

FINAL -APPROVED

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

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TC/TG/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/TRG No. 6.08 Date September 9, 2008

TC/TG/TRG TITLE: Geothermal Energy Utilization

DATE OF MEETING: June 24, 2008 LOCATION: Salt Lake City, Utah

Members Present	Year APPTD	MEMBERS ABSENT	Year APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
J. B. Singh (Chair)	07	Pat Kempf	06	Arthur Hunt (Secretary)
Lisa Meline (Program)	05	Jim MacMillan	07	John Shonder (Research)
Kevin Rafferty	07			David Dinse (Vice Chair)
Andrew Chiasson	06			Steve Kavanaugh (Handbook)
Robert Brown	04			Jeff Spitler
Kay Thrasher	04			Ed Kush
Cary Smith	06			Robert Koschka
Michel Bernier	07			Michael Kuk
Gary Phetteplace (ALI Coord)	07			Darin Nutter (Webmaster)
Xiaobing Liu	08			Roger Taliotis
Kirk Mescher	08			Pat Bailey
Cenk Yavuzturk	07			Martin Zuniga
				Carl Huber
				Tim Roos
				Alan Niles
				Howard Newton
				Jay Ramkumar
				Erica Reading
				Henry Healey

DISTRIBUTION

ALL MEMBERS OF TC/TG/TRG

TAC Chairman: _____ Bryan Becker

TAC Section Head: _____ Gary Phetteplace

LIAISONS

RAC Research: _____ Jaap Hogeling

Chapter Technology Transfer Committee: _____ Coren Metzger

Journal: _____ Fred Turner

Special Publications: _____ Julia Keen

Standards: _____ Jay Kohler

Handbook: _____ Mark Modera

MANAGER OF RESEARCH/TECHNICAL SERVICES: _____ Michael Vaughn

MANAGER OF STANDARDS: _____ Claire Ramspeck



Meeting of
TC 6.8 GEOTHERMAL ENERGY UTILIZATION
Hilton Hotel, Salt Lake City, Utah
Tuesday, 24 June, 2008

DRAFT MINUTES

Pursuant to an announcement sent to all members, ASHRAE Technical Committee TC 6.8, *Geothermal Energy Utilization*, met on Tuesday, June 24, 2008 in the Hilton Hotel, Salt Lake City, Utah. The meeting was held in conjunction with the ASHRAE 2008 Summer Meeting.

I. CALL TO ORDER, WELCOME, INTRODUCTIONS

Chairman J. B. Singh called the meeting to order at 3:33 pm. The chairman welcomed everyone. Members, guests, and ASHRAE Committee liaisons then introduced themselves. The Chairman asked that the sign in sheet be filled in completely and that attendees update their information on the roster sheet.

II. QUORUM CHECK

Fifty percent of the voting members of the technical committee, present in person, constitutes a quorum for the transaction of business. A roll call revealed that twelve of the fourteen members were present, establishing that a quorum was available to conduct committee business.

III. APPROVAL OF MINUTES

The chairman distributed copies of the minutes of the January 22, 2008 meeting and asked members to review them. Gary Phetteplace moved to approve the minutes with minor corrections, and Art Hunt seconded. The motion was carried (§ 11,0,0 Chair not voting).

IV. ANNOUNCEMENTS FROM THE CHAIR

ASHRAE has approved a new strategic plan. Details are available on the website

Sustainable Urban Design: Engineering Tomorrow Today is the theme of this January's Chicago meeting

Gary Phetteplace is our new Section head.

ASHRAE is promoting the concept of zero energy buildings and will be in a leadership position in attaining that objective.

ASHRAE has available about \$2,500,000 per year of funding for research, with an



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additional \$300,000 per year of co funding.

There is now an online database for entering building owning and operating costs
Everyone who has relevant information should participate in the development of the data base.

V. ANNOUNCEMENTS FROM ASHRAE:

Gary Phetteplace is our new Section Head.

The ASHRAE Program Committee is being dismantled. This change will not affect the Chicago programs.

A new Strategic Research Plan will be developed reaching out as far as 2010 and 2015.

The present Research Plan has been updated and is available for review on the website.

RTARs are due by August 15, 2008.

There will be a handbook workshop in Chicago 8:00 AM to 9:00 AM Sunday.

As ASHRAE guidelines are developed, useful rules of thumb should be added.

The Certification Committee is developing a new certification program and is seeking input on certifications to be offered. A proposal form for new certifications is available for download at the certification Committee section of the website.

