



Goal 2: Commercial Quality Maintenance Committee Tuesday October 11, 2016 Meeting Notes

Call to Order

The meeting was called to order at 10:05 am PDT by Don Langston, Chair and President of Aire Rite AC and Refrigeration. Meetings are normally scheduled for 60 minutes.

Roll Call

Quorum for voting organizations = 7 of 12. 7 voting members, 8 non-voting members and 6 guest and 1 staff attended this meeting. A total of 22 members, guests and staff attended.

P = present at meeting

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

WHPA Goal 2: CQM Committee VOTING Members				Roll Call
ACCA (Air Conditioning Contractors of America)	Donald	Prather	Contractor Association	P
Aire Rite AC & Refrigeration	Don	Langston	Contractor (Nonresidential)	P
CLEARresult	Gretchen	Egging	Energy Efficiency Program Consultant	P
FDSI (Field Diagnostic Services Inc.)	Dale	Rossi	Third Party Quality Assurance Providers	P
Honeywell ECC (Commercial Buildings, Trade Sales)	Mike	Lawing	Controls (Manufacturer or Distributor)	P
HSGS (Honeywell Smart Grid Solutions)	Shayne	Holderby	Energy Efficiency Program Consultant	
Marina Mechanical	Denny	Mann	Contractor (Nonresidential)	
PG&E (Pacific Gas and Electric Company)	Jeanne	Duvall	California IOU	
SCE (Southern California Edison)	Scott	Higa	California IOU	P
SDG&E (San Diego Gas and Electric Company)	Jeremy	Reefe	California IOU	
Tre' Laine Associates	Pepper	Hunziker	Energy Efficiency Program Consultant	P
Western Allied Corporation	Mike	Gallagher	Contractor (Nonresidential)	
WHPA Goal 2: CQM Committee NON-VOTING Members				Roll Call
ASHRAE			Engineering Society	
BELIMO Aircontrols, Inc	Darryl	DeAngelis	Controls (Manufacturer or Distributor)	
Brownson Technical School	Bill	Brown	Educator, Trainer	
BuildingMetrics Inc. (BMI)	Pete	Jacobs	Energy Efficiency Program Consultant	P
Clean Energy Horizons	Norm	Stone	Energy Efficiency Program Consultant	
CLEARresult (formerly PECEI)	Michael	Blazey	Energy Efficiency Program Consultant	
CLEARresult	Elizabeth (Liz)	DeSouza	Energy Efficiency Program Consultant	
CLEARresult (formerly PECEI)	Phil	Jordan	Energy Efficiency Program Consultant	P
CLEARresult (formerly PECEI)	Paul	Kyllo	Energy Efficiency Program Consultant	
CLEARresult (formerly PECEI)	Mike	Withers	Energy Efficiency Program Consultant	P
Honeywell Smart Grid Solutions (HSGS)	Steve	Varnum	Energy Efficiency Program Consultant	P
PG&E (Pacific Gas and Electric Company)	Christian	Weber	California IOU	p
Richard Danks Consulting	Richard	Danks	Other Stakeholder	P
SCE (Southern California Edison)	Steve	Clinton	California IOU	P
SDG&E (San Diego Gas and Electric Company)	Robert	Nacke	California IOU	
SMUD (Sacramento Municipal Utility District)	Bruce	Baccei	Publicly Owned Utility	P



