

## Meeting Notes: Market Adoption Subcommittee – Conference Call December 7, 2011 12:00 – 1:30pm (Pacific Time)

Scribe: Wendy Worrell, WHPA Staff

<b>Welcome, Roll Call – Bob Sundberg</b>		
<b>Attendees</b>	<b>Organization</b>	<b>WHPA Category</b>
• Mark Cherniack, <b>WHPA Staff</b>	New Buildings Institute	Other Stakeholder, Staff
• Serafima Higginson	Honeywell	HVAC Manufacturer
• Julie Humes, <b>Mkt Adopt Chair</b>	Lennox Industries	HVAC Manufacturer
• Daniel Jones	Honeywell ACS/ECC	Controls Mnf/Distributor
• KC Spivey, <b>Advanced Tech Chair</b>	Pacific Gas & Electric	Investor Owned Utilities
• Bob Sundberg, <b>WHPA Staff</b>	WHPA	Staff
• Jonathan Woolley	Western Cooling Efficiency Center/UC Davis	Other Stakeholder
<b>Members Unable to Attend</b>	<b>Organization</b>	<b>WHPA Category</b>
• Carl Cimino	Pipe Trades Training Center	Educator/Trainer
• Ruzwa Cooper	Cooper Oates Air Conditioning	Nonresidential Contractor
• Chris Forth	Johnson Controls/York Unitary Products	HVAC Manufacturer
• Jason Hanson	Sierra Pacific	Residential Contractor
• Don Langston	Air Rite Air Conditioning & Refrigeration	Nonresidential Contractor
• Lizette Nielsen for Jeremy Reeve	San Diego Gas & Electric	Investor Owned Utilities
• James Tuleya	Pacific Gas & Electric	Investor Owned Utilities
• Dave Waters	RSD Total Controls	Controls Mnf/Distributor

*To not be repetitive, the individual names of meeting participants will be used, but the organization names will not be repeated in the body of the notes.*

Bob Sundberg reported that Chris Forth was intending to participate, but he had something booked that took him away from this volunteer opportunity. Don Langston was expected to attend. The newest member, Ruzwa Cooper, was aware there was a meeting but did not get it on his calendar and was going to try to break off from something else to call in. Mark Cherniack was only able to attend part of the meeting. Carl Cimino has not attended since the first time and unsure how to proceed with him. A notification was received that Carl had removed the recurring meeting notice from his calendar. Lizette Nielsen and Jason Hanson have not responded yet. Dave Waters had to decline the meeting.

Julie Humes thanked those who called in for the brief meeting before the holidays even though Dale Gustavson had suggested that the meetings “go dark” in December.

Bob Sundberg clarified that Dale Gustavson had suggested that since the new Executive Committee was not scheduled to meet in December, there might have been a number of year end conflicts with a lot of the organizations, especially for those subcommittees meeting in the later part of the month. In this case, there were a number of things that happened to discuss prior to January.

### **November 2<sup>nd</sup> Meeting Notes, Action Items Review, Volunteer Hours – Bob Sundberg**

Bob Sundberg commented on the need to determine which Action Items were accomplished and which needed to be pushed forward into January.

**ACTION: Julie Humes to have follow-up call with Kristin Heinemeier and Mark Cherniack, then email the content to the Market Adoption Subcommittee.**

Bob Sundberg explained that the call was to see what suggestions the Advanced Fault Detection and Diagnostics Subcommittee might have for the Market Adoption Subcommittee to use as product or service to help “flush out the process.”

Julie Humes reported that they narrowed down a couple of products. Honeywell certainly has a good product to put in there. One thing to watch for is making sure it is something that everyone can adopt. If that is something on the table, it is a possibility to go that direction. She felt it was necessary to get processes in place prior to making the decision.

