



**MINUTES**  
**TRAINING AND EDUCATION COMMITTEE (TEC)**  
**Virtual Annual Meeting**  
**June 9, 2021**

**MEMBERS PRESENT:**

Jeremy Smith, Chair  
Keith Reihl, VC/Planning  
Jim Vallort, VC/Operations  
Jason Alphonso  
Jesse Fisher  
Michael Langton  
Cheng Wee Leong  
Kim Pierson  
Terry Schroeder  
Andrew Sneed  
Randy Schrecengost, ExO  
Bill Dean, Coordinating Officer  
Tahir Raza, Incoming TEC Member  
Ashley Weekly, Incoming TEC Member

**VISITORS:**

Don Brandt  
Julia Keen  
Larry Smith

**STAFF PRESENT:**

Karen Murray, Staff Liaison  
David Soltis  
Eunice Njeru  
Susan Polite

**Action Items**

**No.    Responsible    Action**

- 1    Staff Liaison    Post ExO report to Basecamp
- 2    Staff Liaison    Send suggested Learning Pathways topics to the committee for review
- 3    Staff Liaison    Send course info to YEA for social media posts.
- 4    Staff Liaison    Update last presented sunset recommended courses.
  
- 5    Operations    Create model course evals to meet budget–fixed, break-even quality

## Agenda TEC Annual Meeting (Virtual)

June 9, 2021

- ASHRAE brand
- 6 Mr. Brandt Provide a proposal for Appl Guides course(s)
  - 7 TEC Rep & Staff Liaison Work with Marketing to develop survey and actively bring people to the Learning Pathways webpage

### 1. Call to Order

Mr. Smith called the meeting to order at 8:03 a.m.

### 2. ASHRAE Code of Ethics Commitment

Mr. Smith reminded everyone that the meeting would be held in compliance with the ASHRAE Code of Ethics and Core Values.

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

Core Values: <https://www.ashrae.org/about/ashrae-s-core-values>

### 3. Introduction of Members and Visitors/Roll Call

Members and visitors acknowledged attendance.

### 4. Review of Agenda

No changes noted.

### 5. Minutes of May 6, 2021 Meeting

Mr. Reihl moved and Mr. Vallort seconded approval of Minutes of the May 6, 2021 virtual meeting. Motion passed unanimously (CNV). Minutes posted on ASHRAE Website TEC Page.

### 6. Board ExO Report

Mr. Schrecengost presented the ExO Report to Committees. He reminded the group that committee member nominations are needed. He encouraged members with terms ending June 30, 2021 who want to serve with another committee to contact the committee ExO.

ACTION: Staff Liaison to post ExO report to Basecamp.

### 7. Chair's Report

Mr. Smith thanked everyone for their engagement throughout the challenging year.

### 8. Financial Report

Ms. Murray reported that while ALI courses were not held at the 2021 winter or annual conferences and fewer HVAC Design trainings were offered, the number of company requests for online instructor-led courses increased. The number of eLearning course sales also increased keeping revenues close to budget. Monthly financial reports are posted to Basecamp.

### 9. Staff Reports

9.1 ASHRAE Learning Institute

- Ms. Murray presented a comparison of SY2020-21 course registrations to those of the previous years. She again noted the increase in company requested online courses. [See Appendix A.](#)
- 9.2 eLearning  
Ms. Njeru provided a summary of eLearning courses, including revenue trends, sources of enrollment, revision plans, and available new courses. [See Appendix B.](#)
- 9.3 Global Training Center  
No report presented.
10. Subcommittee Reports
- 10.1 Planning  
The Planning Subcommittee met April 14, 2021. Notes are included in [Appendix C.](#)
- 10.2 Operations  
The Operations Subcommittee met on March 29, 2021. Notes are included in [Appendix D.](#)
11. Review Open Action Items [See Appendix E.](#)
12. 2020-21 MBO Progress  
Final 2020-21 MBOs are included in [Appendix F.](#)
13. Old business  
No discussion.
- 13.1 ASHRAE Learning Pathways  
Ms. Keen introduced the new ASHRAE Learning Pathways, a 2021-22 presidential initiative focused on professional development. The program is intended to be the leading “go to” place for topical resources. The first two pathways are HVAC Design Basics and Pathogen Mitigation with numerous more expected.
- New topics are expected to be added regularly to ensure the site continues to grow as a leading information source. New topics will also promote available ASHRAE resources such as training and education, publications, DLs, etc. A survey is expected to be released in late summer to determine additional topical needs. The TEC will then take the lead to find and use ASHRAE resources to enhance the program value and attract member usage.
- The initial suggested pathways include:
- Building EQ Mastery
  - Building Operation
  - Healthcare
  - High Performance/Energy
  - Leadership
  - Pathogen Mitigation (added)
  - Project Management