**Goal 2: Commercial Quality Maintenance Committee
Tuesday October 11, 2016 Meeting Notes**

Transformative Wave	Joe	Schmutzler	Controls (Manufacturer of Distributor)	P
Transformative Wave	Justin	Sipe	Controls (Manufacturer of Distributor)	
Lupson and Associates	Warren	Lupson	Other Stakeholder	
XCSpec	Jeff	Aalfs	Controls (Manufacturer of Distributor)	
XCSpec	Janet	Peterson	Controls (Manufacturer of Distributor)	
WHPA Goal 2: CQM Committee Invited Guests and Staff				Roll Call
Adrienne Thomle, Consulting **	Adrienne	Thomle +		P
AHRI	Garrett	McGuire	HVAC Manufacturer Association	p
Air Management Industries	April	Yungen	Contractor (nonresidential)	
AirTest Technologies	Mike	Schell	HVAC Manufacturer	
American Commissioning Group	Craig	Hofferber	Third Party Quality Assurance Provider	
AMS (American Mechanical Services)	Marc	Pickett	Contractor (Nonresidential)	p
California Public Utilities Commission (CPUC) - Energy Division	Carmen	Best	California PUC	
California Public Utilities Commission (CPUC) - Energy Division	Pete	Skala+	California PUC	
CLEARresult	Richard	Waite	Energy Efficiency Program Consultant	
Fieldpiece Instruments	Russ	Harju	HVAC Manufacturer	p
Galawish & Associates	Elsia	Galawish	Energy Efficiency Program Consultant	
ICF (ICF International)	James	Jackson	Energy Efficiency Program Consultant	
Mark Cherniack Emeritus	Mark	Cherniack	Emeritus	
NADCA (National Air Duct Cleaners Association)	Dan	Stradford	Contractor Association	
NCI (National Comfort Institute)	Rob	Falke	Educator / Trainer	
Pax-Sun Engineering, Inc.	Tom	Paxson	Other Stakeholder	
PG&E (Pacific Gas and Electric Company)	Robert	Davis	California IOU	
SCE (Southern California Edison)	Andres	Fergadiotti+	California IOU	
SCE (Southern California Edison)	Sean	Gouw	California IOU	
ServTEC Air Conditioning	George	Rodriguez	Contractor (Nonresidential)	p
UC Davis Energy Efficiency Center	Kristin	Heinemeier	Research Organization	
STAFF				
BBI (Better Buildings Inc.)	Mark	Lowry	WHPA Executive Advisor/BBI COO	
BNB Consulting/WHPA Staff, host, admin. support & scribe	Bob	Sundberg	WHPA Staff	P
CLEARresult	Paul	Kyllo+	WHPA Senior Advisor	
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



**Goal 2: Commercial Quality Maintenance Committee
Tuesday October 11, 2016 Meeting Notes**

AGENDA

Topic	Discussion Leader	Desired Outcome
Welcome, roll call, review agenda, approve past meeting minutes and ACTION items	Don Langston and Bob Sundberg/staff	Record meeting attendees, finalize past meeting minutes, review status of meeting action items.
Welcome new members & guests, review new candidates	Don Langston and Bob Sundberg/staff	New members and invited guests welcomed. Decision made on suggested revisions to candidate options and the review process.
NEWS – Regulatory and Legislative Updates	Don Langston, CPUC/ED, CEC & IOU Representatives	TBD
CQM Program Updates SCE/PG&E/SDG&E	Gretchen Egging, Shayne Holderby, Jeremy Reeve	Gain a current understanding of IOU CQM program status, progress, developments and issues.
CQM STD 180 User Guide WG Update	Dale Rossi	Members updated on WG status and progress of draft work product and Value Proposition Matrix
2016 Goal #2 Working Session – present draft	Don Langston	Share goals and milestones submitted to Executive Committee for approval
Review meeting Action Items, set next meeting date/time, adjourn	Don Langston	Set next meeting date and confirm time.

Approve Minutes of Previous Meeting

The September 13 meeting draft notes were distributed September 16. Approved meeting notes would be finalized and posted to the CQM Committee site.

Review Status of Action Items from Previous Meeting

PAST ACTION ITEMS:

September 2015 ACTION: Scott Higa, SCE, would report progress on the testimonials and access to and analysis of customer energy data at the next monthly meeting. Ongoing.

Welcome New Members and Guests; Consider Pending Members

- Russ Harju – Marketing and Sales Manager, Fieldpiece Instruments, HVAC Manufacturer of tools to analyze and maintain air conditioning equipment
- George Rodriguez, Owner, ServTEC Air Conditioning, Contractor (nonresidential)
- April Yungen, President, Air Management Industries, Contractor (nonresidential)
- Marc Pickett, Senior Account Manager, AMS, Contractor (nonresidential)

New Business - Don Langston & IOU Representatives

None.