A. SUBCOMMITTEE REPORTS:

B. HANDBOOK COMMITTEE – STEVE KAVANAUGH

Our geothermal chapter 32 is in the 2007 Applications Handbook. It is felt that the portion on hybrid systems is too brief. The Handbook Subcommittee, which consists of Steve Kavanaugh, Kevin Rafferty, and Jim MacMillan welcomes any comments and suggestions for the next edition

C. MEMBERSHIP COMMITTEE – KIRK MESCHER

No Report

C. PROGRAMS COMMITTEE – LISA MELINE

Ms. Meline recommended the following Chicago programs and priorities:

SEMINAR



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(1) GSHP Systems in Urban Settings, James G. MacMillan, P.E., Chair

25 years of Geothermal Heat Pumps in Manhattan and boroughs (Carl Orio)

Central Plant Geothermal: It's not just Unitary anymore (Steve Hamstra)
Presentation title TBD (Jack DiEnna)

FORUM

(2) Controlling GSHP Costs: *What data do we have and what information do we need?* Steve Kavanaugh, Ph.D. to moderate

TRANSACTION SESSIONS

Presentation on Research Project TRP-1384, Michel Bernier, Ph.D., Chair

Tiffany Cox is researching other papers which might partner well with this for a Transaction Session.

Carl Orio will not be submitting a paper. He is participating in the Seminar noted above instead.

There may be an opportunity to present the Research Project in a Seminar Format to solicit beta Testers of the software. Michel is looking into what is allowed by ASHRAE Research, assuming the terms of the contract have been met.

Lisa Meline moved that the above be accepted, Art Hunt seconded, Motion carried 8 11,0,0,Chair not voting

RESEARCH COMMITTEE – JOHN SHONDER

The new strategic plan for research is now available and a new Research Manual has been prepared.

Work Statement authors can now bid on research projects.

A survey is proposed to find out what should be in the next Research plan. First priority is to get the Surface Water Heat Pump project moving. Steve Kavanaugh suggested a project to identify design practices to optimize environmental and economic benefits of GSHP

The report on RP 1384 has been finally approved. ASHRAE does not object to commercialization of the software. A beta test subcommittee was formed consisting



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of Michel Bernier as Chair, with Cenk Yavuzturk and Cary Smith. They will obtain 25 testers to help decide if the software is commercially viable. Michel Bernier moved to form the subcommittee and proceed with the beta testing, Gary Phetteplace seconded. Carried 9 11/0/0, Chair not voting.

F. JOURNAL – J.B. SINGH

The Journal is looking for articles on GSHP

G. WEBMASTER – DARIN NUTTER

The website is current

H. STANDARDS - DOUG CANE

The committee is not yet activated.

I. ALI COORDINATOR – GARY PHETTEPLACE

No activity to report

J. EDUCATION AND SPECIAL PUBLICATIONS – JOHN SHONDER

Michael Kuk volunteered the following:

New Guidelines and Standards

Standard 111 TAB (not 100% positive on the standard number): This is a new standard for TAB. Puts much more responsibility on the TAB contractor to verify controls operation. Could have an impact on the commissioning of GX systems.

Guideline 1.1-2007 HVAC&R Technical Requirements for the Commissioning Process: Good resource for Cxing GX systems

Standard 130-2008: Method of Testing Air Terminal Units

Guideline 13-2007: Specifying Direct Digital Control Systems

Guideline 0-2005: Updated commissioning guideline.



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VII. LIAISON REPORTS

A. TC 9.4 - STEVE KAVANAUGH

The information has been covered earlier in the meeting

B. TC 8.11 - DARIN NUTTER

They are considering a seminar on small duct high velocity systems

C. TC 7.8, GPC 14, FEMP - JOHN SHONDER

FEMP is looking for water to water heat pump numbers on renewable energy credits for GSHP

D. IGSHPA – DAVE DINSE

There is a meeting planned for Nashville this summer.

VIII. OLD BUSINESS

There was no old business

IX. NEW BUSINESS

Mike Kuk said the Illinois Chapter of ASHRAE is looking for feedback and Assistance from TC 6.8 members in evaluating a project to reduce the carbon footprint that ASHRAE meeting will impose on the Chicago area. The Salt Lake Chapter started the first project in which they installed a solar thermal system on a YWCA. The Illinois Chapter just found out about the initiative from ASHRAE and are looking for ideas. I would like to see a GX system installed in Chicago. We are looking for vendors interested in donating product and/or services, engineers donating services and/or advice, and general ideas and support.

X. ADJOURN

A motion to adjourn was brought by Lisa Meline and seconded by Gary Phetteplace (11,0,0, Chair not voting) The meeting adjourned at approximately 6:30 p.m.