



## Goal 2: Commercial Quality Installation Committee Meeting Minutes Friday January 20, 2017

### Call to Order

The meeting was called to order at 10:04 pm PST by Rob Falke, Chair and President of National Comfort Institute. Meetings are normally scheduled for 60 minutes.

### Roll Call

Quorum for voting organizations = 5 of 9. Meeting attendees included: X voting members; 3 non-voting members; 0 guest; 1 staff. A total of 10 members and guests attended this meeting.

P = present at meeting

A = absent voting member; if proxy has been assigned it will be noted below.

WHPA Goal 2: CQI Committee VOTING Members				Roll Call
Air-Tro	Bob	Helbing	Contractor (Nonresidential)	P
Aire Rite AC & Refrigeration	Don	Langston	Contractor (Nonresidential)	
All Pro Plbg., Htg. & AC	Michael	Greany	Contractor (Nonresidential)	
BuildingMetrics	Pete	Jacobs	Energy Efficiency Program Consultant	P
Green Link Mechanical	Jerry	Hernandez	Contractor (Nonresidential)	
Lincus-Solaris	Brian	Mauleon	Energy Efficiency Program Consultant	P
National Comfort Institute (NCI)	Rob	Falke	Educator, Trainer	P
Southern California Edison (SCE)	Sean	Gouw	California IOU	P
Tre' Laine Associates	Pepper	Hunziker	Other Stakeholder	P
<b>WHPA Goal 2: CQI Committee Approved Guests and Staff</b>				
Aire Rite AC & Refrigeration	Larry	Smith	Contractor (Nonresidential)	
AMS	Marc	Pickett	Contractor (Nonresidential)	P
National Comfort Institute (NCI)	Ben	Lipscomb	Educator, Trainer	P
Lupson & Associates LLC	Warren	Lupson	Other Stakeholder	
San Diego Gas & Electric (SDG&E)	Jeremy	Reefe	California IOU	
Southern California Edison (SCE)	Scott	Higa	California IOU	P
<b>STAFF</b>				
IC Refrigeration	Rich	Imfeld		
ServTEC AC	George	Rodriguez	Contractor (Nonresidential)	
Southern California Gas Company (SoCalGas)	Pete	Tanios +	California IOU	
BNB Consulting/WHPA Staff, host, admin. support & scribe	Bob	Sundberg	WHPA Staff	P
Empowered LLC	Shea	Dibble	WHPA Co-Director	

\*\* Organization is Not a Member of the WHPA; + Individual is NOT Registered with the WHPA;

(P) after last name = Member/Registrant is Pending Approval from the WHPA Executive Committee



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<b>AGENDA</b>		
<b>Topic</b>	<b>Discussion Leader</b>	<b>Desired Outcome</b>
Welcome, roll call, review agenda, approve past meeting minutes and ACTION items	Rob Falke and Bob Sundberg	Record meeting attendees, finalize past meeting minutes, review status of meeting action items.
Welcome members & guests	Rob Falke	Welcome new guests and prospective members.
New Business – EC adoption of committee & WG 2016 work products	Rob Falke	Committee informed on new business topics and recent developments.
Industry activity – ASHRAE SPC 221 Committee	Rob Falke	Update committee members.
2017 Committee Goals Update	Rob Falke	Share results of 2017 goals vote.
CQI Data Spec. WG planning	Rob Falke & Pete Jacobs	
EC response to CQI WG SFDS work product	Pete Jacobs	Information sharing. Work product was “adopted” as a WHPA document.
CQI Committee 2017 Goals 2 & 6 planning	Pete Jacobs	Agreement on proposed 2017 goals. Next step, develop an implementation plan, timing and progress milestones.
Industry activity – ASHRAE SPC 221 coordination	Rob Falke	Update members on recent industry activity.
Coordination of CQI C. and WG meeting frequency & resource	Rob Falke & Pete Jacobs	Decide on sufficient committee meeting frequency to allow WG 2017 progress.
Summarize meeting, assignments/ACTION items, set next meeting date/time, adjourn	Rob Falke and Bob Sundberg	Set next meeting date, confirm time, review any new ACTION items and next meeting agenda items.

**Approve Minutes of Previous Meeting**

The December 23 meeting notes were distributed January 2. The minutes were finalized, approved and would be posted to this committee's location at the WHPA website.

**Review Status of Action Items from Previous Meeting**

April 2015 ACTION: Sean Gouw would speak with Andres Fergadiotti about attending the next CQI Committee meeting to help the team better understand current SCE claimed savings efforts and approaches which might be considered for a CQI program. Ongoing.

**Welcome New Members and Guests**

None. Rob Falke to review “pending members” for potentially joining the committee. These are new WHPA members who had expressed interest about this committee on their registration forms.



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### **New Business - Rob Falke**

None.

### **Executive Committee Response to CQI Committee & WG 2016 work products - Rob Falke**

Rob Falke, Chair, confirmed to members that the Executive Committee had reviewed and approved adoption of the definition work product at their December meeting. The Executive Committee had also reviewed and approved adoption of the data specification WG's work product.