Goal 2: Commercial Quality Maintenance Committee Tuesday October 11, 2016 Meeting Notes

NEWS Updates -Regulatory and Legislative - Don Langston, CPUC/ED, CEC & IOU Representatives

Thursday October 13 the WHPA sent out an email to all members with an alert for an upcoming CPUC staff workshop on Monday October 17. Subject: 2016 Existing Buildings Energy Efficiency Action Plan Update. Open for oral public comments. **Written comments due by November 1.**



Thu 10/13/2016 12:56 PM

Performance Alliance <scott@performancealliance.org>

Notice of Staff Workshop 2016 Existing Buildings Energy Efficiency Action Plan Update

To: Bob Sundberg

If there are problems with how this message is displayed, click here to view it in a web browser.

Revised Notice of Staff Workshop 2016 Existing Buildings Energy Efficiency Action Plan Update

California Energy Commission staff for the Existing Buildings Energy Efficiency Action Plan will conduct a workshop regarding revised strategies in the [2016 Existing Buildings Energy Efficiency Action Plan Update draft](#).

Oral comments will be taken at the meeting with **Written comments due by November 1, 2016.**

Commissioners from the Energy Commission and the California Public Utilities Commission may attend or participate in the workshop.

Monday, October 17, 2016

9:30 a.m. to 3:30 p.m.

CALIFORNIA ENERGY COMMISSION

1516 Ninth Street

First Floor, Arthur Rosenfeld Hearing Room

Sacramento, California

(Wheelchair Accessible)

Remote Access Available by Computer or Phone via WebEx™

To join the meeting:

VIA COMPUTER: Go to <https://energy.webex.com> and enter the unique meeting number: **929 289 336**. When prompted, enter your information and the following meeting password: **mtg@930am**.

The "Join Conference" menu will offer you a choice of audio connections:

1. To call into the meeting: Select "I will call in" and follow the on-screen directions.
2. International Attendees: Click on the "Global call-in number" link.
3. To have WebEx call you: Enter your phone number and click "Call Me."
4. To listen over the computer: If you have a broadband connection, and a headset or a computer microphone and speakers, you may use VoIP (Internet audio) by going to the Audio menu, clicking on "Use Computer Headset," then "Call Using Computer."

VIA TELEPHONE ONLY (no visual presentation): Call 1-866-469-3239 (toll-free in the U.S. and Canada). When prompted, enter the unique meeting number: **929 289 336**.

Public Comment

Oral Comments. Staff will accept oral comments during the workshop. Public comments may be limited to three minutes per speaker. Any comments will become part of the public record in this proceeding.

Written Comments. Written comments should be submitted to the Dockets Unit by October 24,



**Goal 2: Commercial Quality Maintenance Committee
Tuesday October 11, 2016 Meeting Notes**

IOU CQM Program Updates

SCE CQM program summary (Gretchen Egging of CLEAResult):

Gretchen Egging, CLEAResult, indicated that they'd already almost paid their energy efficiency goal incentives for the year. In the past they've struggled to meet their goal and this year they'd knocked it out of the park. She accounted a lot of the success for setting up many accounts last year. They didn't have a lot more customers. But, they had a much larger participation in buildings from existing customers.

Bob Sundberg, WHPA staff, summarized that once customers decided to participate, they enrolled more of their buildings. The number of new buildings for which checks were cut jumped by almost 100 % to 276 buildings.

SCE CQM HVAC – September

	Sep-16	2016 YTD
New contractors	1	6
New customers - application received	11	64
New buildings – check cut	119	276
% of units w/ economizers	52%	55%
New tonnage – check cut	13,522	28,658
Units w/ CSA – check cut	843	3210
Units w/ DCV/VFD – check cut	23	806
Units w/ ADEC w/ CSA – check cut*	317	1368
kWh – check cut	1,041,043	11,323,178
kW – check cut	550.10	4,480.49

PG&E CQM Program Summary (Jeanne Duvall of PG&E & Shayne Holderby of HSGS)

Shayne Holderby was unable to attend. Steve Varnum did attend and commented. Their savings target looked like it would be met for the yearly goal. They'd finished with a stronger summer than anticipated, given how hot it had been. Contractors were ramping up again with the weather change. Training was increasing and the program was progressing quite well.

SDG&E CQM Program Update

None.

