



**Goal 2: Commercial Quality Installation Committee Meeting Minutes
Friday, September 15, 2017**

WHPA Code of Conduct: Please note that all participants of all Western HVAC Performance Alliance (WHPA) meetings, committees, working groups, and ad hoc groups shall adhere to the WHPA Code of Conduct: <http://www.performancealliance.org/Home/CodeofConduct/tabid/205/Default.aspx>.

Welcome/Call to Order

The meeting was called to order at 10:04 a.m. PDT by Ben Lipscomb (NCI) filling in for Chair Rob Falke (NCI).

Roll Call and Approval of August 18, 2017, Meeting Minutes

There are eight voting members and meeting quorum is five. Meetings are scheduled for 60 minutes.

Pete Jacobs (BMI) requested the August minutes to reflect the following revision in an Action Items: *Provide Cristalle Mauleon (Solaris-Technical) with a white paper by LBNL (Jessica Anderson) dealing with how to incorporate non-routine variables into billing analyses. This paper will not be available until the end of September.*

Jerry Hernandez (Green Link Mechanical) made a motion to approve the August 18, 2017, meeting minutes with the change under Action Items, Pete Jacobs (BMI) seconded the motion, the meeting minutes were approved as revised.

Organization	First Name	Last Name	WHPA Category	P=Present
Voting Members				
Air-Tro	Bob	Helbing	Contractor (Nonresidential)	P
All Pro Plumbing Heating and Air	Michael	Greany	Contractor (Nonresidential)	A
BMI (BuildingMetrics Inc.)	Pete	Jacobs	Energy Efficiency Program Consultant	P
Cumming Corporation	Brian	Mauleon	Energy Efficiency Program Consultant	P
Green Link Mechanical	Jerry	Hernandez	Contractor (Nonresidential)	P
NCI (National Comfort Institute)	Rob (Chair)	Falke	Educator, Trainer	A (proxy to Ben Lipscomb)
SCE (Southern California Edison)	Sean	Gouw	California IOU	A
Tre'Laine Associates	Pepper	Hunziker	Energy Efficiency Program Consultant	P
Non-Voting Members				
Lincus-Solaris	Cristalle	Mauleon	Energy Efficiency Program Consultant	P
NCI (National Comfort Institute)	Ben	Lipscomb	Educator, Trainer	P (proxy for Rob Falke)
SCE (Southern California Edison)	Scott	Higa	California IOU	P
Staff				
Galawish Consulting Associates (Staff Support)	Elsia	Galawish	Energy Efficiency Program Consultant	P



**Goal 2: Commercial Quality Installation Committee Meeting Minutes
Friday, September 15, 2017**

Review Agenda

Ben Lipscomb (NCI) reviewed the agenda. No additional items were added.

AGENDA TOPICS	DISCUSSION LEADER
Welcome	Ben Lipscomb
Roll Call and Approve August 18, 2017, Meeting Minutes	Elsia Galawish
Review Agenda	Ben Lipscomb
Taking AB 802 into the Field Work Paper	Ben Lipscomb
Update from the CQI Field Data Spec Working Group	Pete Jacobs
Statewide HVAC System Performance Measurement	Ben Lipscomb
Looking Ahead to Future WHPA Goals and Activities	Ben Lipscomb
New Business	Ben Lipscomb
Next Meeting Date, Action Items and Assignments	Elsia Galawish
Adjourn	Ben Lipscomb

Taking AB 802 into the Field Work Paper

Ben Lipscomb (NCI) presented an overview of the Committee’s 2017 Goal 2 – *provide a work paper identifying obstacles (when operationalizing AB 802 in the field) and solutions for engaging HVAC consumers and their contractors with requirements of AB 802 at the field level (how to make it happen)*. California Bill AB 802 calls for energy efficiency programs to change the ways savings are counted. It allows, among other things, for savings to be counted against existing baseline rather than a default code baseline used in the past. It also encourages meter-based savings – determined based on data from the building meter or sub-metering – some form of real energy data collection, in addition to deemed/custom savings estimation approaches used in the past. This set up some interesting opportunities and challenges. Our goal is to interpret these opportunities and challenges in terms of how they impact the HVAC portion of the energy efficiency portfolio. The initial draft version (v1.5 dated 8/18/2017) is embedded below.



