



## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday March 16, 2017 Meeting Notes

### Call to Order

The meeting was called to order at 10:02 am PDT by Don Langston, CQM Committee Chair.

### Roll Call

The Chair considered one member of each organization to be a voting member for this working group. 9 of 16 voting members in attendance would constitute a quorum. 6 voting members, 4 non-voting members, 2 guests and 1 staff were present for a total of 13 attendees.

P = Present at meeting A = Absent from meeting; if proxy has been assigned it will be noted below. Although Voting Members have been designated by Staff, this group acts primarily by consensus.				
<b>CQM User Guide Working Group Voting Members</b>				
ACCA (Air Conditioning Contractors of America)	Donald	Prather	Contractor Association	
Air Management Industries	April	Yungen	Contractor (Nonresidential)	
Aire Rite AC & Refrigeration	Don	Langston	Contractor (Nonresidential)	P
AMS (American Mechanical Services)	Marc	Pickett	Contractor (Nonresidential)	
Charles Segerstrom, Energy Efficiency Consulting	Charles	Segerstrom	Energy Efficiency Program Consultant	
CLEAResult (formerly PECEI)	Todd	Van Osdol	California IOU	
FDSI (Field Diagnostic Services Inc.)	Dale	Rossi	Third Party Quality Assurance Providers	
GWP (Goodheart-Willcox Publisher)	Sandy	Clark	Educator, Trainer	
Honeywell E&ES, Commercial Buildings, Trade	Michael	Lawing	Controls (Manufacturer or Distributor)	P
HSGS (Honeywell Smart Grid Solutions)	Shayne	Holderby	Energy Efficiency Program Consultant	
Marina Mechanical	Denny	Mann	Contractor (Nonresidential)	P
National Comfort Institute	Jeff	Sturgeon	Educator, Trainer	P
Richard Danks Consulting - FacilityPro	Rick	Danks	Other Stakeholder	P
SCE (Southern California Edison)	Scott	Higa	California IOU	P
Tre' Laine Associates	Pepper	Hunziker	Energy Efficiency Program Consultant	
Western Allied Corporation	Mike	Gallagher	Contractor (Nonresidential)	
Warren Lupson and Associates	Warren	Lupson	Other Stakeholder	
<b>CQM User Guide Working Group Non-Voting Members</b>				
BELIMO	Darryl	DeAngelis	Controls (Manufacturer or Distributor)	
BMI (BuildingMetrics, Inc.)	Pete	Jacobs	Energy Efficiency Program Consultant	
Brownson Technical School	Bill	Brown	Educator, Trainer	P
CLEAResult (formerly PECEI)	Michael	Blazey	Energy Efficiency Program Consultant	
HSGS (Honeywell Smart Grid Solutions)	Steve	Varnum	Energy Efficiency Program Consultant	
PG&E	Christian	Weber	California IOU	P
SCE (Southern California Edison)	Steve	Clinton	California IOU	P
SMUD (Sacramento Municipal Utility District)	Bruce	Baccei	Publicly Owned Utility	P
<b>CQM User Guide Working Group Guests (Non-Voting)</b>				
Adrienne Thomle, Consulting**	Adrienne	Thomle+		
AirTest Technologies	Mike	Schell	HVAC Manufacturer	P
Little Caesar's **	Wendy	Gallo+		P
<b>WHPA Staff (Non-Voting)</b>				
BBI (Better Buildings Inc.)	Mark	Lowry	WHPA Executive Advisor/BBI COO	
BNB Consulting/WHPA Staff	Bob	Sundberg	Energy Efficiency Program Consultant	P (scribe)
Empowered Solutions/WHPA Staff (WHPA Co-Director)	Shea	Dibble	Energy Efficiency Organization	

\*\* 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



## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday March 16, 2017 Meeting Notes

*To avoid repetition, the name of the member organization will not be repeated in the body of the minutes past the first identification with the name of the representative participant.*

### Welcoming and Member Introductions

No new members or guests.

### Approve Previous Meeting Draft Notes

The March 9 meeting draft notes were distributed March 13. Members were asked to provide any additional suggested revisions or corrections after which finalized meeting notes would be posted to the WHPA website by Bob Sundberg.

### ACTION Items

Feb. 23 **Decision:** the WG decided to concentrate first on how to develop and produce annual reports and attempt work on recommendations for quarterly/periodic reports as time permitted.

Feb. 23 **ACTION:** the working group needed to decide whether they should change their concept of maintenance to include airside measurements or not. Also, whether they believed that airflow related measurement needed to be added to Standard 180 or not. Completed.