Bob Sundberg discussed the processes. The product being recommended was not a whole box like a rooftop unit or packaged equipment. The recommendation was instead for a technology or product that could be retrofitted to equipment in the 95% that is “out there” and existing. The AFDD subcommittee recommended considering something that would be capable of fault diagnostics and detection. One of those items was the ventilation and economizer system that Honeywell had developed and introduced (JADE system), which included options for demand control ventilation, user interface and some other interesting things. It did include an alarm capability for the sensors, the logic module, the motor, the damper positions, etc. That is what Title 24 has been looking for and is the kind of thing that is normally not at all available unless there is building automation. It seemed like a pretty good candidate for the Market Adoption Subcommittee to adopt as a technology to use as a vehicle to better understand the kinds of barriers in the process of market adoption and mainstreaming of the technology. Currently there does not seem to be any other comparable separate product that would accomplish the same kinds of things. They were referring to the Honeywell Jade.

Mark Cherniack confirmed that to be the case and brought up price point in terms of market entry – other potential products start to go up into the thousands of dollars. They would not be appropriate for a larger market share.

Julie Humes added that one of the things from yesterday’s meeting that she brought up with the ETCC was the ability to “get their hands on data”. She asked Daniel and Serafima if they could solicit their help with that for non-proprietary information. She specifically referenced this would be for where there needs to be more awareness, where the penetration might be lower or where forecasted percentages have not met goals.

Serafima Higginson agreed they could look at something to provide. They have just introduced another tool that works with the Jade now that works specifically on the recording of the data onto a PC. It is the CMOS tool.

Bob Sundberg clarified that Julie Humes wasn’t referring to data from the rooftop unit, but rather information regarding the degree of rapid acceptance and adoption in the market place. For example, “if you had it out for 6-9 months and every contractor has put it on every rooftop unit they have, it wouldn’t be a good vehicle for us. But, if there is something with a great feature set that should solve a lot of problems, but there are degrees/resistance/types of barriers that are impeding it, it would probably be the type of vehicle this subcommittee would be looking for to help learn the process and difficulties in market acceptance for other technologies too. It isn’t the data from the rooftop unit really. If you had expected that say 100,000 units were to be sold in the first 12 months, but in fact the numbers were a significantly smaller number of concern to the manufacturer due to barriers of getting attention: market business climate, price point, old style service contractors resistant to new technology, and the like; that sort of data that could be shared with the subcommittee would help.

Serafima Higginson understood. She needs to talk with Adrienne (Project Manager) on that. If not, she can definitely pull something together that will be beneficial to look at.

**ACTION: Serafima Higginson will pull together data to help the Market Adoption Subcommittee better understand the degree of rapid acceptance or adoption in the marketplace.**

Julie Humes thought that sounded great. She commented that they have challenged the Utilities and ETCC with the same kind of numbers. Without some kind of numbers, it is difficult to know “whether you’ve moved the needle.”

Bob Sundberg referred back to the Action Items as there were others related to this. Some of them were connected to Chris Forth who was unable to attend this meeting. He was going to get a summary of the Johnson Controls series of brands to the team that included some information. Chris was also going to check with his distributor to see if he could find a contractor with diagnostics experience related to it. They may have been able to identify an appropriate type of product from their venue. Julie Humes was looking into some technologies within Lennox. Some possible candidates from other manufacturers (Carrier, Trane, etc.) would also be desirable. Chris was going to look into some other things as well. For now, those either would be similar to Jade – a controlled product capable of upgrade or retrofit to a rooftop unit or else the whole unit, but in this downturned market, it probably is not the item that would help the subcommittee understand the process most readily.

Julie Humes commented that it is a possibility though. She would like to also see what comes out of yesterday’s meeting presentation.

**ACTION: Julie Humes to speak at December 6, 2011 Emerging Technologies Program Managers Meeting (if receive final approval).**

Bob Sundberg announced that Julie Humes was able to meet with the ETCC yesterday. KC Spivey called into that meeting.

