

Technical Committee Meeting Minutes  
TC 6.02 District Energy  
Sunday, 2023-06-25

---

Voting Committee Members:

Name	Position	Voting Status	Present
Mr. Daniel Pyewell	Chair	Voting	Yes
Ms. Jessica Mangler		Voting	No
Mr. Michael Calabrese		Voting	Yes
Mr. Timothy Anderson	Vice Chair	Voting	Yes
Mr. Mohamed Alagraa		Voting	Yes
Ms. Elizabeth (Betsy) Goll	Handbook Subcommittee Chair	Voting	Yes
Gary Phetteplace		Voting	Yes
Mr. Bill Ryan		Voting	No

6 Voting Members and 0 Non-Quorum Voting Members  
Need minimum 5 Voting Members Present to meet Quorum

Non-Voting Members and Guest:

Name	Position	Voting Status	Present
Mr. Bruce Lindsay	TC 6.9	Non-Voting	Yes
Mr. Geoff Bares	Programs Subcommittee Chair	Non-Voting	Yes
Mr. Keiron Nanan	Guest	Non-Voting	Yes
Mr. Jayson Bursill	Webmaster	Non-Voting	No
Mr. Hugo Aguilar	Guest	Non-Voting	Yes
Mr. Scott Duncan	Guest	Non-Voting	Yes
Mr. Wayne Barrowman	Guest	Non-Voting	Yes
Mr. Jay Eldridge	Research Subcommittee Chair	Non-Voting	No
Mr. David Blum	Guest	Non-Voting	Yes
Minzghe Hu	Guest	Non-Voting	Yes
Mr. Yuhang Zhang	Guest	Non-Voting	Yes
Mr. Wangda Zuo	Research Subcommittee Co-Chair	Non-Voting	No
Mr. Alexander Zhovoveb	Guest	Non-Voting	Yes
Mr. Steven Tredinnick		Non-Voting	Yes
Mr. Doug Reindl	TACC Liaison	Non-Voting	Yes
Mr. Richard Sweetser	DOE Liaison	Non-Voting	Yes
Mr. John Andrepont	IDEA Liaison	Non-Voting	No
Mr. Dustin Meredith	TAC Chair	Non-Voting	Yes
Mr. Dawen Lu	Section Head	Non-Voting	No

Ms. Elizabeth Zakelj	Chapter Technology Transfer Chair	Non-Voting	No
Mr. Omar Abdelaziz	Research Liaison	Non-Voting	No
Mr. Craig Wray	Standard Liaison	Non-Voting	No
Mr. Steven Hammerling	Staff Liaison	Non-Voting	No
Mr. Alan Neely	Membership Chair	Non-Voting	No
Mr. David Lumm	Guest	Non-Voting	Yes
Mr. Charles Bertuch	Secretary	Non-Voting	Yes
Mr. Alec Cusik	Guest	Non-Voting	Yes
Ms. Christine Troutman	Guest	Non-Voting	Yes
Mr. Scott Duncan	Guest	Non-Voting	Yes
Mr. Jimmy Principe	Guest	Non-Voting	Yes
Mr. Jamie Fine		Non-Voting	Yes
Mr. Ibrahim Hesham Hassanien		Non-Voting	Yes
Mr. Raji Khouri		Non-Voting	Yes

**1. The Chair (Daniel Pyewell) Called to Order at 3:31 pm and discussed -**

Technical Committee (TC) 6.02 is concerned with district energy technology and integrated systems that provide one or more forms of thermal energy or a combination of thermal energy and electric power from a central plant(s) to meet the heating, cooling, or combined thermal energy and power needs of end-users in two or more structures. The TC collects and disseminates information on regional resource planning including the design, performance, economic analysis, operation and maintenance of central plants, distribution networks, and consumer limited to materials, construction methods, heat transfer, fluid flow, and measurement. The scope of the TC includes the development and assessment of associated technologies for energy use sections.

**2. ASHRAE Code of Ethics Commitment – Announced by TC Chair (Daniel Pyewell)**

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 interest. (see full code of ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>.)

**3. Introductions / Attendees - TC Chair (Daniel Pyewell)**

- A. Name, company/location, & position on committee.
- B. Attendance was taken
- C. Review of Current Voting Members and TC officers, Quorum is met with 6 VMs present.
  - i. Ref. Manual of Procedures – 3.3.2 through 3.2.7
  - ii. Note that with our international voting member, it allows the TC to have one less individual to meet quorum.
- D. Recruiting of new members and officers for this technical committee (TC 6.02) were discussed.