CQM STD 180 User Guide Working Group Update – Dale Rossi

Dale Rossi, FDSI and WG Chair,

The group had elected to research five topics and decided to focus on #4 in 2016 and #5 as time permitted:

1. Understanding performance objectives and condition indicators
2. Making a maintenance plan
3. Investigating unacceptable conditions and performance



Goal 2: Commercial Quality Maintenance Committee Tuesday October 11, 2016 Meeting Notes

4. **Communicating the value proposition**
5. **Customer facing reporting**

Dale Rossi stated that in 2015 they'd produced an outline for what a Standard 180 User Manual might include in order for the Standard 180 committee to put it out for bid to produce. In 2016, the working group (WG) was asked to produce a more practical "user guide" outline which could be used nationally as well as to provide some guidance for California utility program planners, managers and implementers. They were asked to address issue areas beyond the technical parts of the standard on how the earlier sections on definitions and implementation might be better understood. Things like performance objectives and value propositions which were ancillary to the standard.

Previous working groups had focused on Section 5 and maintenance tasking for different HVAC equipment. Many parties believed that Section 5 and the lists of maintenance tasks was the core of the standard. This group differed from that interpretation and believed that sections 4 & 5, Definitions and Implementation, were the heart of the standard. Section 4, the rules for how the standard worked, had not been examined thoroughly before.

When the group started, they identified that there were a number of outstanding issues around what the standard actually intended. For 2016, they decided to work on how the standard was intended to work. More of what they wanted the guide to address. Their work in 2016 was more focused on non-technical aspects of how a maintenance program could be designed to be in compliance with the standard, what was really required and the processes which could guide its design and successful implementation.

They'd focused for several meetings on customer facing reporting and what that could mean. That work hadn't been resolved but did explore how to close the loop on setting performance objectives and then following through with customer discussions regarding status and providing efforts to detail progress toward those objectives. To contrast current performance against a baseline record of performance.

They'd decided to spend most of their time investigating what value propositions could convince key decision makers to adopt a standard 180 approach to maintenance.

Russ Harju, Fieldpiece Instruments, asked whether they'd addressed energy cost and cost savings when Dale had referred to performance.

Dale Rossi responded that they WG was referring to building performance, not equipment performance. He reviewed the three performance objectives or purposes for the standard. The WG had concluded that those three were required unless documented that any should be excluded. The group had also decided that you could have additional performance objectives, as many as the owner/responsible party determined were needed. One around equipment life or other important goal. So, energy efficiency would definitely have a cost and potential savings. They'd also concluded that each objective needed to be reduced to a number or metric so most would relate to some sort of savings.

The WG's conclusion was that the current standard required establishing performance objectives but not that there was any means to determine that you were meeting those objectives. There was no specific or detailed requirement to review the performance objectives and track progress towards achieving them in order to determine whether or not the maintenance program was successful.

Dale indicated that Pepper Hunziker had been incredibly helpful in creating a matrix to capture WG findings around performance objectives for certain key market segments. They'd found that the overarching performance



Goal 2: Commercial Quality Maintenance Committee Tuesday October 11, 2016 Meeting Notes

objectives dealt with either cost avoidance/savings or maintaining space occupant comfort. All other objectives they'd explored seemed to follow under one of those two.

Richard Danks, Richard Danks Consulting, responded that the WG might want to consider measuring the effectiveness of the maintenance program. Could there be a way to achieve the same benefit for fewer dollars in cost? There might be benefits from exploring newer technologies which could reduce costs. Rather than strictly adhering to a time based scheduled series of maintenance tasks, like condenser cleaning, you might be able to reduce the frequency of tasks by assessing equipment condition and only applying the task to equipment which needed that maintenance. Infrared, vibration and refrigeration cycle assessment all held promise. This might increase the amount of equipment uptime while expending fewer labor and material dollars of maintenance cost.

Dale Rossi responded that in his understanding, maintenance itself was limited to testing, inspecting and reporting condition and maybe filter replacement. Those other activities would be attributed to service or repair which had a variable/quoted cost rather than being part of the fixed price maintenance agreement. Also, that major value propositions, from his perspective, seemed to be universal, not particular to only specific market segments. As the group worked through defining each market segment, he realized that the key was really how you communicated those major value propositions in ways that segment could appreciate.

