

Call to Order

Mark Lowry (BBI COO) called the meeting to order at 12:05 p.m. PST.

Roll Call - Attendance

A quorum (eight or more) of the Executive Committee (EC) was present or represented by proxy. *To avoid repetition, the abbreviation for the name of the member organization will be used in the body of the minutes.*

| Organization | First Name | Last Name | WHPA Category | Present/Absent | | | | |
|--|----------------|-------------------|---|---------------------------|--|--|--|--|
| Executive Committee | | | | | | | | |
| ACCA (Air Conditioning Contractors of America) | Don | Langston | Contractor (Nonresidential) | P | | | | |
| AHRI (Air-Conditioning, Heating, and Refrigeration Institute) | Garrett | McGuire | HVAC Manufacturer Association | P-has proxy for HARDI | | | | |
| ASHRAE | Ron | Jarnagin | Engineering Society | P | | | | |
| CEC (California Energy Commission) | Lea | Haro | Government (Other than CPUC) | P | | | | |
| CPUC (California Public Utilities Commission) Energy Division | Carmen | Best | CPUC 4 th | P | | | | |
| HARDI (Heating, Airconditioning & Refrigeration Distributors International) | Talbot | Gee | Distributor Association | assigned proxy to AHRI | | | | |
| IHACI (Institute of Heating and Air Conditioning Industries) | Bob | Wiseman | Contractor Association | P | | | | |
| JCEEP (Joint Committee on Energy and Environmental Policy) Western States Council | Dave | Dias | Organized Labor | P | | | | |
| NCI (National Comfort Institute) | Dominick | Guarino | Educator, Trainer | P | | | | |
| PG&E (Pacific Gas and Electric Company) | Jeanne | Duvall | California IOU | P | | | | |
| SCE (Southern California Edison) | Scott | Higa | California IOU | P | | | | |
| SDG&E (San Diego Gas & Electric) | Jeremy | Reefe | California IOU | P | | | | |
| SoCalGas (Southern California Gas Company) | Harvey | Bringas | California IOU | P | | | | |
| UA (United Association) | Don | Tanaka | Organized Labor | P | | | | |
| | Additional Cou | incil of Advisors | <u> </u> | | | | | |
| CALBO | Mark | Meyers | Codes & Standards (Association or Jurisdiction) | P | | | | |
| CCCCO (California Community Colleges Chancellors Office) | Jim | Caldwell | Educator, Trainer | P | | | | |
| EGIA (Electric & Gas Industries Association) | Andre | Christian | Contractor Association | P | | | | |
| PG&E (Pacific Gas and Electric Company) | Christian | Weber | California IOU | P | | | | |
| PHCC (Plumbing-Heating-Cooling Contractor National Association) | Chuck | White | Contractor Association | P | | | | |
| SDG&E (San Diego Gas & Electric) | Paul | Thomas | California IOU | P | | | | |
| US EPA | Chandler | von Schrader | Government (Other than CPUC) | P | | | | |
| | Addition | al Chairs | | | | | | |
| CALBO (Compliance Committee) | Bob | Barks | Codes & Standards (Association or Jurisdiction) | P | | | | |
| Indio Cooling & Heating Supply (EBEE Committee & EWG) | Tim | Mann | Distributor | P | | | | |
| NCI (CQI Committee) | Rob | Falke | Educator, Trainer | P | | | | |
| SCE (FDD Committee) | Sean | Gouw | California IOU | P | | | | |
| SynergyNexGen (EBEE Committee) | Barbara | Hernesman | Energy Efficiency Program Consultant | | | | | |



| WHPA Staff Support | | | | | | | |
|---|--------|-----------|---|---|--|--|--|
| BBI (Facilitator) | Mark | Lowry | Energy Efficiency Program Consultant | P | | | |
| BJGustavson Consulting (WebEx) | Bonnie | Gustavson | Other Stakeholder | P | | | |
| BNB Consulting (Committee Support) | Bob | Sundberg | Energy Efficiency Program Consultant | P | | | |
| Enpowered Solutions (COA Support) | Shea | Dibble | Energy Efficiency Organization | P | | | |
| Galawish Consulting (Committee Support) | Elsia | Galawish | Energy Efficiency Program Consultant | Р | | | |
| Info <i>Plast</i> (Committee Support) | Wendy | Worrell | Other Stakeholder | P | | | |
| Key SEO/Key Marketing Group (Scribe) | Judy | Johnson | Other Stakeholder | P | | | |
| Opinion Dynamics (Presenter) | Ellen | Steiner | Energy Efficiency Program Consultant | P | | | |

