



WHPA Goal 2: CQM Standard 180 User Guide Working Group Thursday July 7, 2015 Meeting Notes

Call to Order

The first planning meeting was called to order at 10:02 am PDT by Dale Rossi, Chair of this working group and a representative of Field Diagnostic Services Inc. (FDSI).

Roll Call

The Chair considered one member of each organization to be a voting member for this new working group, He intends to work toward consensus on all decisions. 10 of 18 voting members in attendance would constitute a quorum. 7 voting members attended this meeting. In addition, 1 non-voting members, 1 guests and 1 staff were present for a total of 10 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.				
CQM Maintenance Task Working Group Voting Members				
ACCA (Air Conditioning Contractors of America)	Donald	Prather	Contractor Association	
AHRI	Warren	Lupson	HVAC Manufacturer Association	
Aire Rite AC & Refrigeration	Don	Langston	Contractor (Nonresidential)	
BELIMO	Darryl	DeAngelis	Controls (Manufacturer or Distributor)	
BMI (BuildingMetrics, Inc.)	Pete	Jacobs	Energy Efficiency Program Consultant	
CLEAResult (formerly PECD)	Michael	Blazey	Energy Efficiency Program Consultant	
FDSI (Field Diagnostic Services Inc.)	Dale	Rossi	Third Party Quality Assurance Providers	P
GWP (Goodheart-Willcox Publisher)	Sandy	Clark	Educator, Trainer	
Honeywell ECC, Commercial Buildings, Trade	Michael	Lawing	Controls (Manufacturer or Distributor)	
HSGS (Honeywell Smart Grid Solutions)	Shayne	Holderby	Energy Efficiency Program Consultant	P
Marina Mechanical	Denny	Mann	Contractor (Nonresidential)	
National Comfort Institute	Jeff	Sturgeon	Educator, Trainer	P
Richard Danks Consulting - FacilityPro	Richard	Danks	Other Stakeholder	P
SCE (Southern California Edison)	Steve	Clinton	California IOU	P
Charles Segerstrom, Energy Efficiency Consulting	Charles	Segerstrom	Energy Efficiency Program Consultant	P
Tre' Laine Associates	Pepper	Hunziker	Energy Efficiency Program Consultant	P
UC Davis EEC (Energy Efficiency Center)	Kristin	Heinemeier	Research Organization	
Western Allied Corporation	Mike	Gallagher	Contractor (Nonresidential)	
CQM Maintenance Task Working Group Non-Voting Members				
CLEAResult	Mike	Withers	Energy Efficiency Program Consultant	
HSGS (Honeywell Smart Grid Solutions)	Steve	Varnum	Energy Efficiency Program Consultant	
SCE (Southern California Edison)	Todd	Van Osdol	California IOU	P
SCE (Southern California Edison)	Scott	Higa	California IOU	
CQM Maintenance Task Working Group Guests				
California Public Utilities Commission (CPUC) - Energy Division			California PUC	
Adrienne Thomle, Consulting**	Adrienne	Thomle+		P
WHPA Staff (Non-Voting)				
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



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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

None.

New Business.

None.

Approve Previous Meeting Draft Notes

The June 30 meeting draft notes were distributed July 4. No revisions were received from attendees. The finalized meeting notes would be posted to the WHPA website by Bob Sundberg.

ACTION Items

May 26 ACTION: Todd Van Osdol, SCE, agreed to provide get together with Scott Higa to locate examples of the reporting tools which the program provided customers and examples of reports delivered to customers. To be provided at WG meeting dealing with customer facing reporting, topic #5. Ongoing.

May 26 ACTION: Todd Van Osdol, SCE, would work with Scott Higa to gather information obtained through EMI conducted customer interviews which revealed reasons why customers would consider continuing HVAC Optimization maintenance practices after IOU program incentives expired. Ongoing.

STATUS: Todd Van Osdol and Scott Higa would deliver findings from the EMI conducted customer interviews at the 4th topic meeting, communicating the value proposition. Completed June 30. WG members asked whether more detailed customer comments might be shared at a future meeting. Todd would check with Scott to see if they could retrieve more detailed comments to help with value proposition statement development. Ongoing

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STATUS: Not resolved.

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AGENDA		
Topic	Discussion Leader	Desired Outcome
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.
Review 6/30 meeting notes	Bob Sundberg	All members would understand what was discussed and/or decided at the previous meeting and provide final revisions or corrections.
Standard 180 base maintenance Value Proposition		Brainstorm value proposition for key stakeholders and discuss which should be included in a user guide.
Set next meeting date/time, assign actions and proposed agenda and adjourn.	Chair, WHPA Staff	Clear understanding of member responsibilities for the next meeting. Next meeting date/time established.