Dale Rossi then walked the group through the categories explored for each market segment. The market segments included:

1. Owner occupied, small
2. Owner occupied, large (including chain franchise owners with multiple locations)
3. National accounts (corporate owned locations, not franchise locations unless exceptionally large)
4. Municipals, universities, schools, hospitals (often referred to as MUSH – institutional segment)

The descriptive categories they'd attempted to complete for each segment included:

- Market segment characteristics/description
- Decision makers
- Key deterrents/pain points/barriers to adoption
- Specific strategies to address major pain points
- Key client benefits
- Documentation and resources to support adoption value propositions

They tried to explore another segment they called REITs (real estate investment trust commercial properties) but decided there were so many combinations of lease arrangements and responsibilities that it was not a single segment. They decided that it was more complex and involved than they could tackle in 2016. Possibly, it could be explored in the future.

Dale continued and described how the WG had explored different market segments in order to try and determine how the value of a Standard 180 based maintenance approach might be communicated effectively. He offered an example using the MUSH institutional market segment. Those were normally very long term property owners. Equipment longevity was especially important to them in order to avoid unnecessary large capital expenses. Their buying process was relatively slow, had to include quite a lot of supportive data and needed to be communicated effectively and approved by several levels of decision makers with a final decision usually made by some sort of board. They generally had the necessary resources. The challenge was to provide evidence that this maintenance was the best use for those resources.

Goal 2: Commercial Quality Maintenance Committee Tuesday October 11, 2016 Meeting Notes

He contrasted MUSH to the owner occupied segment which was generally resource constrained. In contrast, owners could make decisions relatively quickly, sometimes based on emotional reasons.

The group discussion moved onto the full committee's goal #2 around which the work product was being developed. Defining key performance objectives for commercial maintenance and defining a value proposition for each objective.

CQM Committee Goal #2 Defining Performance Objectives – Don Langston

Committee/Working Group: CQM Committee

page 3 of 5

Goal #2: Define Key Performance Objectives for Commercial Maintenance Incorporating AB 802 Elements and Translate into Customer Value Propositions. This would be captured in a matrix posted to the WHPA website by December 31, 2016.				
Milestone	Owner	Deliverable	Due Date	Dependencies
1. Define Key Performance Objectives for Commercial Maintenance	Chair and Committee Members	Key Performance Objectives	June 30, 2016	<ul style="list-style-type: none"> Availability of Chairs and Committee Members
2. Define Customer Value Proposition(s) for Each Identified Performance Objective	Chair and Committee Members	Customer Value Propositions	August 31, 2016	<ul style="list-style-type: none"> Availability of Chairs and Committee Members
3. Finalize Draft of Matrix	Chair, Committee Members, and WHPA Staff	Draft of Matrix	October 31, 2016	<ul style="list-style-type: none"> Availability of Chairs, Committee Members, and WHPA Staff
4. Committee Approves Matrix	Chair and Committee Members	Committee-Approved Matrix	October 31, 2016	<ul style="list-style-type: none"> Availability of Chairs and Committee Members
5. EC Approves Matrix	EC, Chair and WHPA Staff	EC-Approved Matrix	November 30, 2016	<ul style="list-style-type: none"> Availability of Chairs and Committee Members Time on Nov EC Meeting Agenda
6. Matrix Posted to WHPA Website	WHPA Staff	Document posted to WHPA Website	December 31, 2016	<ul style="list-style-type: none"> WHPA Staff Availability

CQM Work Product – Translating performance objectives into value propositions – Dale Rossi/Don Langston

Dale Rossi introduced the working session by sharing and introducing attendees to the work product draft which Jan Peterson, XCSpec, had produced. In the previous two monthly meetings the group had collected a number of client interview questions which were intended to capture and explore what was most important to that client related to their HVAC system operation, costs and approach to maintenance. What subjects needed to be discussed and what information was really necessary so that a client could make an informed decision about their current approach compared to a Standard 180 based alternative.

The document showed how Jan had grouped the questions into three larger categories: HVAC system priorities; budget and financial commitment; metrics to measure HVAC performance. Dale noticed that there seemed to be quite a lot of overlap with the effort the WG had been working on. That those efforts probably needed to be merged in some way.