- Residential
- Resiliency
- Soft Skills
- Specialty/Applications
- Virtual Design & Constr
- Zero Energy Buildings

ACTION 1: Staff Liaison to send information on the pathways program to the full committee and share a model template to establish future pathways.

ACTION 2: TEC Rep and Staff Liaison to work with Marketing to develop survey and actively bring people to the Learning Pathways webpage.

### 13.2 Application Guide on Systems

Mr. Brant presented a request for the TEC to take the lead in developing a new "Application Guide on Systems" in the form of a 2- or 3-day Face-to-face/Virtual ALI courses and handout publications. The idea comes from the Publications Committee survey of key topics conducted by the Society Transformational Ad Hoc. Results indicate a strong industry and individual need for products and training focused on Systems.

Mr. Brandt suggested a focus on the most popular systems: VAVRH, Fan Coils, VRF (Terminal Side only), Chilled Beam, and Radiant all applied with DOAS. Some of the info is already available in current ASHRAE products so I see the development process as a compilation editing task.

The TEC recommended additional information, and Mr. Brant will prepare a training proposal.

ACTION 3: Mr. Brandt to provide a proposal for an Application Guide on Systems course(s).

## 14. New Business

### 14.1 Develop Products from Task Force Data

#### 14.1.1 Epidemic Task Force

#### 14.1.2 Decarbonization Task Force

The committee discussed ideas of how data produced by the Epidemic Task Force and the Decarbonization Task Force could be developed into future PEC products and services. The primary suggestion was to produce new face-to-face and virtual training and enhance existing course materials to reflect the changing environment. Mr. Brandt added that training on topics identified by the Decarbonization Task Force may provide a great opportunity for training courses and more information should be expected.

### 14.2 2021-22 MBOs

Expect July roll-out of MBOs.

### 14.3 Subcommittee Assignments

Subcommittee assignments will be emailed.

14.4 New Member Orientation

New Member Orientation will take place in July.

14.5 Recognition of Outgoing Members

Mr. Smith recognized the outgoing committee members and thanked them for their contributions to the Training and Education Committee. He introduced Mr. Keith Reihl and the incoming 2021-22 TEC Chair. Mr. Reihl thanked Mr. Smith for his contributions to the committee.

15. Next Meeting (Reihl)

The committee will meet again in early fall.

15. Adjourn

The meeting was adjourned at 12:00 PM.

Appendix A – Staff Report on Instructor-led Courses

**SUMMARY OF ALI COURSE REGISTRANTS**

(To date June 7, 2021)

Year Conference/Location	Winter	Annual	Online	In- Company	Chapter	Industry	HVAC I	HVAC II	GTC	TOTAL*
2020-2021 (Virtual/Virtual)	Virtual	Virtual	886**	1,022	400	1,008	345	82	1,656	5,399
2019-20 (Orlando/Virtual)	1,138	Virtual	752***	665	200	42	312	250	339	3,698
2018-19 (Atlanta/Kansas City)	746	212	260	735	600	453	548	331	730	4,615
2017-18 (Chicago/Houston)	838	173	417	1,813	400	124	565	441	153	4,924
2016-17 (Vegas/Long Beach)	1,161	231	449	882	405	51	680	383		4,242
2015-16 (Orlando/St. Louis)	916	214	418	662	430	126	777	444		3,987

\*Total does not include eLearning or SDL registrants.

\*\* An additional 2,584 individuals registered for free online webinars.