**4. Meeting Minutes**

- A. February 6, 2023, Hybrid Winter meeting
  - i. Motion to approve – Betsy Goll, Second – Tim Anderson
  - ii. Approved 5-0-0 Chair NV

**5. Chair's Overview and Report**

- A. TC Breakfast Report –

## 6. Sub-Committee Reports:

### A. Programs: Geoff Bares (Subcommittee Chair)

- i. No programs have been approved for Tampa.
- ii. Future program submissions may include:
  - (1) Decarbonization effort on centralized district hydronic loop at NYU.
  - (2) Princeton conversion of steam system.
  - (3) Unsure if potential TC co-sponsoring of program from TC 7.9 "If Decarb = Electrification, do we have the power" has been resubmitted.
  - (4) Case studies on plastic underground piping for hot water systems (Texas A&M has experience).
  - (5) There is interest in seeing what is going on in Middle East related to District Energy.
  - (6) Sea water cooling.
  - (7) I Hesham mentioned he is willing to present on TES based on data he has from systems in Dubai.
  - (8) Micro-nuclear.

### B. Handbook: Betsy Goll (Subcommittee Chair)

- i. Comments on Chapters 12 and 15 by 7/25. Vote to approve will be held electronically.
- ii. District Heating Guide update will commence in the spring 2024.

### C. Membership: Alan Neely (Membership Subcommittee Chair)

- i. Speaking with ASHRAE staff generating interest in District Cooling. Hoping to promote seminar or webinar.
- ii. New members welcome Mingzhe Liu, Julia Ho, Mahabir Bhandari, Yunshu Xu, Anthonny Mueller, Arun Cherian, Sayani Haribabu, William Fisher, Tra Thai Thanh, Dr. Riley Barta.
- iii. Voting Members: Dan, Betsy, and Mohamed will expire after summer meeting but agreed to extend for one year. Alan Neely and Geoff Bares volunteered to become voting members by summer. Tim and Mike will drop off during summer.
- iv. Open positions: Standards.

### D. Standards: (No Subcommittee Chair)

- i. No active standards are associated with this TC 6.2.

### E. Webmaster: Jayson Bursill (Subcommittee Chair)

- i. Have updated website. Info being stored on Basecamp.

### F. Research: Jay Eldridge (Chair) and Wangda Zuo (Co-Chair)

- i. Banking of Cold in CHW Loop – RTAR chaired by Jamie Fine.
  - (1) Starting with survey to identify potential pilot locations.
  - (2) Develop computer model
  - (3) On site implementation
  - (4) 2 year data recording
  - (5) Hope to submit on August 15
  - (6) The committee voted in favor of proceeding with the RTAR

- 7. Visitors and Liaison Reports/Information from other Committee Representatives**
- A. DOE: Richard Sweetser. DOE has funds available. Need to connect through "Energy Exchange." Check Federal IRA for energy efficiency, thermal energy storage, CHP. Biden administration is pushing decarbonization.
  - B. IDEA: John Andrepoint. Two conferences each year, most recent 2 weeks ago in Chicago with 850 attendees. Focused on urban district utility systems. Campus Energy conference in February.
  - C. Building Decarbonization Task Force: Doug Lidell. Conference scheduled in Washington DC in October 2023.
  - D. ANSI/CSA/IGSHPA C448 Standard (Design and Installation of GSHP Systems for Commercial and Institutional Buildings).
    - i. Jessica Mangler, Lisa Meline, Steve Tredinnick, Gary Phetteplace
    - ii. Adding District Energy Section
    - iii. Stated that it is a work in progress. Meeting about 1 per month.
  - E. Handbook Liaison: 2024 "drop dead" date is 7/31/2023.
  - F. TC 6.9 Dan Pyewell will be Chair next year.
  - G. Publications:
    - i. Publications Committee respectfully requests your input on possible topics, authors and reviewers for future ASHRAE Journal articles. It is our goal to enhance the Journal's reputation as the preeminent publication in our industry. Each of you are most in tune with what our members are looking for to further their knowledge base. With this in mind, if you could respond with a topic or two with suggested authors and reviewers it would be greatly appreciated.
    - ii. Stephen Kavanaugh ASHRAE Publications Liaison is looking for any considerations in publications or articles for the Journal. If interested, please let the Chair know and he will get them in touch with Stephen.
- 8. Old Business-**
- A. Decarbonization focused- What technology is currently available to implement? Any efforts that can be made for R&D. Guidelines should be ready next July.
- 9. New Business**
- A. Contact Daniel Pyewell or Tim Anderson if you're interested in serving any positions on this TC.
  - B. Reviewers of ISO 52001- Charles Bertuch, Ibrahim Hesham Hassanien and Nan Chen. No updates.
  - C. TC is now on Basecamp. Please contact Dan or Tim if you need to be added to Group.
  - D. Input to strategic plan was requested. C Bertuch offered to comment but notes that current plan is out of date and newer version was requested.
  - E. Tim Anderson will be taking over as Chair. Thanks to Dan Pyewell for his service.
- 10. Meeting Adjourned at 5:38 pm.**
- A. Announcement by TC Chair (Daniel Pyewell) to close this session.

Submitted by,  
Charles Bertuch  
TC 6.02 Secretary  
2024-01-20