

Sub-Committee Meeting Minutes  
Technical Committee, TC 6.02 District Energy  
Sunday, 2019-06-23, Kansas City, MO

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TC 6.02 District Energy – Sub-Committee Meeting  
Sunday, 1:00 pm – 3:00 pm, KCCC, Room 2215C

Voting Committee Members Present:

Mr. Steve Tredinnick	2021-06-30	Mr. Daniel Pyewell	2022-06-30
Mr. Michael Calabrese	2022-06-30		

New Incoming Voting Committee Members:

None

**1. The Chair (Steve Tredinnick) Called to Order**

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. Handouts Distributed**

A. None

**3. Sub-Committee Discussion:**

A. Handbook: Steve Tredinnick (Chair)

- i. Chapter 12 and Chapter 15 were submitted to the Society and they were voted on by the TC in Atlanta
- ii. Galley proof will be sent to review, between July 2019 and February 2020.
- iii. Will be released in the Handbook in Spring 2020.
- iv. District cooling Guide was issued, version 2. In 2024 there will be a new release.

B. Program: Tim Anderson (Chair), not present.

- i. Suggested programs, by Chair Alan Neely.
  - (1) Chilled water insulation used in District Energy applications. \$20M lessons learned. High profile chilled water failures.
    - (a) The projects are Minute Maid, NRG Stadium and Lake Wood Church.
  - (2) A project in Dubai in preparation for the World Cup that has 4 football (soccer) stadiums. How does one air condition an open Soccer Stadium in the middle of the dessert?
    - (a) Plant is 1000T per AHU. 80 AHUs using 100%OA. The plant is about 2 miles away (piping distribution)
- ii. Additional topics discussed were the Chicago expansion, ENWAVE, under rail tracks. ROW issues.
- iii. Suggestion programs by Elizabeth (Betsy) Goll

- (1) Airport Plant MIA. Decommissioned air side chiller plant and introduced a 4000T chiller at CCPE plant.
- (2) Miami-Dade GSA District cooling plant that serves American Airlines (AA) Arena. System operates a low temperature, using 35deg water and a low supply air temperature.
- (3) Nova Southeast (SE), a Thermal Energy Storage (TES) plant. Elizabeth Goll will request additional information.

iv. CEC Tracks for Winter 2020 in Orlando

- (1) HVAC&R Fundamentals and Applications
- (2) Systems and Equipment
- (3) Refrigeration and Refrigerants
- (4) Cutting Edge Approaches
- (5) High Efficiency Design and Operation
- (6) Big Data and Smart Controls
- (7) Ventilation, IAQ and Air Distribution Systems
- (8) Standards, Guidelines and Codes

v. CEC Tracks for 2020 Annual in Austin

- (1) Fundamentals and Applications
- (2) HVAC&R Systems and Equipment
- (3) Professional Development
- (4) Research Summit
- (5) Potential Additional Track Ideas
  - (a) Optimization and HVAC&R
  - (b) Commissioning / Continuous Commissioning / Automated Fault Detection
  - (c) Modeling Throughout the Building Life Cycle
  - (d) Hydronic System Design
  - (e) Existing Buildings
  - (f) High Performance for Energy Intensive Building Types
  - (g) Energy Efficiency and Renewables
  - (h) Energy Recovery and Cascade Systems
  - (i) Building Certification and Operating Metrics
  - (j) Ground-Coupled Systems
  - (k) Life Safety
  - (l) Indoor Air Quality
- (6) Potential topics reviewed such as- Interactive Grid, Resilient Community

vi. Mr. Thomas Lawrence from the University of Georgia. He is a very good speaker, he presented in Atlanta.

vii. January 1, 2020. R123 no longer available. What will be used now?

- (1) Ken Shultz from Trane is knowledgeable and may be approached by Bill Ryan.

C. Research: Jay Eldridge (Chair), Not Present at this meeting.

- i. None

**4. Open Discussion**

- A. TC 6.02 Webpage is current and ASHRAE IT department will be approached to repair an issue with browsers.
- B. The ASHRAE authoring portal is only accessible with Internet Explorer v10.
- C. Any Research Topic Action Request (RTAR), Jay Molnar will be following up with other TC's for a potential joint venture.
- D. John Molnar suggested refrigerated warehouses, food temperatures. It could be beneficial for ASHRAE research to study food temperature,
  - i. Viking Cold is a vendor. This uses phase change materials.

E. Question was asked about the Society TC reorganization. It has not effected this TC. Society will be reviewing this by the Austin meeting. This topic will be reviewed in detail at 3pm, during the main meeting.

**5.** Meeting Adjourned at 1:45 pm.

Submitted by,  
Michael Calabrese  
TC 6.02 Secretary  
2019-07-02

DRAFT

# **2019 ASHRAE Annual Conference**

## **TC 6.02 District Energy**

### **Subcommittee Meeting**

Sunday, 2019-06-23, Kansas City, MO

## **Attendance List**

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Shaping Tomorrow's  
Built Environment Today

TC 6.2: Subcommittee Meeting - Sign-in Sheet

Meeting Info: Programs, Research, Handbook Location: Kansas City Convention Center, Room 2215C Date: 1:00-3:00pm on 2019-06-23

Name	Affiliation	E-mail	Member (Voting, Corresponding, or Guest?)	YEA Member? (Yes/No)
MICHAEL CALABRESE	BURNS ENGINEERING PHILADELPHIA PA	mcalabrese@burnsglobal.com	SECRETARY VM	NO
Steve Tredinnick	Burns + McDonnell Chicago	stredinnick@burnsmcd.com	Handbook chair VM	NO
Gary Phetteplace	GWA Research Lynn, NH	gary.p@gwa-research.com	CM	?
Dan Pyrenell	Tanco Engineering	dpyrenell@tancoeng.com	VM	NO
Bill Ryan	UIC	wryan@uic.edu	CM	No
Elizabeth (Betsy) Goll	FPLS	elizabeth.goll@fpl.com	CM	NO
Heather Sharif	ITW	hsharif@itwinsulation.com		Yes
Jim Young	ITW	jyoung@itwinsulation.com		
John Molnar	CoEng Advisors	john.molnar@coengadvisors.com	CM	N





1791 Tullie Circle, N.E./Atlanta, GA 30329  
404-636-8400

**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 6.2      DATE 2019-06-23

TC/TG/MTG/TRG TITLE District Energy

DATE OF MEETING 3:00-5:00pm on 2019-06-23      LOCATION Kansas City Convention Center, Room 2215C

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Alan Neely ( <i>Remote</i> )	2017	Jessica Mangler	2017	
Steve Tredinnick	2017	Geoffrey Bares	2016	
Michael Calabrese	2018	Scott Murray	2017	
Jay Eldridge	2018			
Daniel Pyewell	2018			
Tim Anderson ( <i>Remote</i> )	2018			

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

TAC Section Head: Mr. Dawen Lu	SHx@ashrae.net Where x is the section number
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	See ASHRAE email alias list for needed addresses.
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.