\*\*\* An additional 6,909 individuals registered for free online webinars.

Appendix B – Staff Report on eLearning

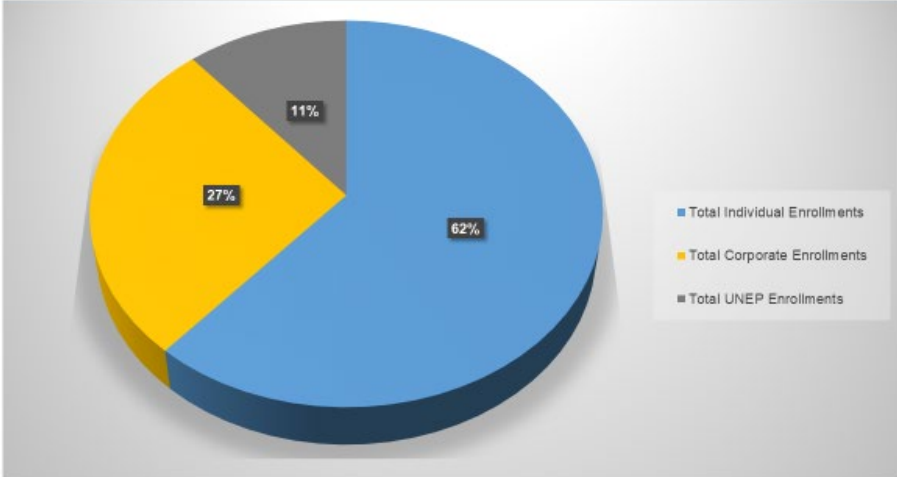
# eLearning Staff Report



## 11-Month Revenue Trend



## Cumulative 11-Month Enrollment by Source



## Course Updates Project

Status Description	Number
Fully Updated	8
Awaiting Instructional Designer Assignment	8
Under Development	1
Total	17





## New Courses

Title	Status	Completion Date
Achieving Zero-Energy Building Design	Complete	August 2020
Energy Efficiency Literacy for Air-Conditioning and Refrigeration Systems (UNEP)	Complete	September 2020
Essentials of DOAS	Pending Launch	June 2021
Designing Toward Net-Zero Energy Commercial Buildings	Content Dev.	October 2021



**Thank you**



Appendix C – Planning Subcommittee Meeting Notes



**NOTES**  
**TRAINING AND EDUCATION COMMITTEE (TEC)**  
**PLANNING SUBCOMMITTEE**  
April 14, 2021

**MEMBERS PRESENT**

Keith Reihl  
Jason Alphonso  
Cheng Wee Leong  
Terry Schroeder  
Andrew Sneed

**VISITORS**

Jeremy Smith

**Action Items** (April 14, 2021)

<b>No.</b>	<b>Responsible</b>	<b>Action</b>
1	Ms. Murray	Add discussion of the Webpage tab to the next TEC committee agenda.
2	Mr. Smith/ Ms. Murray	Update the TEC Reference Manual and repost to Basecamp for review. before the next committee meeting. (From the June 21, 2021 TEC Meeting Minutes)
3	Ms. Murray	Post the approved MOP to the TEC Webpage and Basecamp.
4	Ms. Murray	Determine who received the regular chapter news sent from Society.
5	Ms. Murray	Determine if interest still exists for a BEAP exam prep course.
6	Ms. Schroeder	Post the report to Basecamp for review.
7	Ms. Murray	Send the Table of Contents of the CHD Study Guide to subcommittee members for review.
8	Ms. Murray	Request eLearning course access be given to the subcommittee members.
9	Ms. Murray	Post ALI, eLearning and SDL usage reports to Basecamp.

1. Call to Order

The meeting was called to order at 10:01 AM.

2. ASHRAE Code of Ethics Commitment

Mr. Smith reminded everyone that the meeting would be held in compliance with the ASHRAE Code of Ethics and Core Values.

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

Core Values: <https://www.ashrae.org/about/ashrae-s-core-values>)

3. Introduction of Members and Visitors / Role Call

Members and guests introduced themselves.