Julie Humes shared what she presented and the reception she had. It was a good meeting even though she wasn’t there very long. The right people were in attendance. KC Spivey advised her that she could have expanded a bit further on the WHPA and the structure of it. She really only went into the Advanced Technologies and how it related to one of the goals of the long term Strategic Plan, and then how this subcommittee fit in there. She thought the audience already had a grasp of what WHPA was. KC Spivey mentioned to her that he might be able to explain further at the next meeting. She did a brief presentation focused on letting the ETCC meeting attendees know that the subcommittee has a group of volunteer professionals so, at no cost to them, the ETCC would be able to sit on the Market Adoption Subcommittee, ask for help, have the subcommittee look at technologies felt to have not been as readily accepted as expected and that one of the subcommittee’s jobs is to look at protocols and put processes in place to determine the barriers. She made them aware that the barriers they see might be completely different than what an industry might see. From a manufacturer’s point of view there might be completely different barriers that what a utility sees as a barrier, although there could be some that would be common to both. The DEER database came up twice, which is known to be somewhat of a challenge. She talked about putting a trial in place and asked how the subcommittee could help take some of the products they have seen as being of high value to them as a utility and Emerging Technology Council. Randy Wong spoke up and raised the question asked of him when he was on “our conference call” about the TRIO group having had attention placed on start-ups and entrepreneurs but who is working with the manufacturers. There were a lot of “yes” nods in the room and acknowledgement that they do not do a good enough job of working with manufacturers with R&D labs in technology. There was less feedback, but more head nodding.

Mark Cherniack commented that there is a phenomenon across the board that everyone is “looking for the next thing, the next gizmo, the next whatever that will save us all, or silver bullet or anything”. There is a lot of stuff that can be put out there already.

Julie Humes agreed and stated that Chris Scruton talked a bit about hot/dry and how it got hung up and that even though it is a big goal for the State it has been a big goal for over 5 years. Lennox did some testing of their existing products for hot/dry, but Chris said there were some “hang ups” so right now it is not recognized in DEER perhaps.

KC Spivey added that that discussion went to process and the process to which the utilities utilize to prioritize which technologies to pursue. That is where Paul Delaney came back and volunteered that they would be willing to share their process. He thought that could be a follow-up item for the team – to get Edison to volunteer that.

Mark Cherniack pointed out that that also “cuts across” the Climate Optimized Subcommittee, which is starting up as well both for codes and standards as well as for technology.

Julie Humes felt it brought it all back to the point that there are people “wanting to play” with the ETCC. It made them aware once again that they have some players in the industry who are volunteering their time and efforts into having products adopted. She mentioned that now when there is a new product, there are several different “silos” within her company that have to go seeking out people at utility companies because there is no standard process to introduce something to the whole group at once. So the question is where the manufacturers can go with a new product. Overall, she will be waiting for some feedback and maybe some follow-up. It sounded like maybe Edwin Hornquist from Edison supported the entire deal and felt a better job needed to be done. There were several people who seemed interested in joining this subcommittee’s conference calls and the team to at least see what is being done, the capabilities and desired focuses and bring some ideas.

KC Spivey asked what Julie Humes was thinking in terms of follow-up. He was thinking that maybe a slide overview of WHPA could be put together with another slide or so of recap of items to follow-up with a thank you for the discussion.

Julie Humes felt that sounded good. She will look to KC Spivey to be pointed in the best direction on those items.

Bob Sundberg shared that there have been a couple of presentations for the launch of new committees put together this Summer and Fall as they were being put together so there may be some tools they could draw on. There has been leadership reorganization. Some of the other summaries of the Alliance might be something to use rather than reinvent something.

KC Spivey concurred that they should pull from what is already out there.

**ACTION: Bob Sundberg will send Launch Committee and Subcommittee introductory slides to KC Spivey and Julie Humes.**

Bob Sundberg commended Julie Humes for getting travel approved and the time to devote to meet with the ETCC directly after having followed through with the conference call meetings with the HVAC Program Managers. They were very productive connections for the team she is leading to hopefully have an ongoing dialogue from this point on.