Technical Committee Meeting Minutes  
TC 6.02 District Energy  
Sunday, 2019-06-23, Kansas City, MO

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TC 6.02 District Energy – Meeting  
Sunday, 3:00 pm – 5:00 pm, KCCC, Room 2215C

Voting Committee Members Present:

Steve Tredinnick	2021-06-30	Alan Neely (Telephone)	2019-06-30
Michael Calabrese	2022-06-30	Tim Anderson (Telephone)	2022-06-30
Daniel Pyewell	2022-06-30		

New Incoming Voting Committee Members:  
None

**1. The Substitute Chair (Steve Tredinnick) Called to Order 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. General introductions**

- A. 19 persons in the room.
- B. 2 persons on the Telephone.
- C. Handouts
  - i. TC 6.02 District Energy Meeting Agenda
  - ii. IDEA Liaison report, 2019-05-31 by John Andrepont

**3. ASHRAE Code of Ethics Commitment – Announced by TC Substitute Chair (Steve Tredinnick)**

In this an 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>.)

**4. Membership (TC Substitute Chair (Steve Tredinnick))**

- A. Members & Guests Introductions, roundtable introductions
- B. Review of Current Voting Members and TC officers
  - i. Ref. Manual of Procedures – 3.33, 2.13, 2.14 & 2.15
- C. Recruiting of new members and officers for this technical committee (TC 6.02). Refer to attachment with members and their business cards.
  - i. Elizabeth (Betsy) Goll, ASHRAE Member #5059903
  - ii. Mohommed Ibrahim, ASHRAE Member #8149396
  - iii. John Molnar, ASHRAE Member #8133771
  - iv. Gary Phetteplace, ASHRAE Member #580344
  - v. Drew Turner
  - vi. Michael Langton, ASHRAE Member #2024455

- D. TC Chair Alan Neely will be completing his term in 2019-06-30. He will continue as TC Chair and complete the paperwork.
- E. The TC 6.02 roster requires updating and additional Voting Members to be considered.

**5. Meeting Minutes**

- A. January 2019, Winter meeting in Atlanta, GA (by TC 6.02 secretary, Michael Calabrese)
  - i. Revisions were reviewed. There are a few unknown names which are to be completed.
  - ii. Vote is deferred.

**6. Announcements by Chair:**

- A. CEC call for reviewers: Orlando 2020 Winter Meeting and others. Contact Tiffany Cox ([tcoc@ashrae.org](mailto:tcoc@ashrae.org)) and copy TC Chair, Alan Neely and Vice Chair, Jessica Mangler.
- B. Remote participation meeting is an option to Vote on today's items. To be reviewed by the Chair, Alan Neely.
- C. A "Thank you" letter for employers is available from the ASHRAE president.
- D. Friday 2019-08-02 is the deadline for the Orlando submissions.
- E. Tech council is looking for nominations for the "Hightower" Award. Due to section head, Dawen Lu, by 2019-09-01.
- F. Tracks are listed for Orlando Winter 2020 and Austin Annual 2020
- G. TC reorganization was reviewed.
  - i. Mergers are still being reviewed.
  - ii. Comments by TC were received and the earliest would be at the Austin meeting.

**7. Visitors and Liaison Reports/Information from other Committee Representatives**

- A. IDEA – John Andrepont (non-present, provided report to Chair)
  - i. See the 2019-05-31 report attached to the agenda handout and available on the TC webpage.
  - ii. ASHRAE and IDEA now have an agreement between the groups.
    - (1) Blake Ellis is the liaison between ASHRAE and IDEA.
    - (2) Conferences with IDEA may conflict, such as this conference, simultaneously with IDEA in Pittsburgh, PA.
    - (3) IDEA Campus meeting is typically at the time of the ASHRAE annual meeting

**8. Sub-Committee Reports:**

- A. Handbook: Steve Tredinnick (Chair)
  - i. Chapter 12 and Chapter 15 was approved in Atlanta and have been submitted to the Society
  - ii. Will be released in the new edition of the Handbook in Spring 2020.
  - iii. District Cooling Guide was issued, version 2. In 2024 there will be the next release.
- B. Membership: John Andrepont (Chair), not present
  - i. None
- C. Program: Tim Anderson (Chair), by Telephone.
  - i. Suggested programs, by Chair Alan Neely. Suggested for the 2020 Winter meeting in Orlando.
    - (1) Chilled water insulation used in District Energy applications. \$20M lessons learned. High profile chilled water failures.
      - (a) The projects are Minute Maid, NRG Stadium and Lake Wood Church.
    - (2) A project in Dubai in preparation for the World Cup that has 4 football (soccer) stadiums. How does one air condition an open Soccer Stadium in the middle of the dessert?
      - (a) Plant is 1000T per AHU. 80 AHUs using 100%OA. The plant is about 2 miles away (piping distribution)
  - ii. May be able to combine topics into one presentation.
    - (1) Alan and Mohammed to provide detailed information to Tim Anderson, for program review.
  - iii. CEC Tracks for Winter 2020 in Orlando
    - (1) HVAC&R Fundamentals and Applications
    - (2) Systems and Equipment

- (3) Refrigeration and Refrigerants
- (4) Cutting Edge Approaches
- (5) High Efficiency Design and Operation
- (6) Big Data and Smart Controls
- (7) Ventilation, IAQ and Air Distribution Systems
- (8) Standards, Guidelines and Codes

iv. CEC Tracks for 2020 Annual in Austin

- (1) Fundamentals and Applications
- (2) HVAC&R Systems and Equipment
- (3) Professional Development
- (4) Research Summit
- (5) Potential Additional Track Ideas
  - (a) Optimization and HVAC&R
  - (b) Commissioning / Continuous Commissioning / Automated Fault Detection
  - (c) Modeling Throughout the Building Life Cycle
  - (d) Hydronic System Design
  - (e) Existing Buildings
  - (f) High Performance for Energy Intensive Building Types
  - (g) Energy Efficiency and Renewables
  - (h) Energy Recovery and Cascade Systems
  - (i) Building Certification and Operating Metrics
  - (j) Ground-Coupled Systems
  - (k) Life Safety
  - (l) Indoor Air Quality

v. Refrigerant. January 1, 2020. R123 no longer available. What will be used now?

- (1) TC 8.2 Centrifugal Machines joint venture
- (2) Potential Speakers
  - (a) Thomas Lawrence, University of Georgia. He presented in Atlanta.
  - (b) Juan (UTA) may be able to present as well.
- (3) UTA Campus is off-grid. Their energy is cheapest in the world and they sell back to Austin.
- (4) Austin Energy Texas Facilities Commission. Robert Bush to volunteer to coordinate and assist Alan.
- (5) ENWAVE Chicago expansion under rail tracks. Right of way issues.

vi. Suggestions by Elizabeth Goll.

- (1) Airport Plant MIA. Decommissioned an air side chiller plant and introduced a 4000T chiller at CCPE plant.
- (2) Miami-Dade GSA District cooling plant that serves American Airlines Arena. The systems uses 35degF water and low temperature air distribution.
- (3) Nova SE, a Thermal Energy Storage (TES) plant. Not much information is known. Elizabeth Goll will get more information to present to this TC.

vii. John Karakash, had a program about 2 years ago, TC 8.3 Absorption and Heat Operated Machines and TC 6.9 Thermal Storage.

- (1) Educational Subcommittee of TC 7.3 Operation and Maintenance Management
  - (a) Educational training or a forum at the 2020 Winter conference in Orlando on Lessons Learned.
- (2) Topics should be "Nightmare Stories"

D. Standards: Open

- i. NONE

E. Webmaster: Dan Pyewell (Chair)

- i. IT will be approached to fix an issue with browsers.