Dale Rossi, Chair – agreed that the second action item was an item discussed by the group at the previous meeting but he never intended that it would be a future action item. Dale didn't believe that was an issue that this group needed to address or decide. .... They would have to either seek to change the standard or have Don Langston change the objective of the working group to address that issue.

### New Business – Dale Rossi and Bob Sundberg

Don Langston, CQM Committee Chair – Don introduced himself for those attending the WG meeting. He was the CQM Committee Chair. He was also the Vice-Chair of the joint ASHRAE/ACCA Standard 180 Committee and interim Chairman for ACCA. He also was the President and CEO of Air Rite Air Conditioning and Refrigeration in Southern California. He'd been involved in HVAC contracting for over 45 years, heavily involved in commercial service and retrofits and some new construction work.

He'd served as Chair for the WHPA Commercial Quality Maintenance Committee since inception, November 2009 along with Dale Rossi, FDSI. Dale had played a pivotal role in development and leadership for most of the work product produced by this committee and its working groups. Dale should be recognized for his passion and dedication which those work products represented. But, he'd reached an impasse that would not allow him to continue leading this group. The understanding of the intended goal and content of this user guide, which was under development, had become blurred along the way. Don wanted to clear up that confusion.

The purpose of the user guide was to help inform utilities and other stakeholders of what this group thought it would look like to operationalize Standard 180. Currently, all three major CA IOUs were using Standard 180 as a basis for commercial maintenance programs. In his opinion, none of their programs were close to full compliance with key requirements of the standard. Operationalizing a standard within a utility program was difficult and their efforts were all works in progress and improvement. The standard intent was to state "what" requirements were, not "how" those requirements would or could be met. The purpose of a user guide was to help stakeholders use the standard as a "reference point" upon which they could build a program or manage their facilities. He thought that misunderstanding was the basis of the impasse which developed over the previous week. Dale hadn't been able to wrap his head around that WG direction and some of the conversations around airflow and airside measurements in maintenance and Standard 180. Dale decided to step down from his role as chair for this WG.



**WHPA Goal 2: CQM Standard 180 User Guide Working Group  
Thursday March 16, 2017 Meeting Notes**

The purpose for the rest of the meeting was to have the group try to figure out where they were at in developing this user guide. What the group thought had been accomplished, where they were at and where they should go next.

<b>AGENDA</b>		
<b>Topic</b>	<b>Discussion Leader</b>	<b>Desired Outcome</b>
Welcome, Roll Call, Member Introduction, Approve Past Meeting Notes, Review Action Items, New Business, Meeting Agenda	Chair, WHPA Staff	Record attendees, welcome any new members, approve previous meeting minutes, review status of any open Action items, planned agenda and bring up any new business items for the WG to consider addressing.
WG goals, scope, direction and leadership	Don Langston	Members share a clear understanding for the goals of this WG and determine WG Chair
Confirm next meeting date/time, assign actions and proposed agenda and adjourn.	Don Langston, WHPA Staff	Clear understanding of member responsibilities for the next meeting. Next meeting date/time established.

**User Guide Working Group Plan and Roadmap – Decided at March 2 meeting**

- Feb 23 – Finalize work plan and roadmap – stay at higher level and concentrate on “what” rather than “how”
- 1 - Mar 2 – defining performance objectives for customer facing reporting
- 2 - Mar 9 – categorize data types
- 3 - Mar 16 – categorize data collection methods
- 4 - Mar 23 – categorize useful calculations
- 5 - Mar 30 – categorize useful outputs and descriptions
- 6 - Apr 6 – categorize useful comparisons and conclusions
- 7 - Apr 13 – Write introduction
- 8 - Apr 20 – Write conclusion
- 9 - Apr 27 – Final document review and debate
- 10 - May 4 – Final document review and vote

**User Guide Working Group Planning Discussion – Don Langston**

Jeff Sturgeon, NCI – they’d been refining an understanding of performance objectives on the program level and condition indicators on the technical delivery of service level and recently focused on customer facing reporting for annual reporting and somewhat on quarterly/periodic reporting. During the last meeting, the group had been discussion a fundamental change in an approach to maintenance. That might be a good place to re-start the WG discussion.

Scott Higa, SCE – he wanted to get clarity on the objectives for establishing this WG. He appreciated all of Dale’s efforts and the time constraints WGs operated under in developing work products. His understanding, offered as a starting point, was that the WG was working on a framework to operationalize Section 4 of Standard 180, implementation of a maintenance program and plan. The process for developing and tracking progress towards those performance objectives at a higher building level, not work on details of maintenance tasks or their implementation at the HVAC unit or system level which was the focus of Section 5.