4. Chair's Remarks

Mr. Reihl led a discussion of online TEC course offerings and reviews. Ms. Murray reported that the liaison comments are posted on Basecamp for easy access and review.

Other topics discussed:

- Interactive surveys/real time answers
- Find international committees
- Max member value
- "slide rules for engineers" conf presentation. Check speaker.

5. Planning Subcommittee Tasks

Mr. Rehil reviewed the subcommittee tasks.

- Develop and implement strategic objectives and maintain the list of MBOs.
- Maintain a list of potential future courses and projects.
- Select courses for future development
  - Coordinate course requests from Chapters, PEC/BOD or TC's
  - Communicate with TC's for course requests and development
  - Review new course proposals
  - Prioritize recommendations based on need and success criteria
  - Manage communication with proposers concerning course selection
- Recommend proposals, proposers, and budgets to be presented to full committee for approval.
- Approve staff created SOW & RFP
- Approve course structure, outline, and budget for handoff to Operations.
- Recommend course development and rejections to the full committee for approval.
- Explore strategic partnerships.
- Review and maintain the TEC Manual of Procedures
- Assist staff in planning for course presentations and marketing of courses.

A question was asked if the ASHRAE webpage title should be changed from Professional Development to Training and Education. The change was discussed with no final outcome. A suggestion was made to bring the question to the TEC.

ACTION 1: Ms. Murray will ensure discussion of the Webpage tab is added to the next TEC committee agenda.

Mr. Reihl emphasized the importance of the TEC Reference Manual and Manual of Procedures (MOP).

ACTION 2: (From the June 21, 2021 TEC Meeting Minutes) Mr. Smith/Ms. Murray will update the TEC Reference Manual and repost to Basecamp for review before the next committee meeting.

ACTION 3: Ms. Murray post the approved MOP to the TEC Webpage and Basecamp.

The committee discussed chapter assistance in promoting ALL courses and the importance of getting information about the course to the right chapter person to include in chapter news.

ACTION 4: Ms. Murray will speak with marketing to determine who received the regular chapter news sent from Society.

6. Action Items

Mr. Reihl reviewed the following Planning Subcommittee action items from past TEC meetings.

TEC Meeting February 2020 Orlando

<u>No.</u>	<u>Page</u>	<u>Responsible</u>	<u>Action</u>
4	4	Planning (AdHoc)	Develop RFP for Energy Audits exam prep course. An opportunity exists to align courses with each certification. The TEC Planning Subcommittee will reach out to the Certification Committee to determine if interest still exists for the BEAP exam and possibly for others.

ACTION 5: Ms. Murray will discuss with Tim Kline to determine if interest still exists for a BEAP exam prep course.

8	4	Full Committee/ Planning	Review Strategic Plan Goal 1 for training opportunities. Assigned to Ms. Schroeder and Mr. Sneed to draft ideas for review. The draft is complete. Ms. Schroeder reviewed comments during the meeting. Ms. Murray will upload the copy to Basecamp for review.
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ACTION 6: Ms. Schroeder will post the report to Basecamp for review.

ACTION 7: Ms. Murray will send the Table of Contents of the CHD Study Guide to the subcommittee member for review.

In an effort to learn more about the structure of eLearning course offerings, it was suggested that subcommittee members be given access to view the courses.

**ACTION 8:** Ms. Murray will request access to the eLearning courses be given to the Planning Subcommittee.

**ACTION 9:** Ms. Murray will post ALI, eLearning and SDL usage reports to Basecamp.

7. MBO's

Mr. Reihl led discussion of the MBO's assigned to the Planning Subcommittee.

Objective	SP	Complete by	Fiscal Impact	Responsible Party	Comment/ Status
1. Review new strategic plan for items that apply to TEC and develop a plan to implement 2 ideas from the review. Implement 1 idea in the fall and 1 in the spring.			None	Planning Subcommittee	Review started Need to execute
2. Develop topics and RFPs for an additional (3) practical applications courses			None	Planning Subcommittee	In progress
3. Review SDLs and issue RFPs for the ones that need updating on prescribed schedule			None	Operations Subcommittee	36 mos. post issuance Continuous
4. Review existing courses and sunset those that have not been used in 5 years or recommend updates			None	Operations Subcommittee	Continuous Most eLearning courses were developed in 2007. Updates began ~1 yr ago. Should eLearning be included? TEC to audit? Yes. <b>ACTION:</b> Ms. Murray will send list of courses to TEC. (Also incl in Action 4 from 12/2019 mtg.)