F. Research: Jay Eldridge (Chair)

- i. The District Cooling guide was discussed. RP 1762 a review meeting is scheduled for Monday 2019-06-24. TC 1.10 Combined Heat and Power Systems, is co-sponsoring.
- ii. Jay expressed a desire to have a replacement as Chair. Gary Phetteplace volunteered.

**9. Old Business-**

- A. None

**10. New Business-**

- A. Mention of the newest District Energy, version 2, is in the ASHRAE bookstore now.
- B. Overview of TCs potentially combining and being synergized.

**11. Meeting Adjourned at 4:03 pm.**

- A. Announcement by Substitute Chair (Steve Tredinnick) to close this session.

Submitted by,  
Michael Calabrese  
TC 6.02 Secretary  
2019-07-02

Subcommittee Meetings - Day, Date, Times, & Location Prior to TC 6.02 Meeting:

TC 6.02 Handbook - Sunday, 1:00 pm – 3:00 pm, KCCC, Room 2215C  
TC 6.02 Program - Sunday, 1:00 pm – 3:00 pm, KCCC, Room 2215C  
TC 6.02 Research - Sunday, 1:00 pm – 3:00 pm, KCCC, Room 2215C

# 2019 ASHRAE Annual Conference

TC 6.02 District Energy

**Main Meeting**

Sunday, 2019-06-23, Kansas City, MO

**HANDOUT**

# Agenda: TC 6.2 District Energy Sunday, June 23<sup>rd</sup>, 2019 Kansas City, MO.

**HANDOUT**

Cosponsoring      None

## TC 6.2 Main Committee Meeting

Sunday, June 23<sup>rd</sup> 3:00 pm – 5:00 pm, Kansas City Convention Center, Room 2215C

## TC 6.2 Programs, Research, Handbook

Sunday, June 23<sup>rd</sup> 1:00 pm – 3:00 pm, Kansas City Convention Center, Room 2215C

## Voting Committee Members

Mr. Alan Neely	6/30/2020	Mr. Michael Calabrese	6/30/2022
Mr. Geoffrey Bares	6/30/2020	Mr. Steve Tredinnick	6/30/2021
Ms. Jessica Mangler	6/30/2020	Mr. Timothy Anderson	6/30/2022
Mr. Scott Murray	6/30/2021		
Mr. Daniel Pyewell	6/30/2022		

## New Incoming Voting Committee Members

### 1. Call to Order: (TC Chairman- Alan Neely)

Technical Committee 6.2 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. Agenda & Attendance Handouts - (TC Chairman- Alan Neely)

### 3. ASHRAE Code of Ethics Commitment – (TC Chairman – Alan Neely)

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 Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>.)

### 4. Membership (Alan Neely)

- Members & Guests Introductions and Sign In
- Review of Current Voting Members and TC 6.2 Officers (Ref. Manual of Procedures – 3.2.2, 2.13, 2.14 & 2.15)
- Discuss recruiting new members and officers for this Technical Committee (TC 6.02)

### 5. Approval of Minutes from 13<sup>th</sup> January 2019 meeting in Atlanta, Georgia (TC 6.02 Secretary – Michael Calabrese)

### 6. Announcements by Chair:

- A. CEC Call for Reviewers: 2020 Winter Meeting and others. Contact Tiffany Cox ([tcox@ashrae.org](mailto:tcox@ashrae.org)) and copy TC Chair & Vice Chair (TC Chairman- Alan Neely)
  
- 7.** Visitors & Liaison Reports/Information from other Committee Representatives
  - A. DOE- Richard Sweetser
  - B. IDEA- John Andrepont- Attached
  
- 8.** Sub-Committee Reports:
  - A. Handbook: Steve Tredinnick (Chair)
  - B. Membership: John Andrepont (Chair)
  - C. Program: Tim Anderson (Chair)-
    - i. Ideas:
      - (1) Mohammed- How does one air condition an open roof Soccer Stadium in the middle of the dessert?
      - (2) Alan- Chilled water insulation used in district energy applications (Orlando is an ideal place to give this presentation)
  
  - D. Standards: Open
  - E. Webmaster: Dan Pyewell (Chair)
  - F. Research: Jay Eldridge (Chair)
  
- 9.** Old Business-
  
- 10.**New Business-
  - A. TC Reorganization?
  
- 11.**Meeting Adjourn (5pm)

Subcommittee Meetings - Day, Date, Times, & Location Prior to TC 6.2 Meeting:

- TC 6.02 Handbook - Sunday, 23 June 2019, 1:00 - 3:00 pm, Kansas City Convention Center, Room 2215C
- TC 6.02 Program - Sunday, 23 June 2019, 1:00 - 3:00 pm, Kansas City Convention Center, Room 2215C
- TC 6.02 Research - Sunday, 23 June 2019, 1:00 - 3:00 pm, Kansas City Convention Center, Room 2215C

**HANDOUT**

May 31, 2019

**IDEA Liaison Report to ASHRAE TC 6.2 and TC 1.10**

Prepared by: John Andrepont (+1-630-353-9690 / [CoolSolutionsCo@aol.com](mailto:CoolSolutionsCo@aol.com))

The International District Energy Association (IDEA) is an industry association of >2,300 members. The membership includes: District Energy (Thermal) Utilities; Physical Plant and Utilities Personnel from University, Medical, and other District Energy Facilities; Equipment Manufacturer/Suppliers; Service Providers to the Industry; other District Heating & Cooling Associations; plus Government, Student, and other Personal members.

IDEA publishes a quarterly magazine, entitled *District Energy*.

IDEA has two major conferences each year (one focused on campus District Energy systems and one focused on commercial thermal utility District Energy systems), as well as smaller workshops on subjects such as marketing and thermal distribution, plus occasional regionally-focused or technology-focused conferences. Each major conference also focuses on integrating Combined Heat & Power (CHP) and Thermal Energy Storage (TES) with District Energy.

Upcoming IDEA conferences include:

- 110<sup>th</sup> Annual Conference & Trade Show  
June 24-27, 2019 – Pittsburgh, Pennsylvania
- 33<sup>rd</sup> Annual Campus Energy Conference, Workshops & Trade Show  
February 10-14, 2020 – Denver, Colorado
- 111<sup>th</sup> Annual Conference & Trade Show  
June 22-25, 2020 – Washington, D.C.
- 34<sup>th</sup> Annual Campus Energy Conference, Workshops & Trade Show  
February 16-19, 2021 – San Francisco, CA

For further information on IDEA, contact:

Rob Thornton, President  
IDEA  
24 Lyman Street, Suite 230  
Westborough, Massachusetts 01581

tel: 508-366-9339  
fax: 508-366-0019  
e-mail: [rob.idea@districtenergy.org](mailto:rob.idea@districtenergy.org)  
website: [www.districtenergy.org](http://www.districtenergy.org)

# **2019 ASHRAE Annual Conference**

**TC 6.02 District Energy**

**Main Meeting**

**Sunday, 2019-06-23, Kansas City, MO**

**Attendance List**

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Shaping Tomorrow's  
Built Environment Today

TC 6.2 District Energy Meeting Sign-in Sheet

Meeting Info: Main Committee Location: Kansas City Convention Center, Room 2215C Date: 3:00-5:00pm on 2019-06-23