Taking AB 802 into the Field v 1.5 8-18-17

Regulators are asking high-level questions.

- Why are we not counting savings from the existing baseline level?
- How can we leverage metered data in order to quantify savings?

The initial draft attempts to address these types of questions to the level of the HVAC industry specifically and identify some areas where we need to come up with solutions to overcome some gaps.

Goal 2: Commercial Quality Installation Committee Meeting Minutes Friday, September 15, 2017

Decision to install an energy efficiency measure or an energy-related upgrade is made by customers, and they are typically interfacing with HVAC contractors when they make those decisions. These are the parties that need the information. Often times the IOUs/implementers/regulators do not have a seat at that decision-making table, so we need to figure out how to reframe the high-level implications surrounding AB 802 that make sense to customers and HVAC contractors.

The proposed list of the obstacles includes the following:

1. Contractor leads for customers needing energy upgrades (opportunity).
 - a. *Metered data provides an opportunity to identify customers whose HVAC usage is uncharacteristically high and the opportunity is to get those qualified leads into the hands of contractors. Qualified customer leads generation is one of the primary reasons contractors participate in energy efficiency programs, and AB 802 set up the opportunity to use metered energy use data to generate those leads. This results in data-driven information contractors can then take to customers to help them identify issues and come up with solutions.*
2. Determining which upgrades are needed.
 - a. *It is the job of the contractor to identify sites with potential for high energy savings in general and to provide customer with the best mix of energy efficiency opportunities. Programs need to be designed in such a way that it allows for contractors to apply their skills and find solutions suited to each customer's HVAC situations.*
3. Customer education a critical component of the decision.
 - a. *We need to figure out how to effectively market programs to customers, inform and educate customers on energy efficient technologies, and arm contractors with marketing materials.*
4. In-field creation of the project scope of work.
 - a. *Customers usually look for holistic solutions to meet their energy efficiency needs. We need to empower contractors to draft SOW that fits customer's energy needs.*
5. Training the workforce.
 - a. *Contractors are the primary point of contact for customer. Therefore, they need to be knowledgeable both in terms of the HVAC services they provide and also of the utilities' energy efficiency programs aspects of what they are able to provide to a customer. Utilities need to train contractors in a way that they can successfully communicate with customers.*
6. How will expected savings be estimated?
 - a. *Similar to #7 below—actual energy savings will not be determined until about a year after measures are installed. Need a way to estimate those savings reliably up front so that estimates can be part of the customer's decision-making process and potentially part of utility incentive calculation.*
7. Pre- and post-baseline outside the meter is needed.
 - a. *Savings estimation requires pre/post meter monitoring and that takes time, particularly in the post-installation period. You cannot quantify the energy savings until you have enough monitoring data under a variety of weather conditions to be able to extrapolate energy usage to a typical year. The waiting period after a measure is installed to verify savings at the meter is a challenge. Many customers will not engage in energy efficiency programs if there is a risk or a long lag in receiving an incentive. The benefit has to be there at the time the customer is trying to make the decision because it is part of that decision.*
8. Unknown incentive amounts.
 - a. *If incentives are more of a pay-for-performance type of arrangement to align with AB 802, we do not know what that energy performance looks like until a year down the road. If the incentive is based on a \$/verified net kWh, for example, the customer/contractors do not know what to expect for the incentives, and they cannot role that into their decisions about whether to install an energy efficient measure. They do not have the spare cash to make the capital investment up front. The incentive is part of that decision. Getting some portion of incentives up front is important.*



Goal 2: Commercial Quality Installation Committee Meeting Minutes Friday, September 15, 2017

The next step is to form task groups to edit, add to, delete, and complete the white paper and to get some stakeholders with experience in areas listed below. Ben Lipscomb (NCI) introduced the proposed task groups (TGs) to include:

1. Contractor's Sales Perspective Task Group
2. WE&T Task Group
3. Impact on AB 802 Task Group – *Policy Focus*
4. Implementer and IOU Perspective Task Group
5. Typical System Scope of Work Task Group – *What can be included in a typical SOW for HVAC?*
6. Field System Pre-Upgrade Baseline Task Group – *Performance testing and how to establish baseline usage and estimate baseline based on TI values.*
7. Other needed Task Groups?

