. Members recommended that it would be better to have fewer subcommittee meetings and to complete subcommittee business by conference call.

Old Business

Peter Rojeski summarized discussions he has had with the Student Activities committee about getting students involved at the next ASHRAE meeting. An idea is to give student chapters in each ASHRAE region projects to get feedback from inspectors, health officials and restaurant owners on how well standard 62 is working. Students would interview representatives from these groups and monitor indoor environments in restaurants.

The meeting concluded with the introduction of the new officers (Wayne Webster, chair; Joe Watson, vice chair; Sheila Hayter, secretary) and a congratulatory applause for

Wayne Robertson for a job well done. Thank you Wayne. The meeting was adjourned at 4:15 PM.