KC Spivey seconded that.

Julie Humes asked KC Spivey to find out on the ETCC side of it who is interested in helping to learn more about how the Market Adoption Subcommittee can help.

KC Spivey suggested that one of the bullets in the slide could refer to that and keeping the dialogue open. It can ask for more specifics on the process that can be used to engage (eblast, etc.) and volunteer Julie’s contact information.

**ACTION: KC Spivey and Julie Humes will put together follow-up slides to share with the ETCC. These would include a WHPA overview from existing introductory slides, a recap of follow-up items, and Julie’s contact information.**

**ACTION: Don Langston will reach out to Ruzwa Cooper about joining the Alliance and the Market Adoption Subcommittee and cc Bob Sundberg and Julie Humes.**

Bob Sundberg confirmed that Don Langston did contact Ruzwa Cooper from Cooper Oates, which is a fairly major mechanical contractor in the northern part of the State. Bob spoke with him several times. Ruzwa did register with the Alliance, got signed up and apparently had a conflict with today's meeting time. Bob will work with him to make sure he can join the meetings from this point on. Originally Ruzwa was somewhat reluctant because Don Langston "gets him in a lot of trouble" by suggesting things that would be important contributions for Ruzwa to make time wise. After a bit of introduction and an overview of what the working groups within the Alliance are attempting to do collectively, he seemed more enthusiastic about putting in his efforts.

Bob Sundberg reported that Don Langston was in jury duty and unable to attend this meeting.

**ACTION: Welcome Ruzwa Cooper during January Market Adoption Subcommittee meeting.**

**ACTION: Bob Sundberg will send out the Portfolio Implementation Plan he received from KC Spivey to the Market Adoption Subcommittee.**

Bob Sundberg confirmed that KC Spivey got the Portfolio Implementation Plan to him right after the last meeting, but Bob waited for the Action Plan items from completed meeting minutes before he could send it to the rest of the group. *(NOTE: In checking email history, Bob Sundberg had actually replied to KC Spivey and distributed the attachment to the whole group at 4:25pm on 11/2/11 immediately after receiving it from KC Spivey.)*

Bob Sundberg reminded that page 38 is the place to start per KC Spivey as it has to do with HVAC.

#### **VOLUNTEER HOURS**

Bob Sundberg asked for volunteer contributions since November. He pointed out that as the IOU and other organizations are looking at what has been accomplished, one thing they don't necessarily recognize is that the group members are putting in volunteer time regularly either during or between these meetings. This is the only way to capture at least part of that.

ACTION: Bob Sundberg will check with Chris Forth to find out Chris' volunteer hours since November's meeting.

Serafima Higginson reported about 30 minutes of volunteer time.

Daniel Jones reported that he has been very busy talking about QM180. Between this and his other committee, he put in about 40 hours a month. Bob Sundberg will split those hours with Bonnie Gustavson so she is aware of the other contribution locations.

Bob Sundberg reported that Don Langston had some hours. Based on the past, those were probably between 8-20 hours.

Jonathan Woolley confirmed that he had joined the meeting a bit earlier. He reported that it is difficult to separate what he does for this subcommittee with the rest of the work he does at the Western Cooling Efficiency Center. Bob Sundberg clarified that if it was related to discussions or working with folks offline between the monthly meetings having to do with how to approach market adoption or market acceptance for new technologies that would be valuable to the subcommittee, those hours would count. Jonathan Woolley felt that he hadn't had much time to put in toward what has been generated through the direction that has come through this subcommittee.