Don Langston, Chair, mentioned that the list of basic interview questions were ones he'd regularly used, as recently as with the client he'd met with right before this meeting. Some of the questions were information



Goal 2: Commercial Quality Maintenance Committee Tuesday October 11, 2016 Meeting Notes

gathering and to see how much the client already knew about their building HVAC operations and costs. Other questions help qualify whether the client really cared enough to be worth further inquiry.

- Building Use?– fast food, warehousing, (See Rossi matrix)
- Building Age ?
- Number of RTUs?
- Approximate square footage of conditioned space?
- Owner occupied? Tenant Occupied?
- Who owned the asset?
- Who paid maintenance costs on asset?
- Did they know how much electricity bills are? Did they care?
- Try to get copies of several years of utility bills in advance or to be reviewed at meeting.
- Is there a current maintenance program? Description?
- Past contract copy to review coverage
- Who paid for HVAC maintenance?

Don Langston related that at his most recent customer interview, he was able to get answers to just about everything except their energy bills:

- Owner occupied building
- Property management by a comptroller unfamiliar with building management and HVAC
- The customer had 176 packaged units
- Unknown age and no inventory data
- All R22 units since none changed out in the last seven years or more
- Didn't trust the current contractor as they hadn't seemed to actually get things fixed
- Scope of work for current contract was a one-page copy/paste list of maintenance tasks

He found out that they had old equipment, had basically a filter change service and had no idea what their HVAC related spend was at. His interview questions were intended to understand the customer and their needs as well as qualify the customer. They didn't have a maintenance budget or know what they were spending on the six different properties with 50 to 75k square feet of office space each. Capital expense for equipment failure was to simply get three bids when that happened and always go for the lowest price. The interview questions allowed him to open the conversation which would lead to examining a few pieces of equipment and provide a starting point proposal to test their interest. If they were penny pinchers and couldn't see the bigger picture, it would help qualify them about whether to go further or not.

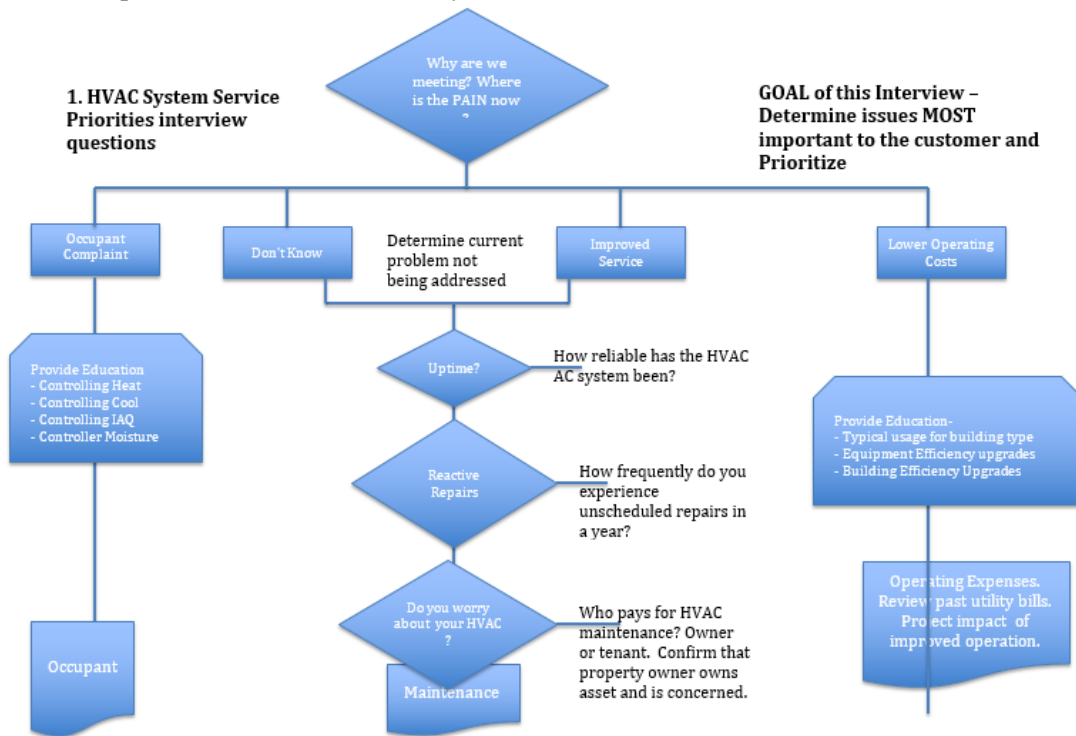
Don thought that this could be a part of the user guide which the WG was working on. A starting point for the customer conversation. How you'd actually tee up a conversation with a customer. How to see if it was a good fit between a Standard 180 oriented service provider and a prospective customer.