Name	Affiliation	E-mail	Member (Voting, Corresponding, or Guest?)	YEA Member? (Yes/No)
MICHAEL CALABRESE	BURNS ENGINEERING PHILA. PA	mcalabrese@burns-group.com	SECRETARY VM	NO
Steve Tredinnick	BURNS+McDonnell Chicago	stredinnick@burnsmcd.com	Handbook VM	NO
Gary Phetteplace	GWA Research Lyons, NH	gary@gwa-research.com	CM	NO
JAY ELDRIDGE	DAIKIN APPLIED	JAY.ELDRIDGE@ DAIKINAPPLIED.COM	CM	NO
PATRICK VILLAUME	PATTERSON-KEYEY	PVILLAUME@HARSCO.COM	G	X
Drew Turner	Danfoss	drew.turner@danfoss.com	Guest	N
Ben Levie	Seattle City Light	Ben.Levie@seattle.gov	Guest?	N
Trey Bush	Braetlet	trey.bush@braetlet.com	Guest	Y
Margaret Phillips	P2S Inc	margaret.phillips@p2sinc.com	guest	Y
John KARAKASH	Resource Professionals Group LLC	JTK@ resourceprofessionalsgroup.com	guest - app. for corr.	✓



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Shaping Tomorrow's  
Built Environment Today

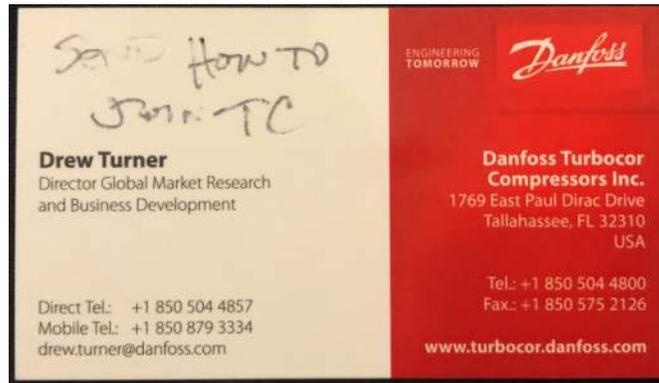
TC 6.2 District Energy Meeting Sign-in Sheet

Meeting Info: Main Committee Location: Kansas City Convention Center, Room 2215C Date: 3:00-5:00pm on 2019-06-23

Name	Affiliation	E-mail	Member (Voting, Corresponding, or Guest?)	YEA Member? (Yes/No)
Mohamed Ibrahim	Dc Pro engine	AQRAN@hotmail.com	corresponding	No
Daniel R. Pyrenell	dpyrenell@tancoeng.com Tanco Engineering		Voting member	No
John Molnar	CoEng Advisors	john.molnar@coengadvisors.com	CM	N
Elizabeth (Betsy) Goll	FPLS	elizabeth.goll@fpl.com	CM	N
Jim Young	ITW	jyoung@itwinsulation.com	CM	N
Heather Sharif	ITW	hsharif@itwinsulation.com	CM	Y
DRAGOS PARASCHIV	HUMBER COLLEGE	dvdagos@paraschiv.ca	<del>CM</del>	No
Daryl Stauffer	Johnson Controls	daryl.stauffer@jci.com	CM	NO

# ATTACHMENT

CONTACTS LISTED BELOW HAVE REQUESTED INFORMATION ABOUT JOINING TC 6.02 AND BECOMING A VOTING MEMBER



Drew Turner

Michael Langton, ASHRAE Member #2024455



Elizabeth (Betsy) Goll, ASHRAE Member #5059903  
-interested in getting involved with the Handbook

Mohamed Ibrahim, ASHRAE Member #8149396

John Molnar, ASHRAE Member #8133771

Gary Phetteplace, ASHRAE Member #580344

# **2019 ASHRAE Annual Conference**

**TC 6.02 District Energy**

**Sunday, 2019-06-23, Kansas City, MO**

**TC 6.02 Roster**  
**2019-05-31**



# ASHRAE Roster

## DISTRICT ENERGY-T-TAC-TC06.02

### As of Any Date

Member  
8141681                      049                      Voting

Term in Position:    07/01/2016 to 06/30/2020

Term on Committee: 07/01/2010 to 06/30/2020

**Mr Geoffrey Bares**

Enwave Chicago  
200 W Jackson Blvd Ste 1310  
Chicago, IL 60606-6941

Phone: (312)377-1793      Fax: (815)439-6595

Email: geoff.bares@enwave.com

ABSENT

Member  
8300539                      075                      Voting

Term in Position:    07/01/2017 to 06/30/2021

Term on Committee: 10/13/2016 to 06/30/2021

**Mr Scott T Murray**

Clearway Energy  
2152 Howard St  
Omaha, NE 68102-2455

Phone: 402-515-4589      Fax:

Email: scott.murray@clearwayenergy.com

YEA

ABSENT

Provisional Corresponding Member  
8299861                      999                      Non-voting

Term in Position:    01/28/2018 to 01/28/2020

Term on Committee: 01/28/2018 to 01/28/2020

**Mr Hyeunguk Ahn**

265 Blue Course Dr Apt 26A  
State College, PA 16803-2859

Phone: 18145718076      Fax:

Email: wook01230@gmail.com

YEA

Provisional Corresponding Member  
8163134                      022                      Non-voting

Term in Position:    07/06/2017 to 07/06/2019

Term on Committee: 07/06/2017 to 07/06/2019

**Mr Joseph Catrambone**

Johnson Controls  
5000 Renaissance Dr  
New Freedom, PA 17349-8979

Phone: (717)771-7734      Fax:

Email: joseph.a.catrambone@jci.com

Provisional Corresponding Member  
8275822                      084                      Non-voting

Term in Position:    07/28/2017 to 07/28/2019

Term on Committee: 07/28/2017 to 07/28/2019

**Mr Jose Chavez**

tk1sc  
15231 Laguna Canyon RD Ste 100  
Irvine, CA 92618-7714

Phone: 949-751-5868      Fax:

Email: jchavez75@gmail.com

YEA

Provisional Corresponding Member  
8256493                      084                      Non-voting

Term in Position:    01/21/2018 to 01/21/2020

Term on Committee: 01/21/2018 to 01/21/2020

**Charlotte Wan Dean**

P2S Engineering  
5000 E Spring St 8th FL  
Long Beach, CA 90815-5218

Phone: (562)497-2999      Fax:

Email: charlotte.dean@p2sinc.com

YEA

Provisional Corresponding Member  
8264693                      118                      Non-voting

Term in Position:    01/24/2018 to 01/24/2020

Term on Committee: 01/24/2018 to 01/24/2020

**Dr S. David Dvorak**

University of Maine  
119 Boardman Hall  
University of Maine  
Orono, ME 04469-5711

Phone: (207)581-2338      Fax: (207)581-2113

Email: dvorak@maine.edu

Provisional Corresponding Member  
5138571                      999                      Non-voting

Term in Position:    06/26/2018 to 06/26/2020

Term on Committee: 06/26/2018 to 06/26/2020

**Mr Frederic Genest**

Natural Resources Canada - CanmetENERGY  
1615 Lionel-Boulet Blvd  
Varenes, QC J3X 1S6 CANADA

Phone: (450) 652-3214      Fax:

Email: frederic.genest2@canada.ca

# ASHRAE Roster

## DISTRICT ENERGY-T-TAC-TC06.02

### As of Any Date

## Provisional Corresponding Member

5059903                      104                      Non-voting

Term in Position:    06/25/2018 to 06/25/2020

Term on Committee: 06/25/2018 to 06/25/2020

**Ms Elizabeth A Goll**2005 N Hibiscus Dr  
North Miami, FL 33181-2351

Florida Power &amp; Light

Phone: (305)552-4893      Fax: (305)899-2272

Email: elizabeth.goll@fpl.com



Would like to be a VM



PRESENT

## Provisional Corresponding Member

8319082                      071                      Non-voting

Term in Position:    07/03/2018 to 07/03/2020

Term on Committee: 07/03/2018 to 07/03/2020

**Joshua Kirlin**2310 Nabors Ln  
Odessa, TX 79761-1555

Win-Sam, Inc.