#### **Discussion RE: Market Adoption Technologies/Practices Candidates**

Bob Sundberg presented that the possible candidates "on the table" are the economizer ventilation technology from Honeywell called Jade as one. He also reminded that there had been quite a bit of discussion about the new

product: Quality Maintenance practice – Commercial focus because of the subcommittee’s own membership. He encouraged holding that in queue even though it is not “a bunch of metal or a program”, but rather something Don Langston has shared about his frustrations and the difficulty of sometimes working with end users and of a contractor’s own capabilities or some of the tools they think are needed but may not have in properly presenting the value of such a different practice. The discussion was opened for any other fault detection or other related technologies.

Julie Humes asked Mark Cherniack to report about what the Fault Diagnostics Subcommittee is doing.

#### **Fault Detection and Diagnostics Subcommittee Activities**

Mark Cherniack reported that the main task and focus for the last several months has been Title 24: rooftop units, fault detection diagnostics, which turned from a prescriptive measure with the support from both Jon Douglas from Lennox and Dick Lord from Carrier. It morphed into a mandatory measure with five diagnostic functions that people agreed to:

1. Sensor Failure: everyone virtually has already embedded in their rooftop units from the OEMs
2. Economizer not economizing when it should be economizing
3. Economizer economizing when it shouldn’t be
4. Stuck damper
5. Airflow

The next steps will be moving onto other areas, including residential FDD. Fault Detection is morphing into a larger universe. It involves both performance monitoring – typically web-enabled so users can see what is going on with their systems, typically rooftop units rather than residential, although there are residential products out there. They are under the heading of smart thermostats or web-enabled thermostats which sometimes provide historical data. The new product includes performance monitoring, so-called advanced controls coupled with FDD. It is essentially a new product class without a formal name yet combining monitoring, controls and FDD. Typically the controls now are around demand control ventilation and variable speed and variable frequency drives on one or both fans, supply and condenser, and/or one fan and a compressor. NBI, specifically, is working a proof of concept product with all variable speed – both fans and compressor, based on work that Tom Hartman has done with chiller controls – “continuous proportional control”. For the FDD committee, they have a draft roadmap in terms of going forward. There are a number of moving parts. Typically at each of their meetings they do have a presentation about an FDD focused type product. That will probably change with some of the newer products that are not focused on FDD but have FDD functions, typically around the economizer. They meet about every 6 weeks, but are not having a December meeting. They will meet again in January.

Julie Humes confirmed with Mark Cherniack that he said John Douglas with Lennox is involved with FDD as an active participant.

Bob Sundberg asked Mark Cherniack how the FDD team ended up in the commercial realm in the economizer arena.

Mark Cherniack clarified that they started there because of work already underway in California from PIER (Public Interest Energy Research project) and Investor Owned Utilities’ Codes and Standards Enhancement (CASE) project. There were two efforts that were combined to deal with rooftop unit FDD very specifically as a continuation of work that was essentially begun in 2006. It was a natural, necessary and appropriate progression from the compliance option in Title 24 to what they thought would be a prescriptive, but now potentially a proposed mandatory measure. Since they have accomplished that in California, Southern California Edison is developing methods of test to assure that claimed functionality of FDD can actually deliver both for residential and commercial systems. A special projects committee has been formed at ASHRAE. That first meeting will be at the January ASHRAE meeting in Chicago to start dealing with methods of test at a national level. It may lead to guidelines if not standards.

Bob Sundberg commented that the focus within the State was toward Title 24 which would focus on new construction mandatory compliance. The other side of that would be if any technologies that would be supporting

any of those measures for Fault Detection and Diagnostics were to be implemented, they would be mandatory and required by Title 24 on new installation. He mentioned that there seems to be a gap between that and how the IOUs can act on it to provide those in programs or resource programs where they would help recognition and outreach to the HVAC community – more in terms of being able to provide encouragement, education, incentives or a combination of things that would try and help good technologies become mainstreamed. He asked if there are efforts with the subcommittee to tackle the other half of the issue in California; i.e.: the recognition of a superior technology within DEER?

