



Goal 2: Commercial Quality Maintenance Committee Tuesday March 22, 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 13. 7 voting members, 5 non-voting members and 5 guest and staff attended this meeting. A total of 17 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	
Aire Rite AC & Refrigeration	Don	Langston	Contractor (Nonresidential)	P
ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers)	Richard	Danks	Engineering Society	P
CLEAResult (formerly CSG)	Liz (Elizabeth)	DeSouza	Energy Efficiency Program Consultant	
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)	
CLEAResult (formerly PECE)	Paul	Kyllo	Energy Efficiency Program Consultant	P
PG&E (Pacific Gas and Electric Company)	Jeanne	Duvall	California IOU	
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)	P
WHPA Goal 2: CQM Committee NON-VOTING Members				Roll Call
ASHRAE	Jim	Scarborough	Engineering Society	
BELIMO Aircontrols, Inc	Vanessa	Castro	Controls (Manufacturer or Distributor)	
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	
Clean Energy Horizons	Norm	Stone	Energy Efficiency Program Consultant	
Climate Pro Mechanical	Ken	Robinson	Contractor (Nonresidential)	
CLEAResult (formerly PECE)	Michael	Blazey	Energy Efficiency Program Consultant	
CLEAResult (formerly PECE)	Steve	Clinton	Energy Efficiency Program Consultant	
CLEAResult (formerly PECE)	Phil	Jordan	Energy Efficiency Program Consultant	P
CLEAResult (formerly PECE)	Duane	Whitehurst	Energy Efficiency Program Consultant	
CLEAResult (formerly CSG)	Michael	Withers	Energy Efficiency Program Consultant	P
CLEAResult (formerly CSG)	Monica	Thilges	Energy Efficiency Program Consultant	
Honeywell ECC (Commercial Buildings, Product Management)	Adrienne	Thomle	Controls (Manufacturer or Distributor)	P
HVACRedu.net	Jeff	Taylor	Educator, Trainer	
KEMA/DNV-GL	Timothy	Devine	Energy Efficiency Program Consultant	
MAS Service/ Dba JB Mechanical	John	Billheimer	Contractor (Nonresidential)	
PG&E (Pacific Gas and Electric	Eddie	Gorbis	California IOU	



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Company)				
Richard Danks Consulting	Richard	Danks	Other Stakeholder	
SDG&E (San Diego Gas and Electric Company)	Jeremy	Reefe	California IOU	
SDG&E (San Diego Gas and Electric Company)	Robert	Nacke	California IOU	
SMW (Sheet Metal Workers) Local # 104	Randy	Young	Organized Labor	
Sacramento Municipal Utility District	Bruce	Baccei	Publically Owned Utility	
SCE (Southern California Edison)	Steve	Clinton	California IOU	
SCE (Southern California Edison)	Andres	Fergadiotti	California IOU	
Transformative Wave	Joe	Schmutzler	Controls (Manufacturer of Distributor)	P
Transformative Wave	Justin	Sipe	Controls (Manufacturer of Distributor)	
XCSpec	Jeff	Aalfs	Controls (Manufacturer of Distributor)	
XCSpec	Janet	Peterson	Controls (Manufacturer of Distributor)	P
WHPA Goal 2: CQM Committee Invited Guests and Staff				Roll Call
AirTest Technologies	Mike	Schell	HVAC Manufacturer	P
American Commissioning Group	Craig	Hofferber	Third Party Quality Assurance Provider	
Bay Controls	Stephan	Parry	Controls (Manufacturer of Distributor)	
CalCERTS	Barbara	Hernesman	Certifying Body	
California Public Utilities Commission (CPUC) - Energy Division	Carmen	Best	California PUC	
California Public Utilities Commission (CPUC) - Energy Division	Lola	Odunlami	California PUC	
California Public Utilities Commission (CPUC) - Energy Division	Pete	Skala+	California PUC	
Honeywell ECC	Daniel	Jones	Controls (Manufacturer or Distributor)	
Honeywell Smart Grid Solutions (HSGS)	Eddy	Saleh+	Energy Efficiency Program Consultant	
Honeywell Smart Grid Solutions (HSGS)	Steve	Varnum	Energy Efficiency Program Consultant	P
HVACRedu.net	Chris	Compton	Educator, Trainer	
ICF (ICF International)	Emily	Pearce	Energy Efficiency Program Consultant	
ICF (ICF International)	James	Jackson	Energy Efficiency Program Consultant	
Integrity Mechanical Systems Corp.	Susan	Siegert	Contractor (Nonresidential)	
LAUSD (Los Angeles Unified School District)	Steve	Granados	Government (Other than CPUC)	
Mark Cherniack Emeritus	Mark	Cherniack	Emeritus	
NCI (National Comfort Institute)	Rob	Falke	Educator / Trainer	P
Pax-Sun Engineering, Inc.	Tom	Paxson	Other Stakeholder	P
PG&E (Pacific Gas and Electric Company)	Mary	Anderson	California IOU	
PG&E (Pacific Gas and Electric Company)	Robert	Davis	California IOU	
SCE (Southern California Edison)	Tara	Becnel	California IOU	
SCE (Southern California Edison)	Ryan	Cho+	California IOU	
SCE (Southern California Edison)	Brett	Close	California IOU	
Service All-Stars	Shaheda	Lodhi	Contractor (Nonresidential)	
UC Davis Energy Efficiency Center	Kristin	Heinemeier	Research Organization	
STAFF				