User Guide Summary Outline – Dale Rossi

This working group (WG) decided that it would explore the following Standard 180 related topics. The WG intended to select one highest priority topic to focus on for most of 2016. When completed, they would select a next highest priority topic to pursue during the balance of 2016 or into 2017 dependent on WHPA allocated resources.

1. Understanding performance objectives and condition indicators
2. Making a maintenance plan
3. Investigating unacceptable conditions and performance
4. **Communicating the value proposition – selected as primary deep dive topic for 2016**
5. Customer facing reporting

Summary of Previous WG Meeting – Dale Rossi

Communicating the Value Proposition – VP Matrix – Pepper Hunziker

Pepper Hunziker, Tre' Laine Associates, provided an overview of the proposed matrix structure. The matrix was focused on nontechnical participants who would be presenting and/or selling They'd tried to represent key market segment stakeholder groups along the rows and information related to perceived benefits of participating in a Standard 180 based utility program, barriers, decision-makers and sales resources related variables for the columns.

- Key market segment stakeholder groups
 - Owner occupied buildings – hardware store, individual salon, non-chain restaurant, independent franchise owner, possibly multiple sites
 - National accounts (restaurants, banks and national retail stores, often tenants of REIT properties)
 - Municipal, university, school, hospital buildings -MUSH (often grouped together because of buying approach and longer term approved budgets)
 - Commercial landlords – tenant based occupation, REITs – buildings owned by real estate investment trusts and most often managed by property management firms

Pepper volunteer to be scribe for revisions to the VP Matrix. Not being a subject matter expert, she was willing to collect the thoughts and agreed revisions which members decided on.

Commercial landlords/property management

The group discussed the final category. Dale Rossi believed that in commercial landlord/lease situations, most often it was the tenant themselves who were responsible for HVAC maintenance as part of their lease agreement. So, the

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tenant would be the responsible party in so far as a decision to be made about Standard 180 based maintenance. Tenants often also paid the utility costs. Commercial landlords/owners and their property managers were more focused on lease related variables like lease rates, renewals and occupancy rate. But, they also made decisions about equipment replacement and related costs as opposed to month-to-month utility costs.

Todd Osdol, CLEAResult, added that in tenant occupied buildings, owners/managers were more interested in:

- tenant satisfaction,
- retention/occupancy rates which would have a direct impact on property value
- previous year(s) energy use impact on property value

Those were very different goals from properties which produced products or retail or service where their interest was more focused on:

- equipment reliability,
- avoidable failure costs,
- increased productivity,
- better able to budget and plan capital equipment replacement in line with capital depreciation schedules

Dale Rossi explained his understanding of REITs. Their focus was on capitalization rates, usually around 10. Anything that could be done to reduce costs would increase their capitalization rate and value. That value seemed to have a direct influence on the publically traded REIT stock price.

Dale added that many of the benefits which Todd and Shayne had highlighted were equally applicable to chains and MUSH market segments where there were more sophisticated, professional buyers and facility managers that the owner occupied category.

Shayne Holderby countered that in his experience, many smaller building owners, owner/occupied situations, had pretty sophisticated depreciation schedules, were aware of expected equipment life and were interested to anticipate and plan for HVAC equipment replacement. He granted that it was more consistently done by the larger chain accounts.

Value Proposition for Owner Occupied Buildings – Pepper Hunziker

Goals/potential benefits

- Reduce utility costs
- Avoid unnecessary repairs
- Extended equipment life
- Adequate customer comfort
- Don't want to think about or be bothered by HVAC equipment issues – not their core competency

Shayne Holderby, HSGS, thought it was a stretch to list several of these benefits. They might or would likely be a result of a Standard 180 based maintenance approach but it would be difficult to claim or substantiate those benefits. He added a potential benefit of providing more consistent equipment operation.

