

Call to Order

Mark Lowry (BBI CEO) called the meeting to order at 12:04 p.m. PST.

Agenda

Topic	Facilitator
Roll Call	Bonnie Gustavson
Approve Minutes of November 8, 2017, EC Meeting	Mark Lowry
Announcements	Mark Lowry
HVAC Stakeholder Engagement Strategy (HSES) Committee Update	Paul Thomas, SDG&E HSES IOU Co-Chair
Commercial Quality Installation Committee Work Product: <i>“Taking AB 802 Into the Field”</i> White Paper (Goal 3)	Rob Falke, NCI CQI Chair
Commercial Quality Maintenance Standard 180 User Guide Customer Communications Working Group Work Product: <i>“Standard 180 Performance Objectives to Value Propositions Interview Process”</i>	Jan Peterson, XCSpec CQM STD 180 UGCC WG Chair
Fault Detection and Diagnostics Committee Work Product: <i>“2017 FDD Roadmap Update”</i> (Goal 1)	Joe Schmutzler, Transformative Wave and Sean Gouw, SCE FDD Co-Chairs
New Business and Adjourn	Mark Lowry

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	P=Present
Executive Committee				
ACCA (Air Conditioning Contractors of America)	Don	Langston	Contractor Association	A -Standing proxy assigned to Louis Fuentes
AHRI (Air-Conditioning, Heating, and Refrigeration Institute)	Garrett	McGuire	HVAC Manufacturer Association	A
ASHRAE	Ron	Jarnagin (Co-Chair)	Engineering Society	A
CEC (California Energy Commission)	Lea	Haro	Government (Other than CPUC)	P
CPUC (California Public Utilities Commission)	unassigned		CPUC	
HARDI (Heating, Airconditioning & Refrigeration Distributors International)	Talbot	Gee	Distributor Association	P
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	A - proxy assigned to UA
NCI (National Comfort Institute)	Dominick	Guarino	Educator, Trainer	P
PG&E (Pacific Gas and Electric Company)	Christian	Weber	California IOU	P
SCE (Southern California Edison)	Scott	Higa	California IOU	P

Organization	First Name	Last Name	WHPA Category	P=Present
SDG&E (San Diego Gas & Electric)	Paul	Thomas (Co-Chair)	California IOU	P
SoCalGas (Southern California Gas Company)	Harvey	Bringas	California IOU	P
UA (United Association)	Don	Tanaka	Organized Labor	P-proxy for JCEEP
Guests				
NCI (National Comfort Institute)	Rob	Falke	Educator, Trainer	P
PG&E (Pacific Gas and Electric Company)	Mark	Salavitch	California IOU	P
SCE (Southern California Edison)	Sean	Gouw	California IOU	P
Transformative Wave	Joe	Schmutzler	Controls (Manufacturer or Distributor)	P
XCSpec	Jan	Peterson	Controls (Manufacturer or Distributor)	P
Staff				
BBI (Better Buildings, Inc. CEO) (Facilitator)	Mark	Lowry	Energy Efficiency Program Consultant	P
BJGustavson Consulting (WebEx)	Bonnie	Gustavson	Other Stakeholder	P
BNB Consulting (CQM Staff Support)	Bob	Sundberg	Energy Efficiency Program Consultant	P
Galawish Consulting Associates (FDD Staff Support)	Elsia	Galawish	Energy Efficiency Program Consultant	P
InfoPlast (HSES Staff Support)	Wendy	Worrell	Other Stakeholder	P
Key SEO/Key Marketing Group (Scribe)	Judy	Johnson	Other Stakeholder	P
Opinion Dynamics (Plan Support)	Ellen	Steiner	Energy Efficiency Program Consultant	P

Approve Minutes of November 8, 2017, Meeting – posted on WHPA website

MOTION made by Dominick Guarino (NCI) and seconded by Bob Wiseman (IHACI) to approve the EC Meeting Minutes of November 8, 2017. All EC members present or represented by proxy voted in favor of passing the motion. Motion **CARRIED**.

