



**WHPA Quarterly Joint Meeting of the
Executive Committee, Council of Advisors, and Chairs
May 17, 2017**

Call to Order

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

Roll Call – Attendance

A quorum (eight or more) of the Executive Committee (EC) was present or represented by proxy.

Organization	First Name	Last Name	WHPA Category	Present/Absent
Executive Committee				
ACCA (Air Conditioning Contractors of America)	Don	Langston	Contractor (Nonresidential)	A – proxy to Louis Fuentes
AHRI (Air-Conditioning, Heating, and Refrigeration Institute)	Garrett	McGuire	HVAC Manufacturer Association	A
ASHRAE	Ron	Jarnagin	Engineering Society	A
CEC (California Energy Commission)	Lea	Haro	Government (Other than CPUC)	P
CPUC (California Public Utilities Commission) Energy Division	Steve	Rickert	CPUC	P
HARDI (Heating, Airconditioning & Refrigeration Distributors International)	Talbot	Gee	Distributor Association	A
IHACI (Institute of Heating and Air Conditioning Industries)	Bob	Wiseman	Contractor Association	A
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)	Paul	Thomas	California IOU	P
SoCalGas (Southern California Gas Company)	Harvey	Bringas	California IOU	P
UA (United Association)	Don	Tanaka	Organized Labor	P
Remaining Council of Advisors				
BPI (Building Performance Institute)	John	Jones	Certifying Body	P
CALBO	Mark	Meyers	Codes & Standards (Association or Jurisdiction)	P
CCCCO (California Community Colleges Chancellors Office)	Jim	Caldwell	Educator, Trainer	P
PG&E (Pacific Gas and Electric Company)	Christian	Weber	California IOU	P
SDG&E (San Diego Gas & Electric)	Jeremy	Reefe	California IOU	P
Remaining Chairs				
NCI (CQI Committee)	Rob	Falke	Educator, Trainer	P
SynergyNexGen (EBEE Committee & EWG)	Barbara	Hernesman	Energy Efficiency Program Consultant	P
XCSpec (CQM UGCC Working Group)	Janet	Peterson	Controls (Manufacturer or Distributor)	P
Guests				
ACCA (Air Conditioning Contractors of America)	Louis	Fuentes	Contractor (Nonresidential)	P - proxy for Don Langston
ASHRAE	Rick	Danks	Engineering Society	P
WHPA Staff Support				
BBI (Facilitator)	Mark	Lowry	Energy Efficiency Program Consultant	P
BJGustavson Consulting (WebEx)	Bonnie	Gustavson	Other Stakeholder	P



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Agenda

Topic	Discussion Leader
Roll Call	Bonnie Gustavson
Approval of April 19, 2017, EC Meeting Minutes	Mark Lowry
Announcements	Mark Lowry
Organization Announcement	Jeanne Duvall
WHPA Quarterly Report Highlights	Mark Lowry
2017 In-Person Meeting	Harvey Bringas
Industry Perspectives	Dave Dias Rob Falke
New Business and Adjourn	Mark Lowry

Approval of April 19, 2017, EC Meeting Minutes – posted on WHPA website

MOTION made by Don Tanaka (UA) and seconded by Louis Fuentes (ACCA) to approve the EC Meeting Minutes of April 19, 2017. Aye votes were received by email in advance of the meeting from Talbot Gee (HARDI) and Garret McGuire (HARDI). All EC members present voted in favor of passing the motion with one abstention cast by Steve Rickert (CPUC). Motion **CARRIED**.

Announcements

- ANNOUNCEMENTS** by Mark Lowry (BBI)
- Janet Peterson (XCSpec) – Janet is new Chair of the new CQM User Guide Customer Communications (UGCC) Working Group.
 - Jake Huttner (SCE) – Jake’s position at SCE is changing, so he is stepping down from his position as Co-Chair of WE&T Committee; therefore, we now have an open Co-Chair position, serving as Co-Chair with Jim Caldwell (CCCCO).
 - Online Permitting Working Group (OPWG) – A potential Co-Chair has been identified to serve with Allison Paul (California Homebuilding Foundation); we hope to make an announcement soon.

Organization Announcement

- ANNOUNCEMENT** by Jeanne Duvall (PG&E) – I am leaving PG&E as of May 19 for a new job opportunity. My position will be backfilled; but in the interim, following are the changes to IOU representation on the EC and COA:
- Paul Thomas (SDG&E) will replace Jeanne Duvall as the IOU Co-Chair of the WHPA Executive Committee.
 - Christian Weber (PG&E) will replace Jeanne as the PG&E representative on the EC.
 - Christian Weber (PG&E) will hold PG&E’s first “seat” on the Council of Advisors.
 - Swapna Nigalye (PG&E) will join the Council of Advisors as the PG&E’s second “seat.”