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BBI (Better Buildings Inc.)	Mark	Lowry	WHPA Executive Advisor/BBI COO	
BNB Consulting/WHPA Staff, host, admin. support & scribe	Bob	Sundberg	WHPA Staff	P
Empowered LLC	Shea	Dibble	WHPA Co-Director	
CLEAResult	Paul	Kyllo+	WHPA Senior Advisor	

** 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

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	New members and invited guests welcomed. Decision made on suggested revisions to candidate options and the review process.
CQM Program Updates SCE/PG&E/SDG&E	Monica Thilges, Shayne Holderby	Gain a current understanding of IOU CQM program status, progress, developments and issues.
CPUC/ED DNV GL Impact Evaluation Report of 2013-2014 CM related Programs	Don Langston	Member understanding of impact evaluation approach, assumptions, EE measures evaluated.
CQM Committee 2016 Goals	Don Langston	Discuss goal topics approved by Executive Committee for CQM C. & WG
IOU Business Plan Development – WHPA webinar March 24	Don Langston, Norm Stone and others	Understand opportunity for WHPA member input into IOU program implementation plan development
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 February 9 meeting draft notes were distributed February March 2. Approved meeting notes would be finalized and posted to the CQM Committee site.

Review Status of Action Items from Previous Meeting

September 2015 ACTION: Pete Jacobs volunteered to investigate what the impacts might be for IOU claimed savings if the current CPUC/ED assumed 100% compliance with HVAC equipment installations was reduced to a much lower, possibly low double digit, % from CPUC permitting and compliance rates research. Pending. Postponed.

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. Postponed.

October 2015 ACTION: Pete Jacobs would address the questions of how a reduced level of Title 24 compliance, lower than the current 100% compliance assumption guideline in work papers, might impact the amount of claimed savings



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which an IOU could claim on a future work paper. The impact on a revised RQI one as well as a CQM work paper which the IOUs could develop. Postponed.

October 2015 ACTION: Norm Stone, Clean Energy Horizons, would check with IOU legislative departments to learn about their assessments of this bill and how it could impact their approach to claiming energy savings. Postponed.

Welcome New Members and Guests; Consider Pending Members

Phil Jordan of CLEAResult will be supplying SCE program engineering support previously provided by Ben Lipscomb.

New Business - Don Langston

Reminder to attend the WHPA webinar March 24. The CPUC Coordinating Council would present a workshop to WHPA members regarding IOU business planning for program implementation plans (PIPs).