Agenda

| Торіс | Discussion Leader | | |
|---|---|--|--|
| Roll Call | Bonnie Gustavson | | |
| Approval of January 18, 2017, EC Meeting Minutes | Mark Lowry | | |
| Approval of New Member Applications | Mark Lowry | | |
| EBEE Co-Chair – Tim Mann – Vote to Approve | Mark Lowry | | |
| WHPA Quarterly Report Highlights | Ellen Steiner | | |
| Industry Insights – Call to Action | Judy Johnson | | |
| CAEECC Update | Mark Lowry | | |
| Industry Perspectives – AHR Expo/ASHRAE Winter Meetings | Garrett McGuire, AHRI Ron Jarnagin, ASHRAE Don Langston, ACCA Rob Falke, NCI | | |
| New Business and Adjourn | Mark Lowry | | |

Approval of January 18, 2017, Meeting Minutes – posted on WHPA website

MOTION made by Ron Jarnagin (ASHRAE) and seconded by Don Tanaka (UA) to approve the EC Meeting Minutes of January 18, 2017. All EC members present or represented by proxy voted in favor of passing the motion with one abstention cast by CPUC (Carmen Best). Motion **CARRIED.**

Approval of New Member Applications

COMMENT by Mark Lowry (BBI) – There are two new member applications. Background information was provided to EC members in advance of this meeting.

1. **Air Conditioning Guys, Inc.** (A Becerril Family Co.): Contractor (Residential) Category; Louis Fuentes, President (http://www.acguysimperial.com/)

Mr. Fuentes sent the following comment: As a current ACCA Board Member, I will be representing ACCA on EC and COA while Don Langston is leading ACCA in 2017. However, I will represent my own company, Air Conditioning Guys, Inc., on committees and working groups.

COMMENT by Don Langston (ACCA) that Louis Fuentes will replace Don Langston as the ACCA voting member on the Executive Committee and the Council of Advisors.



2. **HVAC Rater Service**: Third Party Quality Assurance Provider Category; Greg Davis, Owner (http://hvacrater.com/)
From his application: I have been actively participating in the Compliance Committee representing USERA. However, since USERA providership is no longer a viable business, I wish to continue my association with WHPA representing my own company, HVAC Rater Service.

MOTION made by Ron Jarnagin (ASHRAE) and seconded by Don Langston (ACCA) to approve the two new applicants as members of the WHPA. All EC members present or represented by proxy voted in favor of passing the motion. Motion **CARRIED.**

EBEE Co-Chair - Tim Mann - Vote to Approve

COMMENT by Mark Lowry (BBI) – Tim Mann (Indio Cooling and Heating Supply) has been selected as the Co-Chair of the EBEE Committee to replace Liz Yager (County of Sonoma). Tim will be co-chairing with Barbara Hernesman (Synergy NexGen).

MOTION made by Ron Jarnagin (ASHRAE) and seconded by Don Tanaka (UA) to approve the appointment of Tim Mann (Indio Cooling and Heating Supply) as the new Co-Chair of the EBEE Committee. All EC members present or represented by proxy voted in favor of passing the motion. Motion **CARRIED.**

WHPA Quarterly Report Highlights – posted on WHPA website – 2016 Work Products are posted on the Work Products web page

PRESENTATION by Ellen Steiner (Staff) – This is a review of the accomplishments of the WHPA during 2016.

Notable Accomplishments included:

- ✓ There were 17 total Work Products submitted for approval in 2016, including 11 EC-adopted Work Products, 3 interim Work Products, one webinar, one membership kit for all registrant organizations, and one charrette. This was the most number of Work Products completed in a one-year period.
- ✓ Expanded the sphere of influence by ACCA recognizing WHPA as a model of communication at the White House, and the DOE officially recognized the WHPA-adopted Work Product Roadmap to "Onboard and In-Field Fault Detection and Diagnostics."
- ✓ Facilitated WHPA member organization input to CPUC comment periods related to policy and evaluation reports.
- ✓ Ensured that the industry voice was incorporated into the EBEE Action Plan through developing "Recommended Pathways to Implementation for EBEE Action Plan Sub-Strategies 1.5.1, 1.5.2, 1.5.3, 1.5.5, 3.3.1," expanding the CEC's HVAC related knowledge and enabling better understanding of how key areas are interrelated.
- ✓ Created an HVAC industry protocol that will establish a field performance scoring method that can be voluntarily implemented within the HVAC industry. Protocol shared with ASHRAE SPC 221 Committee.
- ✓ Developed Stakeholder Roadmap for Online Permitting of Residential HVAC Mechanical Change-Outs.