Donald Prather, ACCA, suggested that once you had these questions organized for the service provider, you might also have a parallel set of questions for the responsible party to help make sure they ask related key questions.

Goal 2: Commercial Quality Maintenance Committee Tuesday October 11, 2016 Meeting Notes

Customer Interview Matrix, draft by Jan Peterson, XCSpec

Bob Sundberg, WHPA staff, shared Jan Peterson's first matrix online with the group. It focused on the group of interview questions related to HVAC system maintenance and service.



The group neared the end of its one-hour meeting. Bob Sundberg, WHPA staff, asked the group to consider before adjournment how this interview process might be incorporated into the work of the user guide WG.

Dale Rossi thought that the interview questions which Jan Peterson had organized could well be a chapter in the proposed user guide.

Don Langston agreed that he saw Jan's work as a section or chapter in the user guide.

Russ Harju, Fieldpiece Instruments, asked who was the target audience for this user guide. He also asked about primary drivers for considering this approach. From his perspective, most of the benefits boiled down to economic ones.

Dale Rossi responded that the audience was anyone who wanted to implement Standard 180 in a maintenance program. It would have to include the building owner or responsible party. They were the one who, ultimately, had to decide on the type of maintenance program their building would have. The responsible party most often wasn't very familiar with the concept of a Standard 180 based approach to maintenance and needed someone else to help introduce them to how it could work and how they might benefit. The user guide was also intended for the party who would be championing this approach, to give them a resource. Dale agreed about the economic drivers being the case for many customers, especially in some market segments, but not all. He related what had motivated a WG guest from the Fresno Unified School District. Energy efficiency and savings was a primary

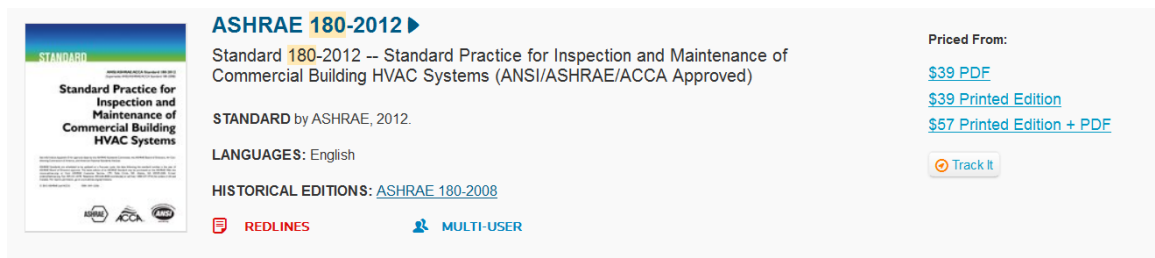
Goal 2: Commercial Quality Maintenance Committee Tuesday October 11, 2016 Meeting Notes

driver behind the utility programs but that was not always the case for building owners or QM program participants. Staff productivity and extended equipment life, protecting their HVAC assets, were a couple of the more common ones. Energy and other HVAC related costs (contract maintenance, repairs and service, equipment replacement) as well as comfort were frequently mentioned drivers. Dale had concluded that the greatest owner returns on investment resulted from avoiding equipment replacement for several years when you took into account a full present net and future net value of the assets.

Don Langston asked Russ Harju whether he owned a copy of the most recent version of Standard 180 2012. If not, he could obtain an electronic copy very reasonably at the ASHRAE.org bookstore, techstreet.com. That way, he could study the earlier Sections 1 through 4 the committee and working group had been addressing as well as the maintenance tasks in Section 5. ASHRAE publications were copyrighted and were restricted from reproduction and distribution but this group had shared Bob Sundberg's licensed copy online at a number of meetings. (Staff note: this standard was jointly developed by ASHRAE and ACCA. Both organizations still support all future revisions.)