### **CQI Committee 2017 Proposed Goals & vote results- Rob Falke**

Rob Falke, Chair, summarized the results of the 2017 goals vote. Overall, all seven goals received enough votes (five or more Yea votes of nine voting members) to be approved. A separate spreadsheet summary of the vote results was provided separately to committee members. There were a couple of expected abstentions. Also, a couple of the Nay votes were received with helpful comments. The other goals needed to be accomplished before supporting an IOU claimed savings work paper effort. That goal should probably be expected to be addressed in 2018. Bob Helbing had also replied with comments about the language used in the goal statements and Rob Falke asked him to share those with the committee.

Bob Helbing, Air-Tro – a lot of the terminology and language used in the goal statements is the type used by people who work with the regulators, commissions, consultants and utilities. But, it made no sense to the contracting community. There wouldn't be great increases in energy savings unless more contractors were brought into the process since they were the ones who brought potential ratepayers to the table to consider improving their HVAC systems. If contractors couldn't easily make sense of what was going on, how would they convince their customers to spend the money it would take to make their properties more energy efficient?

Rob Falke – they'd have to keep that perspective in mind as they addressed working on the goals. Staff had also requested that each committee and working group develop milestones to help measure progress toward achieving their goals. Those would be developed and put before the committee for review at the next meeting.

**ACTION:** Proposed 2017 goals would have periodic milestones developed to break down each goal into manageable segments and help measure progress toward achievement.

Rob wanted to have the group address the goals which the committee was responsible for and which, he thought, pretty directly involved contractors and their customers as well as utilities and regulators.

Rob Falke – Goal # 2

Goal two was related to AB 802 and attempted to take that effort to measure building energy use & savings right down to the individual unit. In order to make use of building energy meter data and deliver savings, there was a need to assess each HVAC system's performance to find out which were wasting energy. This goal was intended to be brought down to a contractor's level and the discussions with their customers about how to deliver energy savings to their customers, whether to go ahead with a job or not.

*"The Commercial Installation Committee will develop and deliver a work product associated with the Field Data Specification detailing the tasks and test process required to field measure the operating performance of an HVAC system to establish a single system baseline. Q3 2017."*

This goal was intended to paint a picture for contractors as well as regulators on how a critical portion of implementing AB 802 could be operationalized. AB 802 was a new directive from the legislature which allowed that energy savings could be confirmed at the building meter, not only through the conventional work paper and DEER modeling process.



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But, energy use information at the meter couldn't determine or diagnose where there was energy waste in the HVAC systems, what needed to be fixed to get at those energy savings. There needed to be a basis for a contractor to evaluate those systems, write a scope of work to correct energy waste and convince their customer to go ahead. This goal was intended to take the standardized field data specification and turn it into a process for assessing the performance of each of the building's HVAC systems by contractors in the field in order to uncover that energy waste and get at the potential savings. That's a part of the process needed which work on implementation of AB 802 had not yet addressed. This goal did reach down to contractors and owners and up to the regulators in an effort to operationalize the new directive. The intent for this goal was to establish a baseline of performance before improvements were made and then an assessment of performance after the improvements so that a comparison could be made.

Rob Falke – Goal # 6

“...gather and publish summary data consistent with the Standardized Field Data Specification gathered from around the state documenting field performance of typical HVAC systems. *This data will be used to further define the performance-driven definition for commercial efficient HVAC installations to provide input to establish minimum levels of acceptable system performance. Q4 2017.*”

Rob Falke thought that both Goal #2 and #6 were directly aimed at contractors and their interests in working with customers who sought energy savings.

Scott Higa, SCE – the goals were a good attempt to fill a gap, connect the people in the field doing the work with all the regulatory requirements and utility program goals. He commended Rob and the committee for trying to bridge that gap. He thought it would be helpful to have some sort of supplemental document to summarize how the deliverables from the goals would impact different market players, the folks on the ground? What impact that goal would have for them?

Rob Falke agreed that a “translation document” would help those Scott referred to. He planned to work with a few committee members to build in some impact information as he developed goal milestones prior to the next meeting.

Rob Falke – Goals # 3, 4, 5

All three goals were related to efforts of Pete Jacob's Standardized Field Data Specification working group.

Goal # 3

“...complete and approve a specification to measure and score the performance of installed commercial maintenance and residential installation HVAC systems.”

Rob Falke - the WG commercial installation (CI) data specification work product was also approved for adoption as a WHPA work product at the December Executive Committee meeting. Pete's WG intended to modify the CI specification for commercial maintenance as well as residential installation applications before turning them over to the CQM and RQI Committees, respectively, to complete further revision each thought necessary.

Goal # 4

Determine the calculation methods for “developing a standardized, repeatable performance-based method for system evaluation.”

Goal # 5

“...developing simplified test protocol supporting procedures forming a HVAC system performance assessment process that could be effectively utilized by HVAC and EM&V professionals in the field to measure and score the performance of installed HVAC systems.”