Don Langston, Chair – the committee’s working groups had focused on issues related to Section 5 for several years. The current effort was intended to focus more on Section 4, as Scott indicated, customer communications and setting expectations for how to comply with the standard in a practical sense. The FORWARD of the standard defined the three main purposes or goals of the standard – indoor air quality, occupant thermal comfort and energy efficiency. Each of those could be used to establish sub-goals of interest to a customer. In his discussion with Dale, he’d stated



## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday March 16, 2017 Meeting Notes

that all commercial systems depended on proper airflow to meet those purposes or goals. Temperature, humidity and draft concerns. At a higher level, airflow had an impact, in his opinion, on all three of those overarching goals. He was at a loss to see how that would be a point of friction for Dale. It might be because the issue of airflow was at too granular a level for the discussion Dale thought the WG should be focusing on at that time.

Pepper Hunziker, Tre' Laine Associates – she was interested in the development of a user guide from a workforce education and training (WE&T) perspective. She thought that part of the purpose for developing a user guide was to assist in market transformation, how this approach could be perpetuated beyond utility programs and their incentives. A user guide could, certainly, be useful for utility program improvement but it would also be of great value in getting a “how to” guide out into the broader marketplace. Into schools, contractors outside of utility programs and beyond the IOU CQM programs as well. She wanted to know if the primary focus of the WG going forward was to support improvement of the IOU CQM programs or was the focus really to have a more open effort to operationalize the standard? She wondered whether the form the user guide would be different depending on the primary audience.

Don Langston – since the CA utilities were funding this effort, he thought the first step would be to better inform IOU program managers, designers and implementers of how this group thought the standard should be implemented. That guide would, certainly, be of value outside the CA utility programs in the state as well as nationally for other utilities and marketplace participants outside any utility program.

Scott Higa, SCE – whether to first benefit the IOU programs or the general industry, he thought the focus should be on the actual implementers of Standard 180, the customer and their service provider or contractor. Utility programs as well as other WE&T efforts outside of the CQM programs could be better informed and helped to more cost-effectively incorporate the intents of the standard into their training. It would help improve the cost-effectiveness of utility programs by providing an up-front reference for responsible parties and their service providers rather than wait for utility programs to fully integrate the processes identified into their formal programs.

Don Langston, Chair – agreed with Scott. Don thought that a user guide would help utility programs bring some reality to their program design, move beyond the early focus on technical maintenance tasks and the cumbersome administration and realign efforts to focus on the dialogue which would produce agreement on establishing the overall goals, objectives and tracking mechanisms for their Standard 180 based maintenance program.

Denny Mann, Marina Mechanical – was glad to be back onboard participating again after an extended absence. From his perspective, the education piece needed to be a big part of market transformation when working with their customers. Right now, 70% to 80% of the maintenance agreements his firm sold were still sold mainly on price. The balance was sold mostly because someone had established a relationship. Those customers were willing to pay more because they were convinced that his firm would provide better service. The biggest challenge had always been getting in front of the right person who could see the additional value they would provide. It was imperative that the owners and those who managed the buildings see that value of this maintenance approach. Without seeing that value, they'd only participate for the incentives. Once those incentives ended, they'd be back to looking for the cheapest price and there wouldn't have been any market transformation accomplished. That education piece and establishing value for a QM approach was critical or they'd just continue to approach contracts based on that cheapest contract price.

Christian Weber, PG&E – he hadn't been involved with development of this user guide before but thought it was a very worthwhile endeavor. To this point, he'd been more involved with and struggled with the cost-effectiveness of the program where their claimed savings work papers had needed to be based on individual energy efficiency measure evaluations. The total resource cost (TRC) of the program with regulators. They only called out and had gained approval for a small number of measures identified under Standard 180. They were focused on trying to include more savings from measures not yet incentivized. Also, how to get more customers and contractors onboard willing to participate in their QM program. A large challenge they still faced was how to better communicate those program benefits to customers, to get them to buy onto continuing with the approach after incentives expired.



## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday March 16, 2017 Meeting Notes

Pepper Hunziker, Tre' Laine Associates – she was very interested in any information which the programs could provide which validated and quantified the benefits of QM program participation. SCE had recently done a mailing to program participants. She asked Don he was aware of any customer feedback which might be used to make the larger marketplace more aware of the value of a Standard 180 maintenance based approach.

Don Langston – recommended working with Scott Higa or with Todd or Kim from CLEAResult, the SCE program implementer, about ways to leverage participating contractor feedback and further recruitment efforts.