Mark Cherniack responded that they are leaving that up to the Market Adoption Subcommittee (followed by much laughter by all). On the DEER there is no specific work anticipated right now related to it in FDD. They have made estimates for Title 24 about the cost and savings potentially of the set of FDD functionalities – not products. Those are part of the record for the Title 24 revision process. They have not gone beyond that. The numbers are basically calculated on data taken from rooftop units and then run through engineering and modeling calculations consistent with Title 24 requirements to estimate potential costs and savings. Beyond that, they have not contemplated moving into field trials or other measured results or, what in California would lead to White Papers submitted to the Energy Commission for review and approval to establish the “deemed savings” for the application of various FDD functions. That step has not been taken. They haven’t actually really talked about it.

Bob Sundberg asked Julie Humes if she felt that had identified a possible stumbling block to IOU’s participating in throwing a lot of program and incentive effort to support adoption of promising new technologies. New technologies, like FDD, were not recognized by DEER and therefore not recognized as delivering energy savings

Julie Humes felt she couldn’t answer that and deferred to KC Spivey to respond.

KC Spivey asked for the question to be restated.

Bob Sundberg clarified that if the new capability of a technology as Mark Cherniack described in Fault Detection and Diagnostics for economizer systems moving from prescriptive to now a recommendation for mandatory compliance with Title 24 having to do with new packaged equipment installation (450 kBtu, 4.5 ton threshold per Mark Cherniack), and if technologies were available that could provide the same type of detection and diagnostics for the packaged equipment units already existing, the recommendation by Title 24 would seem to not provide the acceptance/recognition within the CPUC’s Database for Energy Efficiency (DEER) required to allow IOU’s to provide deemed savings or resource program support for those technologies.

Mark Cherniack believed that to be a correct statement. There has been testing on various products such as Edison doing some performance monitoring on control/FDD products that are coming on the market, but there is no larger initiative underway to test out these products for retrofit for existing systems related to Title 24 or not. There are only small research projects that are analytical underway.

KC Spivey added that there are some instances where they might be able to utilize the work done by the Statewide Codes and Standards Team for whatever it took to get it into Title 24. They sometimes utilize that in their work papers, for example, if they were to try to build a deemed measure around an FDD product. It might be one approach amenable to the Energy Division of the PUC.

Bob Sundberg expressed that it would be “really neat” not to have a void, gap, or duplication of resources if the effort to produce that information that the CPUC would need in order to recognize it could be provided. He asked what the mechanism would be for that for the market acceptance process for a retrofit product that included FDD.

KC Spivey wasn’t really sure how much of the Statewide Codes and Standards work is accessible. He said that Stu Tartaglia – the Chair of the Climate Optimized Building Codes & Equipment Chair subcommittee would have a better feel for that. In talking about the subcommittee’s talking with each other, that might be something for a future agenda – to have Stu join a call and briefly talk about if there is another example of one of the Utilities taking codes and standards work and building a deemed measure around that and whether or not that is

something that can be accomplished. He might also talk about the codes and standards processes for getting requirements in Title 24 and then the accessibility of that information to others who might want to utilize it for other purposes, such as retrofit products.

Mark Cherniack expressed that certainly for the FDD measure that has been submitted for Title 24 all of the analytics are available online in terms of cost effectiveness, energy savings and all the assumptions that went into the modeling, etc, but no one has gone any farther with it in terms of coming up with potentially deemed savings or anything else for retrofit especially.

KC Spivey mentioned that if it is very accessible that may argue for Stu Tartaglia not to come on the call. KC was not aware to the extent that it was all available.

Mark Cherniack confirmed that it is pretty much all there and all related for public comment. People can look over the assumptions that went into the outputs. The modeling itself wouldn't be there but the modeling results would be there.

Bob Sundberg asked what the links are to find that information.

