

**TECHNICAL COMMITTEE 2.8 – Meeting Notes Sumer SLC 2008**

MEETING MINUTES –June 22, 2008

AMERICAN SOCIETY OF HEATING, REFRIGERATION AND AIR-CONDITIONING ENGINEERS, INC.  
1791 Tullie Circle, NE / Atlanta, GA 30329  
404-636-8400

**TC/TG/TRG MINUTES COVER SHEET**

TC/TG/TRG No. TC 2.8 DATE: June 22, 2008

TC/TG/TRG TITLE: Building's Environmental Impact and Sustainability

DATE OF MEETING: June 22, 2008 LOCATION: Salt Lake City, UT

<b>MEMBERS PRESENT</b>	<b>YEAR APPTD</b>	<b>MEMBERS ABSENT</b>	<b>YEAR APPTD</b>	<b>EX-OFFICIO MEMBERS &amp; ADDIT'L ATTENDANCE</b>
Dru Crawlev (Chair) Tom Lawrence (VC) Dave Grumman Kevin Cross ( Rolling off) Janice Means Malcolm Lewis (Rolling Paul Torcellini (Rolling Tom Capellin Harvey J. Bryan (Rolling Bill Coad Frank Mills (Rolling off) John Swift		Gail Brager Dan Larson (Rolling Off) Vikas Patraik Ismena Deacon		H. Jav Enck Michael Deru Stephen Turner Joy Altweis

**DISTRIBUTION**

**ALL MEMBERS OF THE TC/TG/TRG**

TAC CHAIR	Ryan Becker
TAC SECTION HEAD	Chuck Wilkin
SPECIAL PUBLICATIONS LIAISON	Julia Keen
STANDARDS LIAISON	Paul Cabot
HANDBOOK LIAISON	Pradeep Bansal
PROGRAM LIAISON	Joy Altwies
RAC RESEARCH LIAISON	Iain Walker
CTTC LIAISON	Frederic Genest
ALI LIAISON	Tim McGinn
STAFF LIAISON (RESEARCH)	Michael Vaughn
STAFF LIAISON (STANDARDS)	Claire Ramspeck

**Note:** These draft minutes have not been approved and are not the official, approved record until approved by this committee.

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<b>TC/TG/TRG MEETING SCHEDULE</b>				
<b>LOCATION – past 12 months</b>		<b>DATE</b>	<b>LOCATION - planned next 12 months</b>	
Long Beach		June 2007	Chicago	
New York City		January 2008	Louisville	
January 2009				
June 2009				
<b>TC/TG/TRG SUBCOMMITTEES</b>				
<b>Function</b>			<b>Chair</b>	
Materials and Systems			Tom Cappellin	
Interactions with the Environment			Michael Deru	
Handbook			Stephen Turner, Don Brundage	
Research			Paul Torcellini	
Green Guide			John Swift	
<b>RESEARCH PROJECTS – Current</b>			<b>Monitoring</b>	<b>Report Mode</b>
<b>Project Title</b>	<b>Contractor</b>		<b>Comm.Chm.</b>	<b>At Meeting</b>
<b>LONG RANGE RESEARCH PLAN</b>				
<b>Rank</b>	<b>Title</b>	<b>W/S Written</b>	<b>Approved</b>	<b>To R &amp; T</b>
	TBD			
<b>HANDBOOK RESPONSIBILITIES</b>				
<b>Year &amp; Volume</b>	<b>Chapter Title</b>	<b>No.</b>	<b>Deadline</b>	<b>Handbook Subcom. Chair/Liaison</b>
2005 Fundamentals	Energy Resources	17		Brundage/Bansal
2009 Fundamentals	Sustainability	New		Turner/Bansal
<b>STANDARDS ACTIVITIES - List and Describe Subjects</b>				
<b>TECHNICAL PAPERS from Sponsored Research - Title, when presented (past 3 yrs. present &amp; planned)</b>				