WHPA Quarterly Report Highlights – posted on WHPA website

PRESENTATION by Mark Lowry (BBI) – Update on WHPA activities and metrics for February-April 2017.

- Committee and Working Group Accomplishments**
- ▶ Updated compilation of Utility HVAC Incentive Programs on WHPA website to increase WHPA member knowledge to effectively participate in HVAC-related programmatic discussions.

COMMENT by Paul Thomas (SDG&E) – I would like to express my appreciation for the work of WHPA Staff Scott Johnson for his responsive support in making website changes requested by the IOUs.

COMMENT by Paul Thomas (SDG&E) – I would like to thank to Bob Barks (CALBO), Mark Meyers (CALBO), and the Compliance Committee for working with the IOUs to help resolve a challenging situation in developing the Compliance Matrix of Roles and Responsibilities. This was necessary to complete the proposed Work Product.

Committee and Working Group Accomplishments (continued)

- ▶ Pilot-tested two Online Permitting Working Group Surveys—(1) Jurisdictional Survey and (2) Contractor Survey—to increase survey clarity and accuracy of results. Surveys to be fielded in May.
- ▶ Developed two key Online Permitting Working Group Feasibility Memos: (1) Minimum Legal Requirements and (2) Legislative and Regulatory Policy to inform the feasibility of a statewide online permitting tool.
- ▶ Utilized extensive stakeholder representation to continue to refine the HVAC Compliance Definition Matrix.
- ▶ Leveraging the Commercial Installation HVAC industry protocol, developed foundations to establish field performance scoring methods for residential installation and commercial maintenance that can be voluntarily implemented within the HVAC industry. WHPA’s RQI and CQM Committees are considering these foundations to begin adapting CI protocol to their foci.
- ▶ Educated WHPA EC Members on Industry Insights from multiple perspectives (AHRI, ASHRAE, ACCA, NCI, HARDI, IOUs, & CAEECC).

Operational Accomplishments

- ▶ Finalized WHPA Committee and Working Group meeting allocation for January through June 2017.
- ▶ 4 New Member Applications February-April 2017.
- ▶ 1st Quarter 2017 Newsletter developed and distributed with open rate of 28%.
- ▶ 2015 EMV Draft Report E-Blast developed and sent with open rate of 22%.

QUESTION by Paul Thomas (SDG&E) – What is the methodology for developing the volunteer hours that are reported?


ANSWER by Mark Lowry (BBI) – Either Ellen Steiner or Jane Coombs (Staff) can help you to dig into those numbers.

QUESTIONS by Scott Higa (SDG&E) – Who is on the distribution list for the WHPA newsletter? What is the target open rate for the newsletters?

ANSWERS by Mark Lowry (BBI) – The newsletters and eblasts are sent out to the WHPA database. Below are slides showing the historical open rates for WHPA newsletters and eblasts. Scott Johnson (Staff) can provide database numbers and other open rates.


◀ Newsletter Statistics

Date	Newsletter	Recipients	Open Rate	Unsubscribed	Marked as Spam
Mar. 2017	Q1 Newsletter	629	28%	1	0
Dec. 2016	Q4 Newsletter	655	25%	1	0
Oct. 2016	Q3 Newsletter + Special Feature	637	22%	2	0
Jul. 2016	Q2 Newsletter	722	20%	0	0
Apr. 2016	Q1 Newsletter	738	20%	0	0
Dec. 2015	Q4 Newsletter	754	20%	0	0
Oct. 2015	Q3 Newsletter	758	17%	1	0
Jul. 2015	Q2 Newsletter	763	20%	2	0
Apr. 2015	Q1 Newsletter	735	21%	0	0



◀ E-Blast Statistics

Date	E-Blast	Recipients	Open Rate	Unsubscribed	Marked as Spam
Feb 2017	2015 EMV Draft Reports	628	22%	1	0
Jan 2017	Filed Business Plans	630	25%	0	0
Dec 2016	CAEECC Changes	634	24%	1	0
Oct 2016	BP Input Deadline	639	25%	1	0
Oct 2016	Action Plan Workshop	646	21%	2	0
Oct 2016	Roadmap Webinar	650	24%	1	0
Sep 2016	Baseline Webinar	705	22%	3	0
Sep 2016	CAEECC Business Plan	591	20%	1	0
Sep 2016	HVAC3 Comments	592	20%	1	0
Sep 2016	CPUC Webinar	648	24%	0	0
Aug 2016	Adopted Prop. Decision	646	21%	0	0



ACTION for Scott Johnson (Staff) to research HVAC industry open rates for newsletters and eblasts and get the information back to Scott Higa (SDG&E).

2017 In-Person Meeting

COMMENT by Mark Lowry (BBI) – It’s time to start getting a date for the fall WHPA In-Person Meeting for EC and COA members and Committee & Working Group Chairs. We often tie it to the IHACI Trade Show but want to get a sense as to if that matters to you. If it does, do you need to block off the day for the IHACI Trade Show? If it doesn’t, do we want to look at other locations?