Phone: (432)362-0881      Fax:

Email: jkirlin@winsam.com



YEA

## Provisional Corresponding Member

5218882                      185                      Non-voting

Term in Position:    10/19/2017 to 10/19/2019

Term on Committee: 10/19/2017 to 10/19/2019

**Mr Sayani Sri Haribabu**

Gemini Cooling Systems Projects Pvt Ltd

No 90 Kutcheri  
Road Mylapore

Chennai, Tamil Nadu 600004 INDIA

Phone: 9381045229      Fax: 914424985075

Email: sayanihari@yahoo.com

## Provisional Corresponding Member

8358777                      074                      Non-voting

Term in Position:    05/07/2019 to 05/07/2021

Term on Committee: 05/07/2019 to 05/07/2021

**Steven Klekas**

The University of Utah

1795 E South Cmps Dr  
RM 222

Salt Lake City, UT 84112-9449

Phone: 801-674-8387      Fax:

Email: steven.klekas@fm.utah.edu



YEA

## Provisional Corresponding Member

8320250                      073                      Non-voting

Term in Position:    01/18/2019 to 01/18/2021

Term on Committee: 01/18/2019 to 01/18/2021

**Karl W. Heine**

7761 Teller St

Arvada, CO 80003-2226

Colorado School of Mines

Phone: (307) 751-0250      Fax:

Email: kheine@mines.edu



YEA

## Provisional Corresponding Member

8127696                      084                      Non-voting

Term in Position:    01/23/2018 to 01/23/2020

Term on Committee: 01/23/2018 to 01/23/2020

**Mr David Klug**

P2S Engineering

5000 E Spring St Ste 8

Long Beach, CA 90815-5218

Phone: (562)497-2999      Fax:

Email: david.klug@p2sinc.com



YEA

## Provisional Corresponding Member

8266380                      175                      Non-voting

Term in Position:    05/02/2019 to 05/02/2021

Term on Committee: 05/02/2019 to 05/02/2021

**Mr Farhan Juratli**

Nakheel

The Gardens Jebel Ali  
P.O. Box 17777

Dubai, UNITED ARAB EMIRATES

Phone: 509402997      Fax:

Email: Farhan.Juratli@nakheel.com

## Provisional Corresponding Member

8281901                      021                      Non-voting

Term in Position:    09/17/2018 to 09/17/2020

Term on Committee: 09/17/2018 to 09/17/2020

**Noreshvarman Manisagar**2012 W Girard Ave Apt 11B  
Philadelphia, PA 19130-1473

Phone: (267)506-3919      Fax:

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YEA

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# ASHRAE Roster

## DISTRICT ENERGY-T-TAC-TC06.02

### As of Any Date

Provisional Corresponding Member  
8285300                      025                      Non-voting

Term in Position:    06/08/2018    to    06/08/2020

Term on Committee:    06/08/2018    to    06/08/2020

**Mihir Nandkeolyar**    YEA

1909 Bank St

Baltimore, MD 21231-2511

Phone: (419)508-3059    Fax: (419)508-3059  
(4195083059)

Email: mihir.nandkeolyar@jci.com

Provisional Corresponding Member  
8237023                      999                      Non-voting

Term in Position:    09/25/2018    to    09/25/2020

Term on Committee:    09/25/2018    to    09/25/2020

**Margaret Peterson**    YEA

P2S Engineering

5000 E Spring St 8th FL

Long Beach, CA 90815-5218

Phone: (612)275-7552    Fax:

Email: grit.pete@gmail.com

Provisional Corresponding Member  
8067217                      008                      Non-voting

Term in Position:    03/09/2018    to    03/09/2020

Term on Committee:    03/09/2018    to    03/09/2020

**Mr Sergio Sadaba**

3872 W Mercer Way

Mercer Island, WA 98040-3356

Stantec

Phone: (206) 485-5706    Fax: 3122

Email: sergio.sadaba@gmail.com

Provisional Corresponding Member  
8355770                      064                      Non-voting

Term in Position:    01/25/2019    to    01/25/2021

Term on Committee:    01/25/2019    to    01/25/2021

**Mrs Heather A Sharif**    YEA

ITW Insulation Systems

1370 E 40th St  
Ste 1 Bldg 7

Houston, TX 77022-4150

Phone: (713) 696-5649    Fax:

Email: hsharif@itwinsulation.com

PRESENT

Provisional Corresponding Member  
8005818                      022                      Non-voting

Term in Position:    06/14/2017    to    06/14/2019

Term on Committee:    06/14/2017    to    06/14/2019

**Mr Daryl M Stauffer**

Johnson Controls - Frick

100 Cumberland Vly Ave

Waynesboro, PA 17268-1206

Phone: (717)765-2480    Fax: XXXXXXXXXX

Email: daryl.stauffer@jci.com

PRESENT

Provisional Corresponding Member  
8188490                      064                      Non-voting

Term in Position:    01/26/2018    to    01/26/2020

Term on Committee:    01/26/2018    to    01/26/2020

**Dr Lei Wang, PhD**

4412 Hearst Ct

College Station, TX 77845-2004

Texas A&M University

Phone: (979)422-2831    Fax:

Email: leiwanghello@gmail.com

Provisional Corresponding Member  
8255666                      503                      Non-voting

Term in Position:    07/02/2017    to    07/02/2019

Term on Committee:    07/02/2017    to    07/02/2019

**Dr Duan Wu**

Mitsubishi Electric R&D Europe B.V.

17 Firth Road (AC3)

Houstoun Industrial Estate

Livingston, EH54 5DJ UNITED KINGDOM

Phone: +44 (0)1506    Fax:  
446970

Email: d.wu@uk.mercede.mee.com

Corresponding Member  
8149396                      175                      Non-voting

Term in Position:    07/01/2016    to

Term on Committee:    to

**Mr Mohamed Eltaieb Ibrahim Alagraa**

Dc Pro Engineering

Sharjah -Buhirah off2507 Al Durah  
P.O.Box 22851

Sahrjah, 22851 UNITED ARAB EMIRATES

Phone: 0506557612    Fax: 0665566881

Email: aqraa@hotmail.com

Would like to be a VM

PRESENT





# ASHRAE Roster

## DISTRICT ENERGY-T-TAC-TC06.02

### As of Any Date

---

Corresponding Member  
 259862                    070                    Non-voting  
 Term in Position:    07/01/2015 to  
 Term on Committee:  04/29/2014 to 06/30/2015  
**Mr Arthur L Giesler**  
 PermAlert ESP  
 PO Box 2031  
 Colleyville, TX 76034-2031  
 Phone: 817/239-2234      Fax:  
 Email: art.giesler@att.net