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Appendix 3
<b>TC/TC/TRG Sponsored Symposia - Title, when presented (past 3 yrs. present &amp; planned)</b>
Appendix 4
<b>TC/TG/TRG Sponsored Seminars - Title, when presented (past 3 yrs. present &amp; planned)</b>
Appendix 5
<b>TC/TG/TRG Sponsored Forums - Title, when presented (past 3 yrs. present &amp; planned)</b>
Appendix 6
<b>JOURNAL PUBLICATIONS - Title, when published (past 3 yrs. present &amp; planned)</b>
Lawrence, T.M., J.D. Mullen, D.S. Noonan, and H.J. Enck. 2005. “Overcoming Barriers to Efficiency”, <i>ASHRAE Journal</i> 47(9):S40-S44.
Lawrence, T.M. and J.E. Braun. 2007, “Calibrated Simulation for Retrofit Evaluation of Demand-Controlled Ventilation in Small Commercial Buildings”, <i>ASHRAE Transactions</i> 113(2):227-240.

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**Appendix 1**

**RESEARCH PROJECTS**

**TC 2.8 Research Projects Status**

**No active projects at this time due to newly formed committee**

**Active projects**

<b>#</b>	<b>Title</b>	<b>Joint TC</b>	<b>Cognizant Subcommittee/ Contractor</b>	<b>PMSC</b>	<b>Dates / status</b>

**Appendix 2**

**RESEARCH PLAN**

**Technical Committee 2.8  
Research Plan**

The following outlines the current status in the development of our research objectives and plan.

<b>Title</b>	<b>TC Priority</b>	<b>Prior TC priority</b>	<b>Society status</b>	<b>TC Status</b>	<b>Sub- com</b>
TBD, New Research Chair					

**Appendix 3**

**TECHNICAL PAPERS FROM SPONSORED RESEARCH**

No projects completed at this time

<b>RP</b>	<b>Title</b>	<b>Contractor</b>	<b>Approved</b>	<b>Paper</b>

**Appendix 4**

**TC/TG/TRG SPONSORED SYMPOSIA**

**Current as of June 2008**

***PRESENT:***

*Salt Lake City 2008*

Sunday 8:00 AM to 9:30 AM	Seminar 4: How You Do What You Do When You Do It Where You Do It: The Often Cited but Rarely Sighted Standard of Care	(SP) C
Tuesday 11:00 a.m. – 12:30 p.m.	Seminar 52: Quantifying the Environmental Impact of Buildings with Life Cycle Assessment	(SP) G

***PLANNED:***

*Chicago 2009*

- *Low Carbon Cities II* (Frank Mills)
- *Professional Liability in Sustainable Design* (Harvey Bryan)
- *What is ASHRAE's Scope on Sustainability?* (Tom Lawrence, Forum)
- *Who's Responsible for the Thermal Envelope?* (Paul Bertram)
- *ASHRAE Standard 189.1* (Katherine Hammack, with SPC 189.1)
- *Will I Get Sued?* (Mitchell Swann, co-sponsor with TC 1.7)

*Dallas or Long Beach, 2007*

- Energy Performance Case Studies on Military Facilities
- Low Carbon Cities III
- Water Conservation (SPC 191)
- What Does the Design Engineer Need? (Integrated Design)

***PAST:***

**ASHRAE TC 2.8 - Building's Environmental Impact and Sustainability**

**SUMMER 2008 MEETING (Salt Lake City)**

**ACTION ITEMS**

- **Handbook Chapters due soon (Turner, Brundage)**

**NYC Meeting Notes**

*Corrections:*

- Malcolm Lewis – was not present (listed as present).
- Don Brundage- listed as voting member- (he is not).

*Approval of Minutes:*

- minutes approved with amendments-.
  - Moved: Bill Coad.
  - 2<sup>nd</sup>:Tom L.
  - Unanimous approval

**3. Announcements/ Membership:** (Dru to send me his notes)

- RAC.
- Thank you letter from President of ASHRAE is available.
  - o ashrae.org/strategic plan.
  - o explains relationship between strategic plan and vision 20/20,etc.
- CLIMA 2010 Conference in Turkey-May, 2010
  - <http://www.clima2010.org/>
    - Call for papers.
    - Sustainable Energy Use in Buildings.
- Sim Build 2008 Conference in Berkeley, CA.
  - <http://gaia.lbl.gov/ocs/index.php/simbuild/2008>

**4. Standing Committee Liassons**

**Chuck Wilkin**

- 90 % Review of ASHRAE 62 update.
- 90% AEDG Highway Lodging.
- Activity Feedback Form due Tuesday night.
- Certificate of Appreciation presented to Dru Crawley.