IOU CQM Program Updates

SCE CQM program summary (Monica Thilges of CLEAResult is on work leave):

Paul Kylo, CLEAResult, reported for Monica Thilges.

SCE CQM HVAC – February

	Feb 2016	2016 YTD
New contractors	1	1
New customers	2	19
New buildings – check cut	20	22
% of units w/ economizers	42%	52%
New tonnage – check cut	1,504	1,794
Units w/ CSA – check cut	433	476
Units w/ DCV/VFD – check cut	181	181
Units w/ ADEC w/ CSA – check cut	292	324
kWh – check cut	1,786,881	1,826,066
kW – check cut	725	741

Paul reported a large increase in February results. Program improvements were given credit for increased participation, HVAC unit enrollment and savings results. It appeared to be a strong year ahead and they expected to meet or exceed SCE program goals.

Don Langston asked about the trend in customer acceptance. An increased number of his customers were completing their full three years. He was interested in quotes or comments some outgoing customers were providing. He'd had a number who had elected to continue under the same higher level maintenance agreement after the three year program incentives expired.



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Paul Kylo agreed that a number were exiting the program and would complete surveys. He agreed to seek out some of that feedback to report at a future meeting.

Scott Higa, SCE, said that exiting customer comments were generally very favorable. Only one so far had provided a negative response. Almost all commented that they would retain a higher level of maintenance following program participation. A number indicated that those future maintenance agreements would be based on Standard 180 criteria. Scott committed to providing some anonymous customer feedback comments at future meetings.

ACTION: Scott Higa committed to providing CQM program existing customer comments at a future meeting.

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

Shayne Holderby, HSGS, provided the program update.

PG&E CQM HVAC – February

	Feb 2016	2016 YTD
New/Active Contractors	4	40
New customers – app submitted	5	7
New buildings – app submitted	5	7
% of units w/ economizers	30%	38%
New tonnage – app submitted	58.5	122.5
Units w/ CSA - app submitted	15	26
Units w/ DCV/VFD - app submitted	2	2
Units w/ ADEC w/ CSA - app submitted	0	0
kWh - app submitted	21441	61003
kW - app submitted	13	7.5

Shayne stated that their previous reporting issues had been resolved. They should be able to provide monthly program metrics updates going forward.

- Slow start to 2016, somewhat attributed to weather conditions.
- The aggressive contractor enrollment efforts were yielding results. Either due to their successful promotion or more contractors following current program participants as a competitive move.
- New customers/buildings – greatest increase was taking place with property management firms who were enrolling additional properties once they participated in the program.
- Customer direct participation was also increasing.

SDG&E CQM Program Update

No update.

CPUC/ED -- CQM 2013-2014 Program Impact Evaluation Study conducted by DNV GL - Don Langston

Hyperlink direct to CQM program impact evaluation report:






http://www.energydataweb.com/cpucFiles/pdaDocs/1454/HVAC3ImpactReport_PUBLIC_COMMENT.pdf

Don Langston reminded attendees that this program evaluation was based on a current CPUC/ED approach which depended upon DEER assumptions and was limited to the impact of individual energy efficiency measure energy

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savings claims made in IOU claimed savings work papers. This was entirely different than looking at the whole sum of all Standard 180 based maintenance efforts which would have a cumulative impact on the building energy meter record of energy consumption and demand. It also didn't address the other beneficial impacts of quality maintenance like IAQ and occupant comfort and impact on long term reliability of HVAC equipment. He suggested they review some of the highlights in the executive summary, part of the 170+ page report.