---

Corresponding Member  
 8131299                    049                    Non-voting  
 Term in Position:    07/01/2015 to  
 Term on Committee:  08/21/2014 to 06/30/2015  
**Mr Paul E Glanville**  
 Gas Technology Institute  
 1700 S Mt Prospect Rd  
 Des Plaines, IL 60018-1804  
 Phone: (847)222-3278      Fax:  
 Email: paul.glanville@gastechnology.org

---

Corresponding Member  
 8001394                    009                    Non-voting  
 Term in Position:    07/01/2016 to  
 Term on Committee:  11/11/2015 to 06/30/2016  
**Mr Matthew T Goss**  
 CDM Smith  
 11 British Amer Blvd Ste 200  
 Latham, NY 12110-1464  
 Phone: (518)782-4500      Fax: (518)786-3810  
 Email: gossmt@cdmsmith.com

---

Corresponding Member  
 5194913                    008                    Non-voting  
 Term in Position:    07/01/2015 to  
 Term on Committee:  08/21/2014 to 06/30/2015  
**Mr Yanzheng Guan, PhD**  
 2011 Powhatan St  
 Falls Church, VA 22043-1861  
 ARUP  
 Phone: (212)593-0486      Fax:  
 Email: don.guan@gmail.com

---

Corresponding Member  
 7981029                    062                    Non-voting  
 Term in Position:    06/26/2016 to  
 Term on Committee:                    to  
**Mr David L Handwork, PE**  
 Arkansas State University  
 PO Box 250  
 State Univ, AR 72467-0250  
 Phone: (870)680-4691      Fax: (870)972-3691  
 Email: dhandwork@astate.edu

---

Corresponding Member  
 8018351                    043                    Non-voting  
 Term in Position:    07/01/2011 to  
 Term on Committee:                    to  
**Mr Gordon H Hart**  
 Artek Engineering, LLC;  
 20 Deerfield Rd  
 Shrewsbury, MA 01545-1530  
 Phone: (508)842-5826      Fax:  
 Email: gordonhart@gmail.com

---

Corresponding Member  
 8204394                    086                    Non-voting  
 Term in Position:    07/01/2017 to  
 Term on Committee:                    to  
**Mr Jon Heitzinger**      YEA  
 Northern Arizona University  
 530 E. Pine Knoll Dr.  
 Flagstaff, AZ 86011-0001  
 Phone: (928)523-6895      Fax:  
 Email: Jonathan.Heitzinger@nau.edu

---

Corresponding Member  
 8121818                    105                    Non-voting  
 Term in Position:    07/01/2012 to  
 Term on Committee:  07/01/2011 to 06/30/2012  
**Mr Nathan L Ho**      YEA  
 P2S Engineering  
 5000 E Spring St Ste 8  
 Long Beach, CA 90815-5218  
 Phone: (562)497-2999      Fax:  
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---

# ASHRAE Roster

## DISTRICT ENERGY-T-TAC-TC06.02

### As of Any Date

Corresponding Member  
7988802                    038                    Non-voting  
Term in Position:        07/01/2016 to  
Term on Committee:                    to  
**Mr Charles J Hofstetter, Jr**  
Karpinski Engineering  
3135 Euclid Ave Ste 200  
Cleveland, OH 44115-2524  
Phone: (440)823-8270        Fax:  
Email: joehofstetter@hotmail.com

Corresponding Member  
8115717                    094                    Non-voting  
Term in Position:        01/29/2017 to  
Term on Committee:                    to  
**Mr John D Jackson, PE**  
University of Florida  
PO Box 117700  
Gainesville, FL 32611-7735  
Phone: (352)294-0816        Fax: (352)392-5715  
Email: dustin.jackson@ufl.edu

Corresponding Member  
8183966                    105                    Non-voting  
Term in Position:        06/26/2017 to  
Term on Committee:                    to  
**Mr Stephen P Kazim**        **YEA**  
1360 Redondo Ave Apt 104  
Long Beach, CA 90804-2880  
P2S Engineering  
Phone: (714)496-3323        Fax:  
Email: stephen.kazim@p2sinc.com

Corresponding Member  
8075227                    161                    Non-voting  
Term in Position:        07/01/2011 to  
Term on Committee:                    to  
**Mr Mohamed Khalil, LEED, HBDP, CEM**  
flat 42, building 8, group 52  
Elrehab city, New Cairo  
Cairo, 11841 EGYPT  
Shaker Group  
Phone: 110009624        Fax: 225204505  
Email: othman@shakeregyp.com

Corresponding Member  
8173962                    149                    Non-voting  
Term in Position:        07/01/2015 to  
Term on Committee:        10/14/2014 to 06/30/2015  
**Dr Chun-Yong Khoo**        **YEA**  
8 Jalan Serunai Satu  
Taman Desa Utama  
Klang Selangor, 41200 MALAYSIA  
IAQ Solutions Sdn. Bhd.  
Phone: +60139819828        Fax: +60351240312  
Email: kcybiz@gmail.com

Corresponding Member        **Would like to be a VM**  
2024455                    064                    Non-voting  
Term in Position:        07/01/2017 to  
Term on Committee:                    to  
**Mr Michael J Langton, PE**  
Enhanced Professional Services, LLC  
18725 Stewart Hill Dr  
Montgomery, TX 77356-2870  
Phone: (832) 867-7149        Fax: (832) 442-5217  
Email: mlangton@langtonenergy.com

Corresponding Member  
8184544                    025                    Non-voting  
Term in Position:        07/01/2015 to  
Term on Committee:        08/21/2014 to 06/30/2015  
**Mr John Lau**  
Baltimore Aircoil Company  
7600 Dorsey Run Rd  
Jessup, MD 20794-9328  
Phone: (410)799-6522        Fax: (410)799-6405  
Email: jlau@baltimoreaircoil.com

Corresponding Member  
8094334                    034                    Non-voting  
Term in Position:        12/16/2016 to  
Term on Committee:                    to  
**Mr Ryan S Lime**  
105 Shady Bluff Ct  
Saint Augustine, FL 32084-6562  
STELLAR ENERGY  
Phone: (904)687-8264        Fax:  
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ASHRAE Roster  
DISTRICT ENERGY-T-TAC-TC06.02

As of Any Date

CORRESPONDING MEMBER

5079390 095 Non-voting

Term in Position: 07/01/1997 to

Term on Committee: to

**Mr Timothy P McDowell**

2330 High Lonesome Trl

Lafayette, CO 80026-9396

Thermal Energy Systems Specialists

Phone: (608)274-2577 Fax: (608)278-1475

Email: mcdowell@tess-inc.com

Corresponding Member

8133771 037 Non-voting

Term in Position: 07/01/2015 to

Term on Committee: to

**Mr John S Molnar**

YEA

CoEng Advisors Inc.