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5. Every course reviewed by TEC Liaison prior to presentation– Quality check			None		Continuous – 1-2 months prior to meetings <u>ACTION:</u> Ms. Murray will post assignments and review form to Basecamp.
6. Develop marketing plan for TEC courses/branding. Work with ASHRAE marketing to understand and improve			TBD	Planning Subcommittee	Continuous – 1 conf. call early fall and 1 conf. call early spring <u>ACTION:</u> Ms. Murray will post a report to Basecamp listing marketing efforts within in the last 6 months
7. Develop Financial Model for course evaluation				Operations Subcommittee	Draft by Mar 21 Final by TBD

8. New Business

Ms. Murray reported the new course proposal on soft skills was ready for TEC review.

9. Future Meetings

10. Adjournment

The meeting was adjourned at 11:04am.

Appendix D – Operations Subcommittee Meeting Notes



**NOTES**  
**ASHRAE TRAINING AND EDUCATION COMMITTEE (TEC)**  
**OPERATIONS SUBCOMMITTEE**  
**March 29, 2021**

**MEMBERS PRESENT:**

Jim Vallort, VC/Operations  
Jesse Fisher  
Michael Langton  
David Meredith  
Kim Pierson

**VISITORS:**

Jeremy Smith

**STAFF PRESENT:**

Karen Murray, Staff Liaison

**Action Items**

**No.   Responsible   Action**

- |   |                            |   |
|---|----------------------------|---|
| 1 | All                        | Review Draft TEC Minutes. Submit recommended changes to Ms. Murray  |
| 2 | Mr. Langton                | Begin the process of drafting course keywords.  |
| 3 | Mr. Vallort                | Provide a previous keywords list for reference (Complete. Included as email attachment.)                  |
| 4 | All                        | Review and comment on the TEC Liaison template on Basecamp.   |
| 5 | Staff Liaison              | Add summaries of course participant evaluations to Basecamp.  |
| 6 | Staff Liaison              | Upload current eLearning and Global Training Center course schedules to Basecamp for subcommittee review. |
| 7 | Ms. Pierson & Mr. Meredith | Draft a prescribed schedule for SDL reviews.  |
| 8 | Staff Liaison              | Send course usage report to the TEC. (From June 21, 2021 TEC Meeting Minutes)                             |
| 9 | Mr. Fisher                 | Draft a financial model for course evaluation.  |

1. **CALL TO ORDER**

Mr. Vallort called the meeting to order at 3:05 p.m.

2. **INTRODUCTIONS**

Members and guests introduced themselves.

3. **ASHRAE CODE OF ETHICS**

Mr. Vallort reminded everyone the meeting would be held in compliance with the ASHRAE Code of Ethics and Core Values.

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

Core Values: <https://www.ashrae.org/about/ashrae-s-core-values>

4. **REVIEW AGENDA**

No changes to the agenda were noted.

5. **REVIEW OF MINUTES FROM JANUARY 21,2021 TEC MEETING**

ACTION 1: Subcommittee members were asked to review the draft January 21, 2021 TEC meeting minutes and notify Ms. Murray of recommended changes.

6. **OPEN ACTION ITEMS**

A. Examine how to create a relational database, potentially using keywords as a search option.

Background: Mr. Hallstrom reintroduced the idea of establishing an affinity chart to link course topics taught by different instructors, creating a data friendly procedure to ensure all instructors are aware of changes made to a linked topic that may affect their specific course. This will allow instructors to reference the most accurate information. Course liaisons were asked to review their assigned courses for key words that may help determine if/how their course relates to others.

Mr. Vallort asked for project volunteers to pull together key words.

ACTION 2: Michael Langton volunteered to begin the keyword process.

ACTION 3: Mr. Vallort will pull a past keywords list for reference.

B. Review the current template for TEC Liaison course reviews

Is it too long, too short or just right?