Table 1. Realization rates of evaluated IOU QM programs and measure groups

	Coil Cleaning	Refrigerant Charge Adjustment	Economizer Repair	Thermostat Adjustment	Supply Fan Control Adjustment
					
PG&E					
Commercial QM		29%	43%	30%	20%
Air Care Plus	619%	3%	44%	30%	pass-through
SDG&E					
Deemed Incentives- Commercial HVAC	64%	64%	56%		
Commercial Direct Install	58%	26%	56%	30%	
SCE - Quality Maintenance Measure					
Commercial QM	91%				

The SCE Quality Maintenance program did not report claims on a measure level so a program wide realization rate is given.

The study evaluated a series of related maintenance as well as recommissioning (AirCarePlus) programs. Five energy efficiency measures were evaluated in this study as indicated in Table 1 above. The SCE QM program did not report claims on a measure level so a program wide realization rate was give. The % in each box indicated the "realization rate" or the evaluator's assessment of delivered savings / IOU claimed savings. If the % was very low, the claimed savings far exceed savings which program evaluators judged had been delivered. If the \$ was very high, the claimed or earlier allowed claimed savings had been exceptionally low compared to the savings the evaluators judged was being delivered.

From the study:

"The evaluation estimated the achieved savings and compared them to the expected savings as a ratio called realization rate. This is inclusive of the ex post installation rate and any ex post adjustment to the unit energy savings. Table 1 provides a summary of the realization rates for the IOU programs and measure groups evaluated in this study. Empty table cells are those program measure groups that had no ex ante claims in a specific program. While the IOU programs address both residential and commercial activities, DNV GL focused on commercial quality maintenance measure groups because residential program savings were less than 5% of the overall quality maintenance savings. Within the commercial program, the evaluation team addressed high impact measure groups, those that contributed the largest percentage of ex ante savings, across all programs in this evaluation.

The realization rates were generally low; although some were consistent with past evaluation estimates, others were higher than expected. The highest realization rates were for the SCE Commercial QM program. Higher than



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expected frequency of installation of many of the component measures making up the quality maintenance measure accounted for the high realization rate in this program. In general, the economizer repair realization rates are not high, but they are noticeably higher than the past evaluation cycle and promising given previous studies³ showing high failure rates. The low realization rate for the supply fan control measure in PG&E's Commercial QM program was based on their implementer-supplied data, which was inconsistent with the tracking claims." (Page 2)

There were a series of explanations for the low or high realization rates for each measure provided in the study. Shayne Holderby, HSGS, had pointed out that the previous year when a draft evaluation was posted, only five of about twenty-two know factors which contributed to potential energy savings were evaluated. So, the study, his team concluded, did not evaluate the savings effectiveness of Standard 180 based program savings overall but only the impact of the five selected energy efficiency measures. (Staff note: the five were probably selected from and limited to those energy efficiency measures proposed and approved by the CPUC in the IOU claimed savings work paper.)

Contractors were not allowed to receive any ratepayer incentives for any condenser or evaporator coil cleaning because of an earlier CPUC/ED disposition ruling. Note the extremely high realization rate within the AirCarePlus recommissioning program.

Don Langston said he was trying to still make sense of these conclusions which were based on many questioned DEER savings rate assumptions, comparison with laboratory condition operation and very small equipment samplings.

Scott Higa, SCE, explained that the evaluators only tested the individual energy efficiency measures that were part of IOU claimed savings work papers. IOUs often chose to not include all energy efficiency measures which might deliver savings for a variety of reasons.

Bob Sundberg, WHPA staff, clarified that he understood the AirCarePlus to have been a one-time evaluation and recommissioning servicing of a packaged unit, not to be confused with longer term maintenance services or efforts to maintain a higher level of unit performance. Very different from all of the other commercial maintenance program and advanced technology retrofit efforts. But, all were bunched together in the impact evaluation study.

Shayne Holderby, HSGS, had studied the report and provided his comments.