**RAC** – No report.

**STDS/Program/ACI**- No report.

**5. Systems and Environment**-Tom Capellin.

- 5.1.3. RTAR to be dropped.



## **TECHNICAL COMMITTEE 2.8 – Meeting Notes Sumer SLC 2008**

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### **5.2 Interactions with Environment** (Michael Deru)

- 6 ideas for new RTAR's reported by M. Deru. See Subcommittee minutes attached.

### **5.3 Hand Book** (Stephen Turner)

- Frank Mills/Dave Grumman to lead from this point on (Turner is done).
- Motion to approve exist chapter with data as appropriate.
- Motion for approval by Dave Grumman tabled to any forward by letter ballot.
- Dave Grumman motion to approve the new sustainability chapter.
- Bill Coad 2<sup>nd</sup>.
- Has not been distributed-cannot t be voted on.
- Electric ballot (letter ballot).
- Dan Brundage reported on existing chapter update.
- see attached notes from Stephen Turner

### **5.4 Green Guide**

- October 2009 targeted for publication of 3<sup>rd</sup> Edition
- 75% DRAFT planned for ASHRAE Winter 2009 Mtg in Chicago.
- Proposed TOC by end of August.
- Announcements to TC's/membership/etc.
- e-learning course being wrapped up (Due by September 08?).
- See Subcommittee minutes attached.

### **5.5 No Active RTAR's**

**5.6 Programs**-Joy Altweis reported on programs scheduled and took suggestions for new programs. See attached list.

### **5.7 Standards**

- ASHRAE 90.1-2007 for LEED V.3.0 (Jay Enck).
- STD 189-2<sup>nd</sup> Public review/3<sup>rd</sup> Public (Jay Enck) (limited review is expected fall 2008).
- STD 191-Official Meeting (JS). Draft for public review tentatively scheduled for Winter Mtg in Orlando in 2010.

### **5.8 Web Site**

- o -To be transitioned ASHRAE Server.

## **6. Related Activities**

### 6.1 LEED (Jay Enck)

- LEED EB transition to LEED EB ops and maintenance.
- Homes
- LEED for Neighborhood Developments –pilot closed out.

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- 6.2 30% Advanced Energy Design Guides
  - o K-12 in Print.
  - o Hospitality-public.
  - o Warehouse-out.
  - o Healthcare-being developed.
  - o No funding for 50% AEDG's.
  - o Free downwards very successful.
  
- 6.3 Interagency Sustainability Work Group
  - Focusing on exec. orders.
  - Energy reduction laws.
  
- 6.4 Green Globes/GBI- Tom Werkema
  - Washington office very active.
  - Public review closed a few weeks ago.
  - Next step- resolve comments.
  
- 6.5 Carbon Emissions Calculator Tool- Hal Levin
  - Funding Issue.
  - 18 to 24 months once project is started.
  - CEC has developed a tool- only for California.
  
- 6.6 Protocol for Measuring the On-Site Performance of Buildings
  - 70% Draft completed.
  - General categories/3 levels.
  - Target completion for Chicago 2009 winter meeting.
  
- 6.7 BIM Steering Committee (Dru Crawley)
  - Guide to be published by Chicago 2009.
  - Gordon Holness article in April ASHRAE Journal.
  
- 6.8 ASHRAE Renovation Project (Jay Enck)
  - Construction nearing completion.
  - Plans for POE/M+V- on website.
  
- 6.9 ASHRAE Climate Change Position (Don Brundage)
  - Draft out for review.
  
- 6.10 Greening ASHRAE
  - Ad hoc group has been institutionalized.

### **New Business**

- 8.1 Stephen Turner- How do we encourage sustainability in standard 62.1?
  
- 8.2 TRG-Tools for Sustainable Buildings/ operations/costs
  - Strategic goals response effort.