Operational Accomplishments included:

- ✓ 21 New Member Applications approved
- ✓ 17 E-Blasts sent with average open rate of 23%
- ✓ Implemented New Two-Year SMART Goal Process
- ✓ 156 official WHPA meetings held in 2016
- ✓ 5,428 total Volunteer Hours in 2016

COMMENT by Don Langston (ACCA) – There is a lot to be proud of for everyone who is volunteering their time.

COMMENT by Jeremy Reefe (SDG&E) – Thanks \underline{TO} the WHPA Members \underline{FROM} the California IOUs. The contributions of the WHPA have been very valuable to the utilities.

Industry Insights – Call to Action – New web page "Industry Insights" posted on WHPA website http://www.performancealliance.org/WHPAWorkProduct/HVACIndustryInsights/tabid/2616/Default.aspx

PRESENTATION by Judy Johnson (Staff) – The Industry Insights project is a Goal 1 project of the Council of Advisors. The Goal is to "Represent the WHPA, its activities, and its Work Products by communicating this information through current member organizations and other companies to the HVAC market. This may be done through industry publications, newsletters, websites, etc."



This project commenced in fall of 2016 with a discussion by the Council of Advisors and has resulted in a deliverable which is called Industry Insights.

The Work Products in total represent tens of thousands of hours of volunteer hours by subject matter experts since 2010. The Work Products have information that are valuable to people nationally and globally. Each Work Product has been retitled with a more user-friendly description and a summary has been written. The Industry Insights have also been organized so that they can be easily viewed by topic category such as maintenance, installation, policy, commercial, residential, or other sorted criteria.

COMMENT by Dominick Guarino (NCI) – As Chair of the Council of Advisors, we think this is a fine Work Product that we strongly support.

COMMENT by Mark Lowry (BBI) – These Work Products, revised into a more user-friendly format, can get the Work Product content into the hands of many more people in California and elsewhere, making it easier for them to access and relate to the content wherever they are.

COMMENT by Carmen Best (CPUC) – This looks great. Thanks for making it accessible to a broader audience. Do we have access into the views of the website? It would be interesting next year when we do the year-end review to see if we get more hits to the website.

RESPONSE by Mark Lowry (BBI) – Great question. We were not able to show that information in Ellen's PPT, but we do track the website viewership, look at those statistics monthly, and summarize the web viewership data in our monthly report. See PPT page 25 of Ellen's PPT below as an example. You can view the entire "WHPA by the Numbers" Section posted on the website.



RESPONSE by Judy Johnson (Staff) – By using Google Analytics, we have access to every web page that is visited so we can respond to your questions.

CAEECC Update

COMMENT by Mark Lowry (BBI) – The next formal CAEECC meeting is April 19. More information is available on their website at http://www.caeecc.org/.

Industry Perspectives - AHR Expo/ASHRAE Winter Meetings - PPT posted on website

INTRODUCTION by Mark Lowry (BBI) – The AHR Expo and the ASHRAE Winter Meetings were held the end of January in Las Vegas. This was the largest ASHRAE meeting ever with 68,000 attendees from 50 states and 160 countries and more exhibit space than ever before. We have asked WHPA members who attended the Expo and ASHRAE Meetings to share their perspectives.

PERSPECTIVE SHARED by Garrett McGuire (AHRI) – This is the second record-breaking year for AHR Expo. Our industry is heavily regulated, so it will be interesting to see how things play out with the new administration and new Congress. In California, AB 1414 has impact to us. The Tringali Amendment with alternative refrigerants will have a major impact on building codes, and that is often state-by-state and locality-by-locality. We think California can be a leader in that front.

PERSPECTIVE SHARED by Ron Jarnagin (ASHRAE) – There were about 2,000 exhibiting companies, which was a record for ASHRAE Winter Meetings. 3,600 people attended the ASHRAE Meeting itself, which was a record. ASHRAE recently announced that they have a ton of technical material out there, and it's not the easiest thing to find on the ASHRAE website. So they have launched a technology portal, and it makes information out of the research and technology sides of ASHRAE much easier to find than before. Also, past ASHRAE journal articles since 1997 are on the portal. Ron also announced that he prepares a report on WHPA that is provided to the ASHRAE president.