COMMENTS by Harvey Bringas (SoCalGas) – IHACI is Thursday, November 2, in Pasadena. I would like input from you WHPA members who attend the annual In-Person Meeting if you want to go back to the Pasadena Hilton, which is available on Tuesday,

**WHPA Quarterly Joint Meeting of the
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October 31, and Wednesday, November 1, noting that October 31 is Halloween. Alternately, we could meet November 7 and 8 at the Pasadena Hilton if the WHPA In-Person Meeting does not need to be tied to IHACI.

COMMENT by Louis Fuentes (ACCA) – I liked the WHPA In-Person Meeting location and arrangements last year and that they were tied to IHACI and Pasadena.

COMMENT by Dominick Guarino (NCI) – For some of us who come in from out of state, it's a good use of time to have a single location and coordinated schedules for the IHACI and WHPA meetings.

COMMENTS by Dave Dias (JCEEP) and Don Tanaka (UA) – We are both in agreement that the WHPA Meeting should be scheduled in alignment with the Pasadena IHACI Trade Show in November.

QUESTION by Mark Lowry (BBI) – Noting that October 31 is Halloween, is there anyone for whom October 31 and November 1 in Pasadena won't work? **NO RESPONSE.**

QUESTION by Paul Thomas (SDG&E) – Should we discuss scheduling the meeting for a day and a half instead of two days?

RESPONSE by Jeanne Duvall (PG&E) – At the last In-Person Meeting, many people left early, which was a problem because there was a lot of work scheduled for the last of the second day. So maybe we need to think about the agenda. It might not be necessary to spend the entire first day setting the stage as we did in 2016 when we had all the landscape players for the business plan on the agenda.

COMMENTS by Mark Lowry (BBI) – If the business plans are approved by the time of the 2017 In-Person Meeting, it would provide a clearer picture of the landscape for 2018. We will design the meeting to be as effective as possible.

ACTION by Harvey Bringas (SoCalGas) to pencil in October 31 and November 1, 2017, at the Pasadena Hilton for the annual WHPA In-Person Meeting.

Industry Perspectives – PPT on ASHRAE Proposed Standard 221 posted on website

INTRODUCTION by Mark Lowry (BBI) – We are continuing presentations of Industry Insights by industry members of the EC. Speakers this month are Dave Dias, EC member for JCEEP, and Rob Falke, CQI Committee Chair for NCI.

PERSPECTIVE SHARED by Dave Dias (JCEEP) – I am the Business Representative for the Sheet Metal Workers Local 104 and represents Joint Committee on Energy and Environmental Policy (JCEEP) on the WHPA. We are more engaged in the non-residential markets, but it often also relates to residential. We are very concerned about compliance and permits in order to ensure best practices. Having a trained workforce is essential to getting quality installations and quality maintenance.

- ▶ It is critical to have a system-wide approach to HVAC installation, not just an individual equipment approach focusing on the SEER. A system-wide approach is essential to get optimal efficiency.
- ▶ JCEEP has started participating in ASHRAE because they did not have anyone with ductwork expertise on their HVAC committees, and proper ductwork is an important part of getting optimal energy efficiency.
- ▶ DEER savings figures tend not to be accurate; there are better ways to measure.
- ▶ I am the JCEEP representative on the California Mechanical Code Advisory Committee and other committees to provide input with the goal of improving energy efficiency.

COMMENT from Louis Fuentes (ACCA) – I am mainly a residential contractor. As we try to increase the percentage of residential contractors pulling permits, we think it is also important to educate the homeowners as to why it is important for them to have permits. We seem to forget about the homeowner's responsibility to have permits. There are no penalties for the homeowner for not having a permit. We need some type of language in a law, process, or insurance that penalizes homeowners who do not properly pull permits—because the contractors who don't pull permits are not going away.

RESPONSE from Dave Dias (JCEEP) – I am also the JCEEP representative for the CSLB, and I agree with you 100%. I just don't know how to reach 40 million people—I just don't know how to do it. They do it for a smog check, but that is tied to car registration.

COMMENT by Mark Meyers (CALBO) – We see the answer, but no one wants to look at it. If we are to have compliance, it will be difficult and will end up being a legislative answer by the time we are all done.

**WHPA Quarterly Joint Meeting of the
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QUESTION by Mark Lowry (BBI) – Regarding Prop. 39, were you saying that initially the evaluation of that program’s approach was flawed because it was not taking into account that if somebody’s system was broken down and the current energy consumption was therefore zero and if you put in any kind of new system, then the energy consumption was recorded as greater?

RESPONSE by Dave Dias (JCEEP) – Yes, but that was fixed.