Pepper Hunziker – she shared efforts to develop an overview article on the WHPA to be included in a future program newsletter that could be used by SCE for greater outreach to contractors. It highlighted all the Standard 180 related WHPA work products and the energy savings estimating and training tools posted by the Alliance at their website. It also was going to make contractors more aware of the industry information oriented notifications and program announcements under the legislative and policy activity sections which many contractors were unaware of. She didn't know where that article and announcement was in the SCE approval process. When approved, and distributed, she was very interested to see if the information would have an impact on interest in the SCE HVAC Optimization (CQM) program.

Rick Danks, Richard Danks Energy Efficiency Consulting – he was still confused by context and the intended audience for this user guide. It seemed to be almost exclusively modeled on the contractor/owner relationship and interface. Pepper spoke about distributing information and the user guide to the masses. But, there was a significant portion of commercial HVAC being maintained where a contractor was not part of that equation. He offered the caution that “one size didn't fit all” regarding implementation of the standard. There were many other maintenance arrangements which existed including facilities with their own in-house staff like public schools, universities, hospitals/healthcare and such. If the user guide was being developed for “the masses” it would almost need to be in a generic form. Was that what the group intended for its primary initial audience?

Don Langston – the group had considered the various maintenance scenarios before. Where in contracted arrangements, repairs and replacement was outside the context of fixed price maintenance agreements and with in-house staffs and budgets, they were managed differently. California sales tax restrictions were responsible for some of those different required arrangements.

Rick Danks - he agreed that the administration of the maintenance, repair, service and replacement processes needed to be customized but the required tasks and process for developing objectives should be very similar. He thought that fine-tuning the issues of standards implementation within the utility programs and the WHPA efforts to provide guidance was just great and should be continued before they tried to broaden dissemination to the greater marketplace. Consider it more like a well-run pilot for refinement of how to implement the standard.

### Working Group Next Steps – Don Langston

Don Langston, CQM Committee Chair – he acknowledged that he would be unable to lead this WG on a week-to-week basis. But, if they could come to agreement on some next steps, a new WG chair could continue with the group's user guide development momentum. They didn't need to be a rush for developing a good work product. His intent was that the WG move a measured pace with more concern for the quality of their output than meeting some arbitrary or artificial deadline like by June 30.

The group discussed the prior roadmap/meeting schedule of topics which Dale Rossi and the group had previously laid out and agreed to.

The group also discussed how they'd talked about approaching reporting on the variety of specific program performance objectives a customer might establish – energy usage, energy efficiency of HVAC systems, equipment



## WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday March 16, 2017 Meeting Notes

reliability, ratios of contract cost vs. repair/service costs, for example. In some cases, the utility spend was a much lower priority than the equipment uptime and reliability.

Rick Danks – stated that the challenge for service providers and owners was to establish a reasonable link between the maintenance efforts and the goals the responsible party was interested to reach.

Don Langston – agreed with Rick that you almost had to design a maintenance program around each customer’s “pain points.”

Bob Sundberg, WHPA staff – the challenge he saw in implementing Section 4 of the standard was establishing those goals and a means for quantifying and tracking them to whether they could establish a trend toward accomplishment, which Dale Rossi had emphasized in earlier meetings. Review of previous WG work products might be very valuable to some members who hadn’t participated in their development. He offered to send out a WG email with links to the main work products and identify which ones might be most valuable for members to review.

**ACTION:** Bob Sundberg, WHPA staff, would send out a WG email with links to the CQM Committee and WG work products posted at the WHPA website. He’d identify which would be valuable for members to review.

Rick Danks - offered to see whether some examples of prior ASHRAE user guides and user manuals might be shared with this working group. He would pursue authorization from ASHRAE to share portions of some related user guides.

**ACTION:** Rick Danks would pursue ASHRAE formal approval to share portions of related standards user guides or user manuals to help provide structural guidance for this working group.

### Closing Comments/Adjournment

The next meeting was scheduled for Thursday March 30 at 10:00 am PDT.

The next meeting specific agenda and topics were yet to be determined.

The meeting was adjourned at 11:06 am PDT.

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### Action Items and Key Decisions

March 16, 2017 **ACTION:** Bob Sundberg, WHPA staff, would send out a WG email with links to the CQM Committee and WG work products posted at the WHPA website. He’d identify which would be valuable for members to review.

March 16, 2017 **ACTION:** Rick Danks would pursue ASHRAE formal approval to share portions of related standards user guides or user manuals to help provide structural guidance for this working group.