He thanked Russ for bringing up so many good questions. But, by getting and studying this document, which was kind of the foundation for this committee, he could gain a better understanding for why the committee has worked and struggled to understand more exactly what the standard meant and required. They'd been studying it since the time it was developed and first published in 2008. A number of committee members are also members of the Standard 180 Committee and its subcommittees.

<http://www.techstreet.com/ashrae/searches/14345626>



The screenshot shows the product page for ASHRAE 180-2012 on the TechStreet website. On the left is a thumbnail of the standard's cover, titled "Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems". The main content area includes the title "ASHRAE 180-2012" with a right-pointing arrow, followed by the full title "Standard 180-2012 -- Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems (ANSI/ASHRAE/ACCA Approved)". Below this, it states "STANDARD by ASHRAE, 2012.", "LANGUAGES: English", and "HISTORICAL EDITIONS: ASHRAE 180-2008". At the bottom of the main content are icons for "REDLINES" and "MULTI-USER". On the right side, under "Priced From:", there are three options: "\$39 PDF", "\$39 Printed Edition", and "\$57 Printed Edition + PDF". A "Track It" button is located below the pricing options.

Dale Rossi added that they were all still trying to come to a better understanding of the standard which was very elegantly written. But, standards by their very nature were written in code and enforcement language. How to interpret it properly and accurately and internalize it was very challenging since so much of the first few sections was written in generalized terms. Statements about what was required but very little about how that might be accomplished. He offered to help Russ after getting the standard with a tour and discussions about his insights.

Bob Sundberg, WHPA staff, suggested they consider holding to smaller working group meeting to consider how these two efforts, both related to performance objectives and value propositions, could be merged.

Dale Rossi thought that Jan's effort was a good start at visually showing the right questions but was a first draft and needed more work, more refinement before a meeting would be productive. Flow chart symbols were used, but not all were used as intended. The content she addressed could be put into more accurate flow charts or they might consider how to communicate that information other ways. He thought it needed more consideration and didn't think that could be accomplished in a one-hour meeting.



Goal 2: Commercial Quality Maintenance Committee Tuesday October 11, 2016 Meeting Notes

Don suggested they give Dale time to digest the document he'd just seen for the first time and then get back together on the phone in a week or two. He really thought that this content could be a chapter in the user guide. And, conveying the content visually could be a really effective teaching tool.

Dale Rossi said that Don's comments gave him a new picture for the user guide. The customer facing reporting was toward the end of the process, really a continuum that would loop around and start again. These interview questions were really the customer communications on the front end of that process.

Don agreed. And, for a new customer, this would be where that process would start.

Don suggested they meet in two weeks. The group agreed on Thursday October 27 at 10 am PT. They decided to have a planning meeting and to ask Jan Peterson and Pepper Hunziker to attend because of their past contributions as well as Donald Prather and Richard Danks because of their work on Standard 180 and many valuable contributions. That would help provide the full WG with better direction for finalizing their work product. Bob Sundberg was asked to set up a conference call/Webex meeting.

Closing Comments/Adjournment

Don Langston suggested the next full committee meeting be held Tuesday November 8 and asked Bob Sundberg to send out a meeting notice.

Next meeting tentative agenda items:

- ADMIN
 - New business
 - Industry/IOU/Regulator News
 - Check on SCE report of program customer energy usage and analysis and
 - IOU business plan development – committee/individual involvement and committee input update
- IOU program monthly updates
- CQM User Guide Working Group update, presentation of work product, preparation for committee vote
- Confirm next meeting date/time, ACTION items, agenda, adjourn

The meeting was formally adjourned at 11:31 am PST.

* * * * *

Summary of NEW Action Items and Key Decisions

September 2016 ACTION: Don Langston would re-organize the existing list of interview questions to use in a client maintenance program discussion later that day. He'd provide that grouped list to Bob Sundberg for distribution to the committee.

PAST ACTION ITEMS:

September 2015 ACTION: Scott Higa, SCE, would report progress on the testimonials and access to and analysis of customer energy data at the next monthly meeting. Ongoing.