- Adam Scheer of PG&E attempted to go back to the CPUC/ED to garner/justify energy savings claims for coil cleaning performed under the CQM program. They'd taken measurements pre & post servicing. For some reason the CPUC impact evaluation report didn't capture any of that data. They were attempting to get the data they'd previously supplied added back in to be considered for the report findings at a later date. The contractors didn't receive any incentive for the coil cleaning work performed but it was one of 22 tasks required to be performed under their program. Since this report indicated NO savings, a revised report should read something like 1000% if the data is accepted.
- His team attempted to address what they'd concluded were a number of holes in the Work Order 32 report findings. And, they'd decided that this impact evaluation report provided even less information than in WO32 about unit information, what they'd actually found. They felt that their ability to verify and correct any discrepancies was even further compromised.
- The CQM program evaluation team seemed to have proceeded with the same approach as they had going into WO32 regardless of the comments. Specifically, PG&E WO32 comments had indicated 22 program requirements that would have a cumulative impact on unit energy use and savings, but the evaluation chose to only address 5 energy efficiency measures taken individually.
- They'd recognized a program flaw in the thermostat/fan control measure that contributed to such low a % of savings.

Don Langston, Chair, commented that it was difficult to comment on or refute findings when unit evaluation information was not being provided. They'd run into the same difficulty in SCE territory. Legislative directives



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SB350 and AB802 would address a more holistic approach for future evaluations. But, it seemed that until that became a reality, program evaluation remained fixed. Pretty hard to provide meaningful public comments when the evaluation didn't include where they went, which units they evaluated or the conditions under which they were evaluated. He reminded the group of the ACCA sponsored international ANNEX 36 heat pump research which examined the performance impact of single as well as multiple simultaneous faults. The study pointed to a huge opportunity to capture savings. He didn't understand why the CPUC didn't seem to want to make use of large, vetted, international studies and their approach to performance evaluation.

Bob Sundberg, WHPA staff, mentioned his having attended a recent online CPUC/ED workshop on the CQM program impact evaluation study. The host had responded to a question about what the CPUC was doing to prepare for and incorporate SB350 and AB802 legislative directives. She'd indicated that those directives were not yet CPUC policy. As such, they would operate under current policy and approaches until such time as CPUC policy toward evaluation was changed.

Richard Danks, Richard Danks Consulting, commented that he thought the report seemed to cry out for some sort of statistical analysis. Which of those energy efficiency measures was most correlated with energy savings at the building meter. He asked whether there was any sort of study done or planned for that sort of analysis.

No one knew of any CPUC studies of that kind.

Bob Sundberg, WHPA staff, asked whether any of the IOU representatives could comment on their approach for program claimed savings work papers. Were they starting to incorporate building meter data in any way?

Shayne Holderby offered that he knew that in SCE territory they'd done a considerable amount of meter readings. PG&E had offered to conduct individual unit power consumption meter data logging. They had 50 meters set to go, three times the sample size than was evaluated in the impact evaluation study. It came down to getting them/CPUC to agree to use the data rather than the current dependence on lab data. The coil cleaning results in the AirCarePlus program was a good example of the sort of assumptions and discrepancies which lead to confusing results. The lab results used for coil cleaning comparisons initially found only about 1/6th the claimed savings. Now, they recognized much greater actual savings found in the field, hence the 600% increase from the artificially low initial findings. He felt strongly that metering actual units would provide the best detailed data on delivered savings results taking all energy efficiency measures and service practices into account. So far they'd seen no CPUC interest in that approach at all.

Working Group Updates

No report. The committee had not yet been informed that a working group proposed to carry forward their work on a Standard 180 User Guide had been approved.

California Legislative Assembly Bill 802 & Senate Bill 350

No one had updates for legislative and CPUC progress regarding implementation of the two bills.

CQM Committee 2016 Goals

The group reviewed 2015 goals, progress and accomplishments. Both working groups had delivered work product to the Executive Committee for consideration at the December meeting. The EC had approved work products of both the Standard 180 Maintenance Task Working Group and the Standard 180 User Manual Working Group.

Don Langston, Chair, commented on the strong progress made in 2015 as well as the more focused proposed 2016 goals that looked well aligned with the SB350 and AB802 legislative directives.