- More consistent HVAC equipment operation
- Avoid catastrophic failure and premature replacement capital costs
- Increased equipment reliability
- Increased customer/worker satisfaction
- Maintenance operational costs should remain quite consistent and predictable

Barriers, pain points, push back which deter adopting Standard 180 approach

- Believes it would be too expensive, can't afford higher maintenance costs

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- Industry standard practice involved minimal inspection, not predictive or preventive maintenance – doing more was foreign
- Limiting “maintenance” to replacing filters and infrequently cleaning coils might be all that was proposed or required for tenant agreements
- Employee or relative replaces the filter regularly, that’s all I need
- Don’t need it, never seen the benefit before
- Owner might compare more comprehensive maintenance to an appliance “warranty” which they don’t buy
- Owner would find too time-consuming to consider contracts and more about another system

Strategies to address barriers, pain points

- Access and utilization of utility billing records
- Point owners to sites like www.ac-quality.com (residential) or www.hvacoptimization.com (commercial) for utility information and resource links
- Analysis of comparing ROI from not maintaining equipment to Standard 180 maintenance approach
- Compare cost of having to repair/re-commission whole units vs. better maintenance over the same period of time
- Educating customers about the real, true cost of minimal inspection approaches or outright negligence of maintenance – put into financial terms
- Educating customers that proper maintenance should not be confused with an extended warranty – neglecting recommended maintenance is actually system abuse and could void equipment warranty. Compared to car oil level checking and changing. If you don’t check and change, your engine will fail. “Pay me now or pay me later.” Pay somewhat more for maintenance or neglect will cause a failure and you’ll pay a lot more later and a lot sooner. Compare the cost of a few oil changes to the cost to replace an entire engine.
- Utilize industry, EPA and other sources of information comparing owner costs of different maintenance approaches
- Point out that they know they should be doing the right thing, not neglecting their HVAC systems
- Point to websites providing predictive maintenance energy savings information and justification for this approach vs. run-to-fail - HOLD FOR RESOURCES AND USEFUL DOCUMENTS – examples:
 - <http://www.facilitiesnet.com/hvac/article/HVAC-Maintenance-and-Energy-Savings-Facilities-Management-HVAC-Feature--10680>
 - <http://www.buildingefficiencyinitiative.org/articles/studies-show-hvac-system-maintenance-saves-energy>
 - <http://www.achrnews.com/articles/131216-tapping-the-potential-of-predictive-maintenance>
 - <http://www.sustainabilityroadmap.org/pims/9#.V4LND6J0nEY>
- Contractor could share energy data from their other customers, documented savings experience, personalized case study, similar building types, uses, climate should experience similar results
- Customer referrals, letters – avoid web site purchased referrals
- Compare the status of the equipment and current approach against manufacturer’s recommended maintenance practices and schedules – point out specific deficiencies in current approach
- People trust people they know and trust, highly regarded authority figures – the technician is more trusted than the salesperson or contract manager – leverage that existing relationship for existing customers
- HVAC failure would likely drive customers out or away – lost hours or days of revenue on top of emergency replacement costs and avoiding financing costs for replacement
- Need to express benefits in terms of success which the owner understands and values – (hot dog stand and expressing the seemingly low energy savings in the number of additional hot dogs they’d need to sell to deliver net profit to equal – HUGE number, sometimes unattainable sales increase to reach)

Contractor/Service Provider Barriers – applicable to multiple market segments

- Minimal contract price kept their foot in the door to be called for equipment repairs and replacement



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- Proposing more comprehensive maintenance would invite owners to contact other firms for competitive pricing
- Difficulty justifying or providing proof of the value from more comprehensive and expensive maintenance

Decision-makers for owner occupied building segment – key owner interest/benefit

- Single owner, joint owners, owner couple – need to determine which benefits appeal to which owners
 - Equipment longevity
 - Fewer emergency repairs
 - Avoided downtime
 - Lower utility costs
 - Competes with other business or personal use of available capital or line of credit – opportunity cost, priority
 - Rate of return (ROI)
 - Mean time between equipment failure – extended equipment lifespan financial benefit

EMI/SCE HVAC Optimization program customer interview high level comments – Scott Higa/SCE

- Eight of the ten interview respondents reported that they planned to continue with the enhanced maintenance they received through the program. These respondents reported that they, “... want the best” or that they “May never go beyond this level of maintenance, but I won’t do less.”
- Of the two respondents who reported that they would not continue with the enhanced level of maintenance, one reported that they would pursue a “hybrid” between their earlier level of maintenance and the level of maintenance they received through the program.
- Only one (dissatisfied) respondent reported that they would not continue with the enhanced level of maintenance at all, reporting that, “The process was rigid and not helpful.”

Closing Comments/Adjournment

Pepper Hunziker would update the VP Matrix and provide to Bob Sundberg for distribution out to the WG.

The next meeting was scheduled for Thursday July 14 at 10 am PDT. Their agenda would be to focus on the Value Proposition Matrix.

The Chair adjourned the meeting at 11:08 am PDT.

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Action Items and Key Decisions

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