**ACTION: Mark Cherniack will send the links for the analytics used for the FDD measure submitted for Title 24 to Bob Sundberg who will forward it to the Market Adoption team.**

Bob Sundberg commented that whatever the technology is and from whatever the source is they can find a means for avoiding gaps and duplication in having something that is being pursued in the Title 24 arena also assist in being recognized through some efforts (hopefully a single effort) of resource for evaluation and study for CPUC (DEER), it would seem to put the Utilities in a "one up" position of being able to consider that for something that could be recognized and supported for retrofit since that is the majority of what is wasting energy.

Mark Cherniack agreed that Bob Sundberg "put his finger" on an issue that most people are aware of: one of the simple challenges, just in HVAC, let alone other areas like lighting, is that there is not a single person who so far tracks and attempts to integrate all of the various things that are going on from Codes & Standards to Emerging Technology to Program Initiatives to simply testing going on that may or may not formally be under the ET envelope. He doesn't know if there is anybody who "has this all rounded up."

KC Spivey confirmed that Mark Cherniack is correct. KC stated that it is a constant challenge for them within one Utility trying to "stay on the same page" with where everybody is headed and what is getting accomplished, policy issues, etc. There is a lot to keep up with on a continuing basis.

Julie Humes thanked Mark Cherniack for the big update. She felt that he should update more often since they have come a long way from the last update she heard.

Mark Cherniack confirmed that there is a lot going on, but that he is not the one who knows it all. He doesn't think anyone does, which is a problem in a way because of the need to integrate products with marketing, testing, results, cost effectiveness. People he knows in channels are doing what they need to do. He once thought there should be an HVAC master over the entire HVAC portfolio in California, but that is not a practical solution. He does not know who individually or organizationally could do that, but it does bring him back the Alliance. There also have silos but they are "not very thick" since they have their own limits on what people can do and what people know about.

Julie Humes agreed that everyone has silos. She likes the idea of an HVAC grand master (laughter) and thought maybe the CPUC would jump in with that one. She felt there should be some kind of department, even if it is a small one to be the "keeper of all". She acknowledged that is seemed like an impossible task, but added that if every State did that, then there would be a DOE grand master too.

Bob Sundberg thought back to when he was enrolled in product development. Everyone involved in product marketing, communications marketing, product management and the various service groups for all of that – anything that was going to be suggested for an initiative would become a project, get engineering support for development of a product and then go through the testing phases to the point of a market launch and the follow-through of the life cycle. About 2/3 of the process was involved in a development funnel. Bob pictured both what KC Spivey and Randall Wong had provided in the IOU process for Emerging Technologies. At the IOU level the concept is very well evolved, not necessarily for those outside the groups, but to the point where it is functional and seems to work very well. At a State level, where there are things in a funnel for Title 24 or for Codes & Standards or for Emerging Technologies, those funnels aren't really connected. The grand master concept isn't really so far removed though. Bob mentioned that they had a small committee that reviewed anything coming into the funnel. If it didn't meet the criteria it was thrown out of the funnel. If it showed more promise, it got more funding and stayed in the funnel to make progress. If it got market testing acceptance for some first, second and third phase acceptance, it kept going. It was the small group that had an overview of all the different product groups wherever they were. The grand master is not such a foreign concept. The fact that everyone is trying to function in their own area but hasn't been linked is understandable, but certainly not as effective as it might be.

KC Spivey mentioned that Hazlyn Fortune has joined the Energy Division. She moved over from the Demand Response Team to HVAC. From what he heard that morning, she has a lot of potential to be a huge source for pulling it all together with HVAC and what is going on with the Energy Efficiency Programs with HVAC in the State.

Bob Sundberg asked KC Spivey to repeat the information since most didn't know Hazlyn Fortune.

KC Spivey clarified that Hazlyn Fortune is the replacement for Ann Primo. It took a while for Simon Baker to back fill Ann's position, but he has finally been able to bring Hazlyn on board. She came from the Demand Response Team within the CPUC Energy Division. She is their assigned staff person for HVAC. She is the one who meets with the Statewide HVAC Team on a routine basis. That meeting is being hosted today by PG&E. KC is leaving this meeting early to join that meeting.