ACTION 4: Committee members were asked to review and provide comments on the TEC Liaison template available [here](#) in the Courses, Liaisons and Reports folder on Basecamp.



- C. Create a timeline and process for posting participant and TEC Liaisons course reviews to Basecamp.

Background: TEC Committee reviews of courses are currently sent to ASHRAE staff and do not provide future course reviewers with a context of past reviews.

Ms. Murray reported that a folder was added to Basecamp for liaisons to post course reviews.

ACTION 5: Ms. Murray will add summaries of course participant evaluations to the same folder.

- D. Report on Non-performing courses

Ms. Murray reported the Course Usage Report is available for committee review on Basecamp in the Budget and Marketing folder.

- E. Review eLearning and Global Training Center courses

Subcommittee members were asked to familiarize themselves with the eLearning and GTC course offerings.

ACTION 6: (From the June 21, 2021 TEC Meeting Minutes) Ms. Murray will upload the current list of eLearning courses and the Global Training Center course schedule to Basecamp for Operations Subcommittee review. Action also referenced in 2020-21 MBOs.

- F. Review SDLs and issue RFPs for the ones that need updating on prescribed schedule.

ACTION 7: Kim Pierson and Dave Meredith agreed to review SDLs and draft a prescribed schedule for review.

- G. Review existing courses and sunset those that have not been used in 5 years or recommend updates.

ACTION 8: Ms. Murray will send course usage report to the TEC. (From June 21, 2021 TEC Meeting Minutes)

- H. Develop Financial Model for course evaluation.

ACTION 9: Jesse Fisher will draft a financial model for course evaluation.

## 7. NEW BUSINESS

## 8. ADJOURN

The meeting was adjourned at 4:00pm.

Appendix E – Open Action Items

TEC Spring Meeting May 6, 2021

<u>No.</u>	<u>Responsible</u>	<u>Action</u>
4	Operations	Provide links to relational database.
8	Staff Liaison	Seek additional information on the request for training on system applications

TEC Meeting Winter January 21, 2021

<u>No.</u>	<u>Responsible</u>	<u>Action</u>
2	TEC Chair	Assign a liaison to the eLearning course work.
7	Mr. Smith/ Ms. Murray	Update the TEC Reference Manual and repost to Basecamp for review before the next committee meeting. In progress. Ms. Schroeder and Mr. Alphonso agreed to work on the project.
10	Operations	Examine how to create a relational database, potentially using keywords as a search options. In progress
11	Course Liaisons	Review assigned courses prior to March 30 to identify topics and keywords to link the course to others.
13	Mr. Vallort	Create a timeline for posting participant and TEC Liaisons course reviews to Basecamp.

Appendix F – 2020-2021 MBOs

**Training & Education Committee**

**MBOs for Society Year 2020-21**

Chair: Jeremy Smith Date: December 1, 2020

<b>Objective</b>	<b>SP</b>	<b>Complete by</b>	<b>Fiscal Impact</b>	<b>Responsible Party</b>	<b>Comment/ Status</b>
1. Review new strategic plan for items that apply to TEC and develop a plan to implement 2 ideas from the review. Implement 1 idea in the fall and 1 in the spring.			None	Planning Subcommittee	Review started
2. Develop topics and RFPs for an additional (3) practical applications courses			None	Planning Subcommittee	In progress
3. Review SDLs and issue RFPs for the ones that need updating on prescribed schedule			None	Operations Subcommittee	36 mos. post issuance Continuous
4. Review existing courses and sunset those that have not been used in 5 years or recommend updates			None	Operations Subcommittee	Continuous
5. Every course reviewed by TEC Liaison prior to presentation– Quality check			None		Continuous – 1-2 months prior to meetings
6. Develop marketing plan for TEC courses/branding. Work with ASHRAE marketing to understand and improve			TBD	Planning Subcommittee	Continuous – 1 conf. call early fall and 1 conf. call early spring
7. Develop Financial Model for course evaluation				Operations Subcommittee	Draft by Mar 21 Final by TBD In progress
<b>Additional Recommendations for Strategic Planning: Not at this time</b>					