Announcements

ANNOUNCEMENT by Don Tanaka (UA So Cal Pipes) – I will be stepping down as the UA So Cal Pipes representative to the Executive Committee effective January 1, 2018. Jerry Trevino, Director of HVACR for Southern California Pipe Trades, will be taking my place on the Executive Committee. Jerry's email is jtrevino@socalpipe.org.

COMMENT by Mark Lowry (BBI CEO) – New applications are not being processed for the WHPA at this time.

NOTE by Judy Johnson (Staff/Scribe) – This is because of the ramp-down in WHPA Staff support. Registration in the WHPA is required in order to vote on a WHPA Committee or Working Group. The Executive Committee minutes will record the change in the UA representative to the EC and the effective date.

COMMENT by Mark Lowry (BBI CEO) – Thank you to Don Tanaka (UA) for your contributions to the WHPA since its inception in 2009. Don has been a member of the Steering Committee and Executive Committee since the beginning representing UA So Cal Pipes.

HVAC Stakeholder Engagement Strategy (HSES) Committee Update

COMMENT by Paul Thomas (SDG&E and IOU Co-Chair of HSES Committee) – Here is an update on actions by the HSES Committee and the Chartering Committee since the last EC meeting on November 8.

- Chartering Committee Chair Dave Dias (JCEEP) is working on getting additional members for that Committee.
- Mark Lowry (BBI CEO) has been leading the HSES Committee through some fundamental discussion of an identity for the future WHPA, and the Committee has come to an agreement on some of these. Further discussion on this topic will be held at the November 17 HSES Meeting.
- The HSES Committee has reached agreement on:
 1. The current WHPA membership categories are appropriate for the future (potentially a non-profit) WHPA. There is discussion of potentially adding some additional membership categories.
 2. It is still appropriate for the WHPA to be a member organization.
 3. It was agreed that the CPUC and the CEC need to remain engaged and involved in the WHPA.
 4. It was agreed that the WHPA will not focus on political action, such as lobbying.
- Discussions are being held on:
 1. The number of members on Board of Directors: It is agreed that the new Board of Directors will have about the same number of members as the current Executive Committee.
 2. Membership dues.

The goal is to present a proposed Charter for the new organization to the Executive Committee at its December 13 meeting.

Commercial Quality Installation Committee Work Product: “Taking AB 802 Into the Field” White Paper – Work Product posted on WHPA website

PRESENTATION by Rob Falke (NCI and Chair of the CQI Committee) – This CQI Committee Work Product. “Taking AB 802 Into the Field” White Paper is the Committee’s primary Work Product for 2017 and is being presented to the Executive Committee for adoption. This is Goal 3 of the Committee for 2017.

As we worked over the years with this Committee, a main focus was to be in touch with those in the field. We have a good cross-section of the industry on this Committee and all share the vision that performance must be a part of the future and the way things are bound to change.

As we worked, we were in touch with those in the field. We realize that AB 802 will significantly change the market itself and especially EE programs for HVAC. However, we also believe that this is very hidden from regulators, implementers, aggregators, and others and that they can’t see deep enough to see what AB 802 will mean in the field. In this paper, we in the Committee want to show what AB 802 means in the field and especially in the transactions between the contractor and the consumer.

Two-thirds of the members of the CQI Committee participated in and broke up into task groups from three perspectives:

1. Contractor Implementation
2. Education and Training
3. Utility Program Design and Savings Estimates

A lot of our work was influenced by the HVAC performance principals in ASHRAE 221 Proposed Standard that is coming out soon for public review. Pete Jacobs (BMI) and the WHPA CQI Working Group that he chaired laid the standard for programs that are performance based. The real work of an energy savings program happens over a table. This is where the contractor and customer make the decisions that launch a project. Hopefully, this Work Product will be read and considered by regulators. We think there are concepts in this that are important for programs to be successful. Many contractors participate in utility programs because of the leads that are provided and because many contractors are weak on the marketing side.

Our hope is that this Work Paper will bring awareness to regulators, utilities, implementers, aggregators, and the HVAC practitioners of the issues that must be addressed in order for the intent of the assembly bill to succeed. Following are issues that we found and proposed solutions.

- A real strength that can be added to a program is current information of analyzing smart meter, weather data, and excessive consumption by the HVAC system. This will produce qualified leads encouraging contractor participation. This may offset the negative effects of AB 1414, requiring permits.
- With AB 802, there will be more specific solutions required because there will most likely not be a set of simple measures that can be executed on a building. Only through inspections, testing, and diagnostics can you find out what will save energy at the meter. Over the past 10 years in California, we were only getting about 50% of what the utilities projected.
- The Committee sees that a custom scope of work will be required for each project with inspections, testing, and diagnostics to find the improvements to be made.
- The consumer will need to be more involved, and trust will be built between the consumer and the contractor through measurements and testing. That will be a huge shift, but that process of involving the customer in the data itself will need to be part of the implementation of AB 802.
- Testing and diagnostics are addressed in ASHRAE Proposed Standard 221.
- A new breed of WE&T and utility program training will be needed to marry the technical knowledge with increased skills to communicate with and educate consumers.
- Needed custom upgrades can only be identified by measuring the performance of each system and educating consumers while evaluating the data and prescribing custom upgrades.
- This is a real shift in the skills required. The Committee is really concerned because this is moving into the hands of the implementer, and the Committee is worried if the implementers will have those skills.

QUESTION by Paul Thomas (SDG&E) – Does the Committee think that more education is needed in the utility education centers or in the programs?

ANSWER by Rob Falke (NCI) – Both sides. In the White Paper, both of those trainings are addressed and they need to be in harmony. That conclusion came from the Committee members who represent all parts of the industry.

PRESENTATION continued by Rob Falke (NCI) – Additional issues that must be addressed.

- The Committee is really concerned that there is a lot of hocus-pocus when it comes to energy savings. The end-game is what appears at the meter. There will need to be tools used that will calibrate between the field measurements and the EM&V measurements that follow. The Committee thinks, from many members' perspectives, that that could really be a risk with AB 802.
- AB 802 is written in a way that implies that programs with utility meter impacts should be authorized. The Committee does not know what "authorized" means, and we have tried to find out.
- We recommend some metering. There is some very low cost metering that may be used to do that. There is more detail in the paper.
- Contractors will require some incentive be paid when they deliver the work. Results from metered savings programs are not available until a year after the project has been completed. Without the ability to test in an effective way, there are so many unknowns that the sale may not happen. That is a real concern of the Committee.

QUESTION by Christian Weber (PG&E) – What is your concern about essentially doubling the duration of the project because you have to establish a baseline?

ANSWER by Rob Falke (NCI) – ASHRAE Proposed Standard 221 can (potentially) produce a very accurate prediction of the savings. There are a couple calculators being developed now that are significantly better than what were used in past utility programs.

COMMENT by Rob Falke (NCI) – In the Work Product, we call for a constant upgrading of the calculators based on metered data.

OFFER by Rob Falke (NCI) – Anyone on this call should feel free to contact any member of the Committee to discuss any points further.

QUESTION by Lea Haro (CEC) – How will this Work Product be distributed?

ANSWER by Mark Lowry (BBI CEO) – If this Work Product is adopted by the EC, it will be posted on the WHPA website.

COMMENT by Scott Higa (SCE) – I was very involved in the utility task force of this work. I want to note that there was a lot of good discussion and a lot of awareness of how legislation is formulated. What this White Paper does is to inform people of things that need to be considered.

COMMENT by Rob Falke (NCI) – The Committee certainly hopes that this Work Product is used.

MOTION made by Scott Higa (SCE) and seconded by Paul Thomas (SDG&E) to adopt the CQI Committee Work Product “Taking AB 802 Into the Field.” All EC members present or represented by proxy voted in favor of passing the motion with one abstention by Lea Haro (CEC). Motion **CARRIED**.

Commercial Quality Maintenance Standard 180 User Guide Customer Communications Working Group Work Product:
“Standard 180 Performance Objectives to Value Propositions Interview Process” – Work Product posted on WHPA website

PRESENTATION by Jan Peterson, (XCSpec and CQM STD 180 UGCC WG Chair) – This CQM Standard 180 User Guide Customer Communications Working Group Work Product “Standard 180 Performance Objectives to Value Propositions Interview Process” is being presented to the Executive Committee for adoption.

We are trying to use this manual to help the HVAC service organizations educate the asset owner and the asset manager. There is a focus on defining and qualifying the metrics to measure success. The Working Group that developed this Work Product is fairly small, and it is our first year of working together.

What you will find in this Work Product is some guidance going into that first meeting between the contractor and the (potential) customer in order to develop an understanding and action plan in a comprehensive and collaborate relationship with the asset owner/asset manager. The goal is for everyone to have a clear understanding of the metrics and objectives of a maintenance program. This Work Product is about helping to develop educational skills for the service organization. The Work Product outlines guidelines for actions for the service provider prior to the first meeting with the (potential) customer.

One of the avenues we did not have time to address but brought up is when the owner wants their own HVAC team to do the maintenance. The Work Product includes a proposed agenda for that first meeting. There are also case studies included. In the first meeting the contractor tries to understand the customer’s pain points in addition to his financial landscape. The goal of the first structured meeting between the contractor and the potential customer is to get to the action plan. This Work Product shows what the action plan should include while creating it with the customer. With every good sales call, you want to get to the next meeting. This Work Product has suggestions on how to get to that next meeting and then to a signed comprehensive maintenance agreement.

COMMENT by Scott Higa (SCE) – I was in several of the meetings. I am impressed that the Working Group was able to come together and produce this. I was most interested in the performance objectives and how to measure them. This Work Product helps to fill in the gap in Section 4 of ASHRAE Standard 180. This can help make Standard 180 practices successful in the field.

COMMENT by Jan Petersen (XCSpec) – This work has been folded into the Standard 180 ASHRAE group.

MOTION made by Scott Higa (SCE) and seconded by Don Tanaka (UA) to adopt the CQI Committee Work Product “Standard 180 Performance Objectives to Value Propositions Interview Process.” All EC members present or represented by proxy voted in favor of passing the motion with one abstention by Lea Haro (CEC). Motion **CARRIED**.

Fault Detection and Diagnostics Committee Work Product: “2017 FDD Roadmap Update” – Work Product posted on WHPA website

PRESENTATION by Joe Schmutzler (Transformative Wave and Co-Chair of the FDD Committee) – This FDD Committee Work Product “2017 FDD Roadmap Update” is being presented to the Executive Committee for adoption.

The FDD Roadmap has not been updated since 2013. Following are some of the main elements of the update developed by the FDD Committee this year:

- Updated the Roadmap Goals – Developed new mid-term goals and long-term goals.
- Listed Commercialize Onboard Diagnostic Systems that meet California requirements.
- Incorporated mandatory Onboard Diagnostic Systems in California Building Codes for built up and residential systems.
- Sean Gouw (SCE and Co-Chair of the FDD Committee) contributed a lot to this Work Product.
- Our goal was to develop a Work Product of the quality of the California lighting deliverable.

Other changes in this Work Product:

- Removed the Action Item tables that were in the prior version of the Roadmap.
- Added the following Appendices to make it easier to update the FDD Roadmap in the future:
 - Appendix A – FDD-Related Research (Includes Reports)
 - Appendix B – FDD-Related Technology Patents
 - Appendix C – Organizations Involved in FDD

MOTION made by Don Tanaka (UA) and seconded by Scott Higa (SCE) to adopt the FDD Committee Work Product “2017 FDD Roadmap Update.” All EC members present or represented by proxy voted in favor of passing the motion. Motion **CARRIED**.

New Business and Adjourn

No other new business was presented.

At the December 13 EC Meeting, the goal is to have a lot of information from the HSES Committee and the Chartering Committee in addition to several Work Products to be presented for adoption.

QUESTION by Paul Thomas (SDG&E) – Is a communication to the broader membership still going to happen?

ANSWER by Mark Lowry (BBI CEO) – Yes.

The next Executive Committee Meeting is by conference call on Wednesday, December 13, 2017, at noon Pacific Time.

The meeting adjourned at 1:18 p.m. PST.

Notes by Judy Key Johnson, WHPA Staff
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