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- Matrix?
- 8.3 NIBS website re: High Performance Building (Dru Crawley)
  - NIBS.org
  - Congress supporting/new
  - ASHRAE Washington DC office leading this effort.
- 8.4 Federal R&D Agenda for Net Zero Energy
  - NIST
  - DOE
  - Draft in progress
  - Available later this year.
- 8.5 Dru Crawley turns meeting over to Tom Lawrence Incoming chair-State of the Committee
  - Thanks to Dru and past chairs.
  - See TL State of the Committee document.
  - Tom asks for feedback.
  - What do we need to improve on?
    - Subcommittee meetings-need more activity.
    - Subcommittee structure issues?
    - Website presence.

**Old Business**

- 7.1 Short course on designing Net Zero Energy buildings.
  - Call for a vote
  - Dru Crawley to support/Janice M. 2<sup>nd</sup>.
  - 9 yes/ 0 no/ 3 abstain- motion passed

**Adjourn**

- Tom L motion to adjourn/ John Swift 2<sup>nd</sup>.
- unanimous- motion passed- meeting adjourned

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Dru Crawley	DOE	Drury.Crawley@ee.doe.gov
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Katherine Hammack	Ernst & Young	katherine.hammack@ey.com

**TC 2.8 Web Site**

**<http://gard.com/tc28/>**

**TC 2.8 E-mail List**

This list is only for communications related to ASHRAE TC 2.8 Building Environmental Impacts and Sustainability. Do not distribute messages of any commercial nature.

To subscribe or unsubscribe to the list, you can go to the TC 2.8 list web site:

<http://lists.onebuilding.org/listinfo.cg/tc28-I-onebuilding.org>

To send a message to all subscribers to the list, address your message to:

[tc28-I@lists.onebuilding.org](mailto:tc28-I@lists.onebuilding.org)

*Note: ASHRAE does not operate this list. Please do not ask them for help. If you have any questions, please contact: Jason Glazer [JGlazer@gard.com](mailto:JGlazer@gard.com)*

*Thanks to Jason and GARD Analytics for hosting this list!*

## TC 2.8 Handbook Subcommittee Salt Lake City

Kevin Cross, Janice Means, Malcolm Lewis, Frank Mills, Doug Fick, Tom Lawrence, Dave Grumman, Don Brundage

1. Stephen Turner's agreed four year term as Handbook SubC chair ends here in SLC. Frank Mills and Dave Grumman both volunteered to lead the SubC going forward, and Tom Lawrence will work with them.
2. The new chapter on Sustainability was finalized with unanimous recommendation to TC for approval to publish with editorial and non-substantive changes to be made prior to publication.
3. Led by Don Brundage, the updates to the existing chapter on Energy Resources were finalized with unanimous recommendation to TC for approval to publish with data updated from pending data releases if possible , plus editorial and non-substantive changes to be made after the meeting prior to publication.
4. Stephen thanked all the volunteer members for their hard work, especially Dave Grumman for his essential and extensive writing efforts, Doug & Kevin for their hard work on graphics, and all who contributed to the new chapter, plus special thanks to Don Brundage for shouldering the existing chapter update while participating in the new chapter effort.

**Minutes**  
**ASHRAE TC 2.8 Subcommittee**  
**Interaction With the Environment**  
**Salt Lake City, UT 06/22/08**

1. Meeting called to order – Michael Deru, chair
2. Possible research topics
  - a. The Effects of increased ventilation effectiveness on productivity and energy performance – Andrew Price and Tom Lawrence
  - b. Rigorous determination of carbon offsets and monetization of the carbon. What are the barriers? How does a building operator monetize energy savings to marketable carbon? Michael Deru with Steve Turner.
  - c. Procedures for measuring energy performance of green buildings – Is this covered by Metrics committee.
  - d. Comparing predesign simulations with operational performance of buildings – what are valid comparisons? What metrics can be carried forward? What impacts on occupant behavior.
  - e. Document persistence of high performance building performance – how do we maintain long-term performance?
    - i. Continuous commissioning
    - ii. What information is required to maintain performance?
3. Meeting adjourned

**Present at subcommittee meeting:**

Michael Deru (chair)  
Tom Lawrence  
Andrew Price  
Paul Bertram  
Scott Miller  
Dave Grumman  
Tom Cappellin  
Diotima von Kempfski  
Thomas Kelly

**ASHRAE SLC Summer Meeting**  
**June 22, 2008**  
**4 PM to 4:50 PM**

Attendees:

John Swift	Cannon Design	<a href="mailto:jswift@cannondesign.com">jswift@cannondesign.com</a>
Tom Lawrence	UGA	<a href="mailto:lawrence@engr.uga.edu">lawrence@engr.uga.edu</a>
Malcolm Lewis	CTG	<a href="mailto:mlewis@ctg-net.com">mlewis@ctg-net.com</a>
Dunstan Macauley	Greenman-Pedersen, Inc.	<a href="mailto:dmacauley@gpinet.com">dmacauley@gpinet.com</a>
Dave Grumman	Grumman/Butkus Assoc	<a href="mailto:dlg@grummanbutkus.com">dlg@grummanbutkus.com</a>
Paul Torcellini	NREL	<a href="mailto:paul.torcellini@nrel.gov">paul.torcellini@nrel.gov</a>
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Stephen Turner	CTG	<a href="mailto:sturner@ctg-net.com">sturner@ctg-net.com</a>
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Douglas Fick	BSA Lifestructures	<a href="mailto:dfick@bsalifestructures.com">dfick@bsalifestructures.com</a>

The following is a summary of discussions at the meeting based on meeting notes taken by John Swift. Please contact John Swift at [jswift@cannondesign.com](mailto:jswift@cannondesign.com) with any suggested edits.

- 1) The target publishing date for the 3<sup>rd</sup> Edition of the Green Guide is Greenbuild 2009 (October 2009).
- 2) It was determined that the Senior Editorial Committee that worked on the 2<sup>nd</sup> Edition will continue on for the 3<sup>rd</sup> Edition.
- 3) JS to contact ASHRAE Publications staff to find out if there is a list of universities that are using the Green Guide as a text book.
- 4) The group that is putting together the exam for ASHRAE Sustainability Certifications wants to interact with the Green Guide editorial staff and make suggestions for GG3. The group will contact JS via e-mail.
- 5) The next edition is targeted to be available in searchable pdf format similar to how the ASHRAE standards are available now.
- 6) It was suggested that GG3 be printed on environmentally friendly paper (similar to Cradle to Cradle material?).
- 7) John Swift to work with ASHRAE to have formal announcement of the Green Guide, 3<sup>rd</sup> Edition development process. This will include:
  - a) Distribution message to all TC Chairs.
  - b) ASHRAE Insights Announcement
  - c) Comment form available on ASHRAE Website
  - d) E-mail announcement from ASHRAE "headquarters"
  - e) Others?
- 8) Content for the 3<sup>rd</sup> Edition was discussed.



- a) Architecture 2030 Challenge and the 2010 Imperative.
  - b) Carbon Reduction
  - c) Expand thermal comfort content
  - d) Net Zero Energy buildings- content on drivers/ global warming, resources, etc.
    - i) ASHRAE Vision 2020  
 ([http://www.ashrae.org/doclib/20080226\\_ashraevision2020.pdf](http://www.ashrae.org/doclib/20080226_ashraevision2020.pdf))
  - e) The impact of BIM.
  - f) Guidance for other green rating systems beyond LEED
    - i) Include LEED V3.0, EB, CI, NC, others?
  - g) Green Tips such as those on how to comply with AHRAE Standards 90.1-2004 and 62.1-2004.
  - h) More international perspectives
    - i) Climate perspectives throughout? New chapter? Appendix?
  - j) Extensive update of references including the Advanced Energy Design Guides, Standard 189, Standard 191, etc.
  - k) Energy Masterplanning/ Sustainability Masterplanning
  - l) LCA
  - m) POE/ M&V updated content (including existing buildings)
  - n) It was suggested that future revisions could use the ASHRAE Survival Guide Series as a vehicle for revisions.
  - o) Last minute “cast a net” over ASHRAE activities info. to be incorporated in Summer of 2009.
  - p) Exergy (Dave G.) <http://tg1.ashraetcs.org/index.html>
  - q) Address existing buildings throughout, or in a separate chapter.
- 9) A first DRAFT of the Table of Contents for GG3 will be completed by September, 2008
- 10) A 75% DRAFT of GG3 is targeted for the Winter Mtg in Chicago, January of 2009.