3365 Harvester Rd.  
Ste 205

Burlington, ON L7N 3M8 CANADA

Phone: 905 320-3363 Fax:

Email: john.molnar@coengadvisors.com

PRESENT

CORRESPONDING MEMBER

545643 079 Non-voting

Term in Position: 07/01/2006 to

Term on Committee: 07/01/1989 to 06/30/2006

**Mr Robert G O'Brien, PE**

5019 157th Ave SE

Bellevue, WA 98006-3634

Washington State University

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Email: rgonu@comcast.net

Corresponding Member

8237279 049 Non-voting

Term in Position: 07/01/2015 to

Term on Committee: 10/21/2014 to 06/30/2015

**Mr Thomas Olmsted**

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SWEP

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Chicago, IL 60647-3706

Phone: 404-408-9571 Fax:

Email: tolmsted@gmail.com

Corresponding Member

8080062 149 Non-voting

Term in Position: 07/01/2010 to

Term on Committee: to

**Mr Muhammad Isa Othman**

No 3 Jalan Tepuan Satv 8/4A  
Shan Alam

Selangor, 40000 MALAYSIA

Phone: 60123348527 Fax:

Email: m\_isa1709@yahoo.com

Corresponding Member

5203711 053 Non-voting

Term in Position: 07/01/2017 to

Term on Committee: 07/01/2008 to 06/30/2019

**Mr Drew L Overmiller, PE**

Burns & McDonnell

9400 Ward Pkwy

Kansas City, MO 64114-3319

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Email: dovermiller@burnsmcd.com

Corresponding Member

8216788 079 Non-voting

Term in Position: 07/01/2015 to

Term on Committee: 08/21/2014 to 06/30/2015

**Mr Brandon Oyer**

YEA

Enwave Seattle

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Seattle, WA 98101-2509

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Corresponding Member

7984983 999 Non-voting

Term in Position: 07/01/2008 to

Term on Committee: to

**Dr Dragos Paraschiv, P.Eng**

2017 Waterbridge Dr.

Burlington, ON L7M4G6 CANADA

Humber Institute of Technology and Advanced Learning

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PRESENT

# ASHRAE Roster

## DISTRICT ENERGY-T-TAC-TC06.02

### As of Any Date

---

Corresponding Member  
 3001624                      049                      Non-voting  
 Term in Position:        07/01/2013 to  
 Term on Committee:    07/01/1988 to 06/30/2013  
**Mr Victor L Penar**  
 7060 Edgebrook Ln  
 Hanover Park, IL 60133-3747  
 Phone:                      Fax:  
 Email: cvpenar1@comcast.net

---

Corresponding Member  
 596604                      032                      Non-voting  
 Term in Position:        07/01/2010 to  
 Term on Committee:        to  
**Mr Frank J Pucciano**  
 769 Bruxton Woods Ct SW  
 Lilburn, GA 30047-5374  
 Schneider Electric  
 Phone: 404/216-5191        Fax:  
 Email: frank.pucciano@schneider-electric.com

---

Corresponding Member  
 5175060                      049                      Non-voting  
 Term in Position:        07/01/2016 to  
 Term on Committee:        to  
**Mr Dharam V Punwani**  
 Avalon Consulting Inc  
 427 Prairie Knoll Dr  
 Naperville, IL 60565-4152  
 Phone: (630)983-0883        Fax: (630)357-1004  
 Email: dpunwani@avalonconsulting.com

---

Corresponding Member  
 8301848                      001                      Non-voting  
 Term in Position:        03/13/2017 to  
 Term on Committee:        to  
**Mr PJ Qvarnstrom**  
 17 Cocheset Path  
 West Yarmouth, MA 02673-2559  
 Swep  
 Phone: (918)231-6770        Fax:  
 Email: philip.qvarnstrom@swep.net

---

Corresponding Member  
 2007830                      080                      Non-voting  
 Term in Position:        07/01/2009 to  
 Term on Committee:    07/01/1997 to 06/30/2009  
**Mr Kevin D Rafferty**  
 Retired  
 PO Box 1935  
 Klamath Falls, OR 97601-0152  
 Phone: (541)783-3324        Fax: (541)783-3324  
 Email: tripower@bmi.net

---

Corresponding Member  
 2050731                      049                      Non-voting  
 Term in Position:        07/01/2008 to  
 Term on Committee:        to  
**Dr William A Ryan, PhD**  
 400 N Walnut Ave  
 Wood Dale, IL 60191-1549  
 University of Illinois at Chicago  
 Phone: (630)561-4448        Fax: (312)996-5620  
 Email: wryan@uic.edu

---



Corresponding Member  
 5098686                      175                      Non-voting  
 Term in Position:        07/01/2007 to  
 Term on Committee:        to  
**Mr Michael Samadhin**  
 Clarke Samadhin Associates  
 PO Box 120223  
 Dubai, UNITED ARAB EMIRATES  
 Phone: 97144342135        Fax: 97144342136  
 Email: msamadhin@clarkesamadhin.com

---

Corresponding Member  
 2025971                      066                      Non-voting  
 Term in Position:        07/01/2009 to  
 Term on Committee:        to  
**Mr Randy C Schrecengost, PE**  
 3003 Kerbey Ln  
 Austin, TX 78703-1423  
 Stanley Consultants  
 Phone: (512)427-3600        Fax: (512)427-3699  
 Email: schrecengostrand@stanleygroup.com

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# ASHRAE Roster

## DISTRICT ENERGY-T-TAC-TC06.02

### As of Any Date

---

Corresponding Member  
8196617                      206                      Non-voting

Term in Position:      02/24/2016 to

Term on Committee:                      to

**Mr Hessam Seifi**

DC PRO Engineering

Office 2507, Al Durrah Tower

Buheirah Corniche, P.O. Box 22851

Sharjah, 22851 UNITED ARAB EMIRATES

Phone: 0501142287                      Fax:

Email: hessam\_seifi@hotmail.com

---

Corresponding Member  
8218253                      064                      Non-voting

Term in Position:      07/01/2015 to

Term on Committee:      09/17/2013 to 06/30/2015

**Mr Eren Selcen, PE**

Houston Airport System

HAS IDHQ Building

111 Standifer St.

Humble, TX 77338

Phone: (281)233-1605                      Fax: (281)233-1830

Email: eren.selcen@houstontx.gov

---

Corresponding Member  
2027360                      032                      Non-voting

Term in Position:      07/01/2018 to

Term on Committee:      07/01/2009 to 06/30/2018

**Mr Steven C Severini**

Newcomb & Boyd

303 Ptree Ctr Ave NE Ste 525

Atlanta, GA 30303

Phone: (404)730-8400                      Fax: (404)730-8401

Email: sseverini@newcomb-boyd.com

---

Corresponding Member  
8161970                      191                      Non-voting

Term in Position:      07/01/2015 to

Term on Committee:      08/16/2014 to 06/30/2015

**Mr Elangovan  
Shanmugam**

Ws Atkins

3 Ali Asker Road

10th Floor Safina Tower

Bangalore, Karnataka 560052 INDIA

Phone: 9902466499                      Fax:

Email: elangovan.shanmugam@atkinglobal.com

---

Corresponding Member  
685827                      052                      Non-voting

Term in Position:      07/01/2010 to

Term on Committee:      07/01/1995 to 06/30/2010

**Mr Alexander H Sleiman**

76 Kellogg Blvd W

Saint Paul, MN 55102-1611

Dist Energy St Paul Inc

Phone: (651)730-6921                      Fax: none

Email: alex.sleiman@districtenergy.com

---

Corresponding Member  
8043552                      049                      Non-voting

Term in Position:      07/01/2010 to

Term on Committee:                      to

**Mr Steve N Spentzas**

YEA

120 E Liberty Dr Ste 290

Wheaton, IL 60187-5457

Phone: (630)212-7739                      Fax:

Email: steve.spentzas@siemens.com

---

Corresponding Member  
2007547                      043                      Non-voting

Term in Position:      07/01/2015 to

Term on Committee:      07/01/2001 to 06/30/2015

**Mr Francis L St John**

Applied Engineering Services Inc

5975 Cast Ck Pkwy N Dr Ste 300

Indianapolis, IN 46250-4346

Phone: (317)502-3859                      Fax: (317)810-4140

Email: fstjohn@applied-e-s.com

---

Corresponding Member  
5125884                      010                      Non-voting

Term in Position:      07/01/2008 to

Term on Committee:                      to

**Mr Michael Stark**

167 Woodstream Cir

Mooresville, NC 28117-7498

Carrier Corporation

Phone: 7048404747                      Fax: (860)998-2690

Email: mike.stark@carrier.utc.com

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# ASHRAE Roster

## DISTRICT ENERGY-T-TAC-TC06.02

### As of Any Date

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Corresponding Member  
8199054                      054                      Non-voting

Term in Position:      07/01/2013 to  
Term on Committee:    11/06/2012 to 06/30/2013

**Mr Rory J Stegeman, PE**

The CTS Group  
11464 County Road 395  
Hartsburg, MO 65039-1103  
Phone: (573)301-0361      Fax:  
Email: Rjswolf@hotmail.com

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Corresponding Member  
771012                      032                      Non-voting

Term in Position:      07/01/2014 to  
Term on Committee:    07/01/1987 to 06/30/2014

**Mr David W Wade, PE**

RDA Engineering Inc  
134 South Ave SE Ste 100  
Marietta, GA 30060-2543  
Phone: (770)421-0870      Fax: (770)421-0885  
Email: dww@rdaeng.com

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Corresponding Member  
2014618                      026                      Non-voting

Term in Position:      07/01/2007 to  
Term on Committee:    07/01/2000 to 06/30/2007

**Mr Richard S Sweetser**

Exergy Partners Corp  
12020 Meadowville Ct  
Herndon, VA 20170-2607  
Phone: (703)707-0293      Fax: (703)707-9566  
Email: rsweetser@exergypartners.com

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CORRESPONDING MEMBER  
5223919                      004                      Non-voting

Term in Position:      07/01/2006 to  
Term on Committee:                      to

**Mr Timothy C Wagner**

UTRC  
411 Silver Ln # MS129-13  
East Hartford, CT 06118-1127  
Phone: (860)610-7589      Fax: (860)660-1446  
Email: wagnertc@utrc.utc.com

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CORRESPONDING MEMBER  
5073278                      999                      Non-voting

Term in Position:      07/01/2000 to  
Term on Committee:                      to

**Mr Robert P Thornton**

International District Energy Association  
24 Lyman St Ste 230  
Westborough, MA 01581-1483  
Phone: (508)366-9339      Fax: (508)366-0019  
Email: rob.idea@districtenergy.org

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CORRESPONDING MEMBER  
5158503                      016                      Non-voting

Term in Position:      07/01/2005 to  
Term on Committee:                      to

**Mr Terrence J Whitehead  
PE**

189 Alderwood St  
Stouffville, ON L4A 5E7 CANADA  
Enbridge Gas Inc  
Phone: (905) 642-6206      Fax: (905) 642-6206  
Email: terry.whitehead2@sympatico.ca

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Corresponding Member  
749804                      021                      Non-voting

Term in Position:      07/01/2012 to  
Term on Committee:    07/01/2007 to 06/30/2012

**Mr William J Trefz**

Trefz Engineering  
601 Dresher Rd Ste 275  
Horsham, PA 19044-2277  
Phone: (215)572-8115      Fax: (215)572-8238  
Email: wtrefz@wtrefz.com

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CORRESPONDING MEMBER  
802224                      085                      Non-voting

Term in Position:      07/01/2004 to  
Term on Committee:    07/01/2004 to 06/30/2005

**Mr Verle A Williams, PE**

8975 Lawrence Wlk Dr Spc 459  
Escondido, CA 92026-6424  
Utility Services Unlimited Inc  
Phone: (858)242-7296      Fax: (760)749-1409  
Email: verleawilliams@gmail.com

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# ASHRAE Roster

## DISTRICT ENERGY-T-TAC-TC06.02

### As of Any Date

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## Corresponding Member

5175086                      612                      Non-voting

Term in Position:    07/01/2013    to

Term on Committee:    07/01/2002    to    06/30/2013

**Mr James W Young, Jr**3105 Cove Loop Rd  
Hendersonville, NC 28739-8870

Dow Chemical Co

Phone: (989)750-8899      Fax: 11111111111

Email: [jyoung@itwinsulation.com](mailto:jyoung@itwinsulation.com)

## Corresponding Member

8094751                      073                      Non-voting

Term in Position:    07/01/2016    to

Term on Committee:    11/14/2014    to    06/30/2016

**Dr Wangda Zuo**1460 Greenbriar Blvd  
Boulder, CO 80305-7042

University of Colorado Boulder

Phone: (765)430-4114      Fax:

Email: [wangda.zuo@gmail.com](mailto:wangda.zuo@gmail.com)

## TAC Chairman

2028310                      027                      Non-voting

Term in Position:    07/01/2018    to    06/30/2019

Term on Committee:    07/01/2018    to    06/30/2019

**Mr Thomas A Justice**

Zene, LLC

4997 Westmoreland Dr

Williamsburg, VA 23188-1989

Phone: (919) 740-6308      Fax:

Email: [justfilter@yahoo.com](mailto:justfilter@yahoo.com)

## Section Head

5194915                      028                      Non-voting

Term in Position:    07/01/2017    to    06/30/2021

Term on Committee:    07/01/2017    to    06/30/2021

**Mr Dawen Lu, PE**

4604 Sadler Grove Way

Glen Allen, VA 23060-6179

Lu + Smith Engineers PLLC

Phone: (804) 519-9306      Fax: (804)925-2600

Email: [dlu6838@gmail.com](mailto:dlu6838@gmail.com)

## 2020 HB Systems &amp; Equipment

3032713                      004                      Non-voting

Term in Position:    07/01/2016    to    06/30/2020

Term on Committee:    07/01/2012    to    06/30/2020

**Mr Michael P Patton**

22 Willow Brook Rd

Glastonbury, CT 06033-1055

Griswold Water Systems

Phone: (860)805-8594      Fax:

Email: [mpatton888@msn.com](mailto:mpatton888@msn.com)

## Research Liaison

8079187                      211                      Non-voting

Term in Position:    07/01/2017    to    06/30/2021

Term on Committee:    07/01/2017    to    06/30/2021

**Omar A Abdelaziz, PhD**20 Kassassin St.  
apt. 3

Agouzah, Giza 12411 EGYPT

Oak Ridge National Laboratory

Phone: (865)387-0725      Fax: (865)574-9338

Email: [omar.abdel.aziz@gmail.com](mailto:omar.abdel.aziz@gmail.com)

## Staff Liaison

7966801                      650                      Non-voting

Term in Position:    07/19/2001    to

Term on Committee:    07/19/2001    to    06/30/2002

**Mr Michael R Vaughn, PE**

ASHRAE

1791 Tullie Cir NE

Atlanta, GA 30329-2398

Phone: (404)636-8400      Fax: (404)321-5478

Email: [MORTS@ashrae.net](mailto:MORTS@ashrae.net)

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