Pepper Hunziker (Tre'Laine), (Scott Higa (SCE), and Cristalle Mauleon (Lincus-Solaris) suggested consolidation of the seven Task Groups into just 3 or 4 groups focusing on those that have the biggest impact.

Ben Lipscomb (NCI) agreed that some of the task groups are interrelated and can be condensed to capture a range of issues. For example, Task Groups #1 and #2 can be consolidated.

Cristalle Mauleon (Lincus-Solaris) also suggested that Task Group # 5 can be merged with Groups #1 and #6, with Task Group #6 being leveraged to create SOW Group #5 and then contractors Group #1 can sell. There is also a need for an Analysis Group to deal with energy savings estimation as it relates to the performance-based savings approach.

Pete Jacobs (BMI) and Jerry Hernandez (Green Link Mechanical) agreed, and Pete Jacobs (BMI) suggested that an Analysis Group be combined with the Implementer/IOU/Regulatory Group.

Ben Lipscomb (NCI) summarized the TG consolidations discussed so far. There should be four TGs:

1. WE&T Task Group divided into two areas:
 - a) sales/training and
 - b) technical training
2. Implementer/IOU/Regulatory Task Group to focus program implementer plan/design/regulatory aspects of this.
3. Contractor-Focused Task Group to look at the work in the field, what is part of typical scope of work, and their recs on how to sell this.
4. Analysis Task Group focused on energy efficiency.

Scott Higa (SCE) sees opportunities for multiple perspectives and good coordination between the Analysis Group and the Program Design Group, however at times, there can be a disconnect between these two groups. The various perspectives will give everyone a better appreciation of California's EE programs and their processes.

Cristalle Mauleon (Lincus-Solaris) highlighted the need for Task Groups to communicate and coordinate with each other to avoid inconsistencies in the white paper.

Ben Lipscomb (NCI) agreed that a Task Group should not operate in a silo but should report back to the larger group periodically, again to ensure consistency in whitepaper.

Pepper Hunziker (Tre'Laine) asked that the framework or end goal be defined for the 3-4 Task Groups and shared across all Task Groups for alignment and consistency.



Goal 2: Commercial Quality Installation Committee Meeting Minutes Friday, September 15, 2017

Ben Lipscomb (NCI) noted that there is a draft of the white paper that has a level of consistency that will help. The next phase ensures the SMEs in the Task Group areas have the opportunity to provide input. As that process moves forward, there will be continual reporting back to the main group and sharing red-lined versions of the white paper to ensure the Committee is comfortable with the continuity of the document and that the white paper projects a message that the full Committee approves of.

Scott Higa (SCE), following up on Pepper Hunziker's (Tre'Laine) comment, opined that the goal can be the title of the white paper, "Taking AB 802 into the Field," and suggested that the goals be defined for each Task Group and that these goals must align with the overarching goal.

Final Committee Agreement—**ACTION ITEM**: Ben Lipscomb (NCI) and Rob Falke (NCI) will do the following:

1. Reformulate the eight (8) obstacles to operationalizing AB 802.
2. Consolidate Task Groups into more appropriate groups—about 3 per feedback.
3. Update white paper v1.5, distribute for review, and solicit volunteers for the consolidated Task Groups.

The following CQI Committee members volunteered to be part of specific Task Groups pending consolidation.

- Analysis & Regulatory: Pete Jacobs (BMI)
- WE&T and Field Systems: Jerry Hernandez (Green Link Mechanical)
- Contractor's Sales Perspective: Bob Helbing (Air-Tro) and Marc Pickett (AMS)
- WE&T: Pepper Hunziker (Tre'Laine Associates)
- Implementer/IOU Perspective: Scott Higa (SCE)

Bob Helbing (Air-Tro) asked for definition of TG roles and objectives documented so the members of the TGs understand what they are undertaking. Scott Higa (SCE) also asked that the expected TG output be defined.