## **Market Adoption Working Groups Progress Report**

Bob Sundberg commented that when more people join the calls it would be more appropriate to discuss working groups.

## **Market Adoption Subcommittee Recruitment**

Bob Sundberg asked Julie Humes if she had any comments on subcommittee recruitment, which was the last item on the proposed agenda.

Julie Humes would like to see some ETCC folks, particularly on the residential side, join the subcommittee following the "nods" she received at the December 6<sup>th</sup> ETCC meeting. She asked KC Spivey if he felt that would be a possibility if volunteers were requested or if they were "volunteered out".

KC Spivey felt it was worth a try to ask.

Julie Humes asked KC Spivey who the Paul was that he mentioned from Southern California Edison.

KC Spivey clarified that it was Paul Delaney, who is on SCE's Emerging Technologies team. He is the one who volunteered to share their process for new products.

Julie Humes thought a separate follow up with Paul Delaney might be beneficial. She asked if they were talking about the same process that Randy Wong shared with the group.

KC Spivey believed that what Randy shared was the Statewide ET with more background on the Emerging Technology Coordinating Council. He believed Paul Delaney was referring more specifically to Edison's internal process.

Julie Humes asked about PG&E's internal process.

KC Spivey commented that they have a process they refer to as SPARC (Smart Products And Rewarded Customers). He was not sure how much of that process could be shared externally. He suggested going to the PG&E website (<http://pge.com>) and searching for SPARC to see what comes up.

Julie Humes thought that once the group sees the anatomy of the adoption on that side, she would like to see what happens after it is put out as a product and it didn't do as well as everyone thought it might. She would like to know the "then what".

KC Spivey shared that internally within PG&E, there is ongoing interaction between the marketing solutions team, the customer engagement team, and the products team. There is a lot of focus on how the product does when it goes out the door. There are a lot of continuing meetings around truing up forecasts to actual results.

Julie Humes added that it goes back to the subcommittee needing that kind of data to properly help somebody with a viable product.

KC Spivey left the meeting.

For recruitment, Bob Sundberg reminded that Mark Cherniack had mentioned Jon Douglas from Lennox earlier on the call.

Julie Humes felt he could be asked but commented that she believed he was "stretched pretty thin". She talked with him once but he is in a different silo.

Mark Cherniack confirmed that Jon Douglas is on the residential side and does some cross-over now and then when needed.

Bob Sundberg added that if Jon Douglas does not have the ability to join the subcommittee, he may have a counterpart not yet engaged with the Alliance who might be able to devote time. There was also another party who was at a PG&E sponsored class in October along with Adrienne Thomle. He was from Carrier and was speaking to their leading edge technologies for advanced technologies and some degree of use of the advanced economizer features and products. (**Hank Gellert** is a Commercial Product Marketing Manager for Carrier Corporation -- see link below) He felt some representative from each of the major OEM's, especially with the observation that TRIO didn't seem to reach out to any of them, would be good. He mentioned that maybe if there are several points of common types of products that are the sorts of things for FDD that the group could be informed from or about, it would put the group in a stronger position.

PG&E HVAC RTU Class link:

<http://www.pge.com/mybusiness/edusafety/training/pec/classes/index.jsp?reqType=detail&ID=5159&db=PEC5159.csv&pageTitle=Class%20Details%20and%20Registration&postback=yes>

Julie Humes completely agreed. She would also like to recommend that the group get a couple of third party implementers involved who are "feet on the street" for the Utilities. Additionally, she would like to get some educators and trainers involved. She will reach out to an implementer she is thinking of as well as an educator she knows that may make sense.

**ACTION: Julie Humes will contact Jon Douglas at Lennox to see if he or a counterpart would be interested in joining the Market Adoption Subcommittee.**

**ACTION: Julie