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### ASHRAE SPC 221 Committee update - Rob Falke and Ben Lipscomb

Ben Lipscomb, NCI – this WHPA work was taking place in parallel with the ASHRAE SPC 221 Committee standard development effort. The goal was to take the measurements identified in the data specification and come up with the calculations needed to determine system delivered performance – delivered cooling capacity to the occupied zones as well as the efficiency that capacity was delivered at. He, Rob and Mel Johnson would be presenting a draft of those calculation methods to the SPC 221 Committee at their ASHRAE meeting in late January. A number of WHPA members were participating on that committee.

Rob Falke – the output of Goals # 3 & 4 were tools which contractors would actually use out in the field to evaluate an installation. A draft for this new standard had been released to committee members. The committee was broken up into twelve specialized task groups to examine and suggest revisions to the standard from each of their perspectives. Task groups included those formed to look at formulas/calculation methods, definitions and field measurement/test methods. The committee intended to have the standard written in the language of a typical technician. The work of those task groups would be reported at the upcoming ASHRAE meetings.

### Standardized Field Data Specification WG planning – Pete Jacobs, Chair

Pete Jacobs – they'd gotten a jump on 2017 work by reviewing the proposed calculation methodology and formulas at the WG December 29 meeting. The proposed calculation methodology would be presented to and reviewed by the ASHRAE SPC 221 Committee later in January at their winter session meetings. Once the WG reviewed feedback from SPC 221 Committee and any revisions to the proposed calculations, they should be very near completing Goal # 4.

Pete expected the WG would meeting in February after members had a chance to digest all the formulas and work toward finalizing the calculations methodology to complete Goal # 4.

Rob Falke asked whether Pete thought there might be additional formulas and calculations beyond what was being proposed to the SPC 221 Committee which would be needed for utility program implementation?

Pete responded, not at this time. He thought they were pretty well aligned.

Rob Falke – documenting about eight selected measurements of static pressure, airflow and temperature would allow benchmarking for any given commercial installation. He intended to have those proposed at the ASHRAE meetings to get some industry feedback about their value. He'd estimated that a technician would need about seven minutes to re-take those selected measurements to see if there had been any significant change which could indicate any serious deterioration in system performance and operation, like a fan belt which needed attention or filters which should be replaced. He thought that had some real potential benefits for the industry regarding evaluation of installed commercial systems.

### CQI Committee meeting planning – Rob Falke

This committee would be directly responsible for accomplishing mainly goals 2 and 6. He wanted to get input about the number of meetings and type of frequency members thought it would take to accomplish those goals as well as to support the WG efforts. He proposed 12 meetings of one hour each in order to accomplish their work. The group discussed establishing a regular meeting day of the week and time. They decided to meet the third Friday of each month at 10:00 am PT for one hour.



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He and Pete Jacobs had agreed that for the data specification WG to accomplish its goals, this would take 18 meetings with each meeting schedule for 1.5 hours.

### **New Business - Rob Falke**

Bob Helbing, Air-Tro – Bob was contacted by the local air quality management district recently regarding rule 1111 in reference to furnace installation. The SCAQMD regulated emissions in Southern California. When this ruling first came out in 1984, over 25 years before, only one manufacturer offered a specialized furnace designed to meet the requirements. They met the standard by over-firing the furnace which had one result of burning down 25 homes. To his knowledge, no manufacturer had yet come out with a furnace which met those requirements. Distributors initially paid the fine for sale of non-compliant equipment which was passed onto the contractor and ultimately to the homeowner.

<https://www.google.com/search?q=Furnace+Rule+1111&ie=utf-8&oe=utf-8>

South Coast Air Quality Management District (SCAQMD) ruling:  
<http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1111.pdf?sfvrsn=4>

He believed that there were no furnaces which met the AQMD furnace rule for oxides of nitrogen requirements. At the same time, this rule required that no furnaces be sold or offered for sale within this district which did not meet this rule. Previously, a fine was imposed for all non-compliant installations. In 18 months, a fine for non-compliant installation will no longer be accepted. No non-compliant equipment would be allowed to be installed. He was not aware of any manufacturer which had equipment being designed to be compliant within this timeframe. Contractors were caught between a rock and a hard place.

Bob Helbing had worked to arrange a meeting with the AQMD board to explain the situation which this ruling was putting both contractors and homeowners in. He asked that anyone from industry join him at that meeting to help explain the severity of the dilemma this ruling had created regarding furnace replacement and early retirement of less efficiency systems. If interested, please contact Bob Helbing at:

bobhelbing@airtro.com

### **Closing Comments/Adjournment**

Rob Falke proposed the committee next meet February 17, the third Friday of that month, at 10:00 am PST.

February meeting tentative agenda:

- The next meeting would be focused on breaking the proposed goals down into progress milestones
- Rob planned to send those milestones out to members ahead of the meeting to request any comments
- Rob asked members to decide which of the two full committee goals (#2 & #6) members would be interested to work on
- Rob, Pete and Ben would update the committee on the SPC 221 Committee meetings and share whatever documents were allowed to be provided outside of the actual committee or at least a summary

The meeting was adjourned at 10:55 am PST.

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### **Summary of Pending and New Action Items and Key Decisions**



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January 2017 ACTION: Rob Falke proposed to work with committee members to develop periodic milestones for 2017 committee goals to break down each goal into manageable segments and help measure progress toward achievement.