INTRODUCTION by Mark Lowry (BBI) – Next, we have Rob Falke (President of NCI), who is Chair of the CQI Committee. With the summer meeting of ASHRAE coming up, we wanted to provide an update.

PERSPECTIVE SHARED by Rob Falke (NCI) – Dave Dias (JCEEP) gave this a good introduction about systems that are not as efficient as they appear to be, and that is what proposed ASHRAE Standard 221 is about and is in development. It is basically a test method to measure and score the operating performance of an installed constant volume unitary HVAC system.

The WHPA was invited to report on the work of Proposed ASHRAE Standard 221:

- ▶ Preliminary work for this standard was completed by the WHPA CQI Field Data Specification Working Group, chaired by Peter Jacobs (BMI). 20-30 Committee participants worked on it, and 15 people from the CQI Committee contributed.
- ▶ Existing industry test method since 2005.
- ▶ Field measures and scores installed HVAC system performance.
- ▶ The basic test takes a trained technician about 45 minutes for a residence and 1½ hours for a commercial installation.
- ▶ Initial accuracy ± 13%.
- ▶ The WHPA CQI Committee is preparing a Work Paper describing the deficiencies of California Assembly Bill AB 802 in a sales situation.

The scoring method in ASHRAE 221 looks at the actual percent of heating or cooling delivered by the system to the occupied space. In essence, with this we can now measure the deteriorating effects of the installation, and even maintenance, on a system by comparing what the equipment is rated at and what makes it into the building. These WHPA committees believe that major performance will eventually replace deemed savings and provide a field measure pre- and post-baseline with which we can document savings. You can start to see what this standard is about.

Should this standard be approved, it may operationalize Assembly Bill 802. We found tons of things missing in AB 802. You can estimate the savings that will occur using this proposed standard. That is missing from AB 802. This is a field standard and made for field guys.

QUESTION by Dave Dias (JCEEP) – Does it take any consideration for fan power?

ANSWER by Rob Falke (NCI) – Yes, we have a version of this that is a field measured system EER of the system, so we take power in the EER formula, and that can be compared to the equipment rated EER in the laboratory. That is how we come up with the percentage.

COMMENTS by Rob Falke (NCI) – Proposed Standard 221 is consistent with many industry standards. It is great to see all of these coming together in this test method. In addition to the interest expressed by ASHRAE, there has been a lot of interest from EM&V people, where the contractor in the field is using the same test methods as EM&V people. Commissioning and balancing groups are also interested. 80% of the use now is between the contractor and the customer. The data below is based on combined information from four studies, and you see that this can be used as a diagnostic tool.

	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%

This proposed standard is being given to the industry so that it can be used as they see fit. We believe this is a new frontier in energy efficiency. It does not coincide with the current practices in California, but it is being used across the country.

QUESTION by Mark Meyers (CALBO) – Regarding the duct system field performance test, did you find most of the inefficiencies were caused by duct leaking, duct sizing, or duct installation?



**WHPA Quarterly Joint Meeting of the
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ANSWER by Rob Falke (NCI) – Those are questions of the past. With this we can see the value of each individual repair. For example, duct leakage has never gotten us the savings that we want. There is no single measure we can point to; it is different on each system. That is where this is taking us. If we can custom diagnose each system, measure it before and after, we will have a completely new way of doing things.

QUESTIONS by Paul Thomas (SDG&E) – How big is the sample size? Also, are you seeing similar results from IOU studies?

ANSWERS by Ron Falke (NCI) – This is based on about 1,000 systems throughout California. Unless it uses this test method, there is no way to draw a parallel.

QUESTION by Dave Dias (JCEEP) – Will it do diagnostics?

ANSWER by Rob Falke (NCI) – Yes, in great detail, down to pressure drops. We are finding lots of problems with curves. It pinpoints problems and allows a surgical repair of the system. This is completely different than the use of deemed savings.

QUESTION by Louis Fuentes (ACCA) – Has this also looked at roofing insulation?

ANSWER by Rob Falke (NCI) – Absolutely.

QUESTION by Mark Lowry (BBI) – Where is proposed Standard 221 in the ASHRAE process?

ANSWER by Rob Falke (NCI) – After the ASHRAE Summer Meeting on August 2, it will be submitted for final public review, and it will come out the first of September for a 45-60-day review.

COMMENT by John Jones (BPI) – I want to thank to you and the team for a ground-breaking standard.

New Business and Adjourn

COMMENT by Louis Fuentes (ACCA) – I understand that you are looking for a co-chair for the Online Permitting Working Group. I am interested in the position.

RSEPNSE by Mark Lowry (BBI) – Excellent. We will get back to you.

The next Executive Committee Meeting is Wednesday, June 21, 2017, at noon Pacific Time.

The meeting adjourned at 1:32 p.m. PDT.

Notes by Judy Key Johnson

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