ACTION for WHPA Staff to pass along the information on the new ASHRAE portal to the WHPA Committees. The URL is https://technologyportal.ashrae.org/.

PERSPECTIVE SHARED by Don Langston (ACCA) – While I was not in attendance, I talked to the chair of the ASHRAE Committee for Standard 180. My concern is that there was not a quorum for the meeting and not as much could be done in that four-hour meeting. I brought this lack of broader participation up at the WHPA Commercial Quality Maintenance Committee (CQM) meeting yesterday. We need more contractor involvement on the ASHRAE Committee, and we also need other stakeholders because there are only a couple categories of stakeholders on the Committee. One thing being debated is, "Are repairs included in a maintenance contract?" Many contractors will say no and that they are handled on a time-and-materials basis. There was also discussion on fixed price – *I will do so many inspections per year at \$X per inspection* – that is reflected in Section 5 of the titles. There were discussions on the need for a user guide and various opinions on if a user manual is needed. I am vice-chair of the ASHRAE Standard 180 Committee. The next meeting will be in Long Beach, California, in June 2017. The goal of Chair Tom Paxon is to revise Standard 180 within two years.

QUESTION by Scott Higa (SCE) – The comments both of you, Ron and Don, show the challenges in making updates within ASHRAE. Based on what you observed in the Winter Conference, how do you see the Work Product that comes out of the WHPA CQM Standard 180 User Manual Working Group being incorporated into the ASHRAE Standard?

RESPONSE by Don Langston (ACCA) – We intend to continue the work on the Standard 180 User Manual within the WHPA Commercial Quality Maintenance Committee, and Ellen Steiner (Staff) has confirmed that the activity has been funded with Staff hours. Also, I think it is important to get more contractors on the ASHRAE Standard 180 Committee.

PERSPECTIVE SHARED by Rob Falke (NCI) (PPT posted on WHPA website) – The WHPA has a Working Group under Chair Peter Jacobs (BMI) that has developed information that has allowed ASHRAE to put together a proposed 221 Standard—a field evaluation and test method to measure and score the operating performance of an installed constant volume unitary HVAC system. We made a presentation at ASHRAE, two at the Expo, and all were standing room only. The results showed a test with a score +/-13% accuracy.

What Does Commercial Measured Performance Look Like Before Upgrades?

| Installed Equipment Field Performance Score | |
|---|-----|
| | 82% |
| Installed Duct System Field Performance Score | 44% |
| Installed System Field Performance Score | 56% |

Measured Performance Improvements

| | As Found | After Upgrade | Improvement |
|---|----------|------------------|-------------|
| Installed Equipment Field Performance Score | 82% | 94% | 12% |
| Installed Duct System Field Performance Score | 44% | 82% | 38% |
| Installed System Field Performance Score | 56% | 88% | 32% |

COMMENT by Rob Falke (NCI) – It's pretty remarkable what this Standard has proposed and how it has been received. This has been invisible for decades. "If you see it, you can do something about it." That is the objective of this committee.

COMMENT by Don Langston (ACCA) – As a contractor who has used this system for many years, we have tested more than 600 systems, we agree with what you say, and it is remarkable and eye-opening. This is exciting stuff!

QUESTION by Chandler von Schrader (EPA) – Is the data from commercial only?

RESPONSE by Rob Falke (NCI) – No, the data is a combination of both commercial and residential.



COMMENT by Jeremy Reefe (SDG&E) – Nice work. Thank you.

QUESTION by Scott Higa (SCE) – Do you have an estimate on when ASHRAE will approve the Standards?

RESPONSE by Rob Falke (NCI) – the Committee is on schedule, so optimistically we hope that we will get an approval at the January 2018 ASHRAE Winter Meeting. Our Committee has received many comments on how quickly we are processing. We thank WHPA for their support in this work.

New Business and Adjourn

ANNOUNCEMENT by Chandler von Schrader (EPA) – I am retiring and leaving the EPA effective March 1, 2017. However, I would like to stay on board with WHPA.

ACTION for Staff to help him re-register with the WHPA as a private entity.

The next Executive Committee Meeting is Wednesday, March 15, 2017, at noon Pacific Time.

The meeting adjourned at 2:08 p.m. PST.

Notes by Judy Key Johnson judy@performancealliance.org