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Bob Sundberg, WHPA staff, indicated that he'd been informed that the EC had considered proposed topics for each committee and the staff resource needed to support those efforts. The CQM Committee had been approved for 10 meetings for the remainder of the year. The EC had also approved the proposed Standard 180 User Guide Working Group and an allocation of 20 one-hour meeting equivalents of staff support. The approved "topics" needed to be refined into more specific goals with quarterly progress milestones over the next couple of months by each committee and working group. Ellen Steiner, staff, would work with committee and working group chairs to accomplish this.

Bob shared that this was one of two working groups to receive approval for such substantial meeting support. The other was the CQI Committee's WG. That group planned to complete its commercial installation standardized data specification first. Then, extend that effort with cross-committee cooperation to adapt it for commercial maintenance and residential installation. Finally, that group intended to extend the commercial installation data spec. into developing a standardized method for unit/system performance evaluation. How the cross-committee data spec. effort would be accomplished was yet to be determined.

Rob Falke, CQI Committee Chair/NCI, commented on details of his committee's goals which involve a cross-cutting working group effort to coordinate the efforts for development of the residential and commercial maintenance data specification. Dale Rossi and Don Langston had participated in the WG's commercial installation data specification all along. The CQI working group would then start the adaptation of the commercial installation to a commercial maintenance specification with CQM Committee member involvement. The draft would then be turned over to the CQM Committee for their review, revision and editing to assess the performance of an installed system. The CQI working group would draft a similar adapted specification for residential installation and similarly turn it over to that committee for further development.

Rob added that savings at the building meter was the big step forward from AB802. But, not all units on a roof would be operating near top efficiency. Someone would still need to get up on that roof to assess individual unit performance, identify seriously degraded performance and faults and propose service to fix and repair faulty operation. There was still the need for a capability to assess individual units to get and keep all units on a roof operating properly. A standardized method for before and after performance assessment would be a very valuable step forward to support the intent of AB802. A foundation for a new way to assess energy efficiency and HVAC program energy savings, away from the current dependence on laboratory testing and layers of assumptions.

Don Langston thanked Rob for his comments. Don also commented on a topic which he and Rob had addressed a number of times related to the use of the term "quality" in committee names. The term was very general and open to multiple interpretations and had been used in initial statements of WHPA goals based on the state's long term strategic plan. He and Rob agreed that the committees might be better served to just be named commercial installation and commercial maintenance.

Rob Falke commented that in his committee's work they'd looked at recommended practices and evaluation procedures from a variety of about 30 industry standards in order to develop their data specification. Not just one. He'd thought it would be less confusing for committee names to not imply that they were based on any single standard but named for the specific HVAC application on which they concentrated their effort.

Tom Paxson, Pac-Sun Engineering, asked how the work of these working groups would be tied to the ASHRAE/ACCA Standard 180 User Manual Subcommittee effort. What sorts of technical as well as non-technical members would participate.

Don Langston suggested that Tom, Dale Rossi and he get on a call after the committee meeting to discuss that question in more detail. He intended both groups to work in a complimentary effort and direction. The intent of the committee's



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WG in developing a user guide rather than a large, comprehensive user manual, was to address some of the key needs of utility programs and their primary participants now. The WG output would be a building block which could be folded back into the Standard 180 User Manual larger effort.

Closing Comments/Adjournment

Don Langston suggested the next meeting be scheduled for Tuesday April 12 at the usual 10:00 am PDT.

Tentative agenda items:

- IOU program monthly updates
- CQM User Manual Working Group launch plans
- CPUC/ED CQM program impact evaluation study
- IOU business planning workshop discussion and updates
- CQM Committee & WG detailed goals and progress milestones

The meeting was formally adjourned at 10:57 am PST.

* * * * *

Summary of NEW Action Items and Key Decisions

March 2016 ACTION: Scott Higa committed to providing CQM program existing customer comments at a future meeting.

PAST ACTION ITEMS:

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