Discussion on WHPA Staff Facilitation Support

Elsia Galawish (Staff) informed the Committee that Staff support for WHPA will end on October 31, 2017, at the IOUs' request, and all work products are due on October 31, 2017. Elsia then asked Scott Higa (SCE) to explain the IOUs' rationale for this decision.

Scott Higa (SCE) agreed that the end of October is the targeted date for all work products and/or status reports to be completed. The following two months will be needed to transition to a new environment (TBD). He added that there is a separate Committee that is discussing the future of WHPA activities, what will be the focus, and the operations of the group. For this group, the TGs will help to accelerate the completion of the white paper.

Elsia Galawish (Staff) added that additional Committee meetings will be added during the month of October.

Pete Jacobs (BMI) suggested that, given this short timeframe to complete the white paper, the use of email should be used as a review mechanism for members.

Scott Higa (SCE) noted that meetings can continue as long as it is within scope of the WHPA Charter. There is nothing preventing WHPA activities from occurring outside of what is happening with the WHPA facilitating contract. He clarified that meetings can continue to meet but without IOU funding of Staff support.

Update from the CQI Field Data Spec Working Group

Pete Jacobs (BMI) – The CQI FDS WG met 9/13/17 and discussed the WG's next steps. We talked about the calculations procedures and provided an update to the December 2017 calculation procedures discussion that simplified the data needs for the calculation steps. The next two WG's meetings will focus on best practices for taking measurement in the field,

Goal 2: Commercial Quality Installation Committee Meeting Minutes Friday, September 15, 2017

prioritizing on those that are part of the calculations procedures. He asked if there were any SMEs who would join the next meeting to provide the WG with their experiences in the field.

Statewide HVAC System Performance Measurement

Ben Lipscomb (NCI) – One of our goals was to gather data to quantify the level of performance, efficiency, and capacity that systems are currently delivering in California with the potential of trying to match up with whether a permit was pulled for the installation or not. We had an idea to seek funding from the CEC for the project. Given the recent reorganization at the CEC, there is a different group of stakeholders now involved with this. We will, however, continue to seek funding from the CEC as well as to draft a strawman scope of work that we can take to them (to provide context) and other potential funding sources. Pete Jacobs (BMI), Elsia Galawish (Staff), Ben Lipscomb (NCI), and Rob Falke (NCI) will work on the potential scope of work. If anyone on the CQI Committee is interested, please contact Rob Falke (rob@ncihvac.com) or Ben Lipscomb (benl@ncihvac.com).

Looking Ahead to Future WHPA Goals and Activities

Will be added to 10/6/2017 meeting agenda.

New Business, Next Meeting Date, Action Items, Assignments, Closing Comments, Adjournment

No new business.

Next Meeting is scheduled for Friday, October 6, 2017, at 12:00-1:30 p.m. PDT.

ACTION ITEMS:

1. Completed. The updated white paper v1.6 and the guidance document are attached below.



Taking AB 802 into
the Field v 1.6 9-19-17



Taking AB 802 to the
Field TASK GROUPS_1

2. Rob Falke (NCI) is still soliciting volunteers for Task Groups. If you know of anyone outside of the CQI Committee who can contribute to these efforts, please notify Rob Falke (rob@ncihvac.com) or Ben Lipscomb (benl@ncihvac.com) of that SME for the following areas:
 - a) Reformulate the eight (8) obstacles to operationalizing AB 802.
 - b) Establish what the consolidate task groups will be - about 3.
 - c) Distribute a list of volunteers to date and request for more volunteers.
 - d) Define TG roles and objectives so the members understand what they are undertaking and what is expected of them.
 - e) Update white paper v1.5 and distribute for review

The meeting adjourned at 11:04 a.m. PDT.

Submitted by Elsia Galawish, WHPA Staff
Galawish Consulting Associates
415-482-1079
Galawish1@gmail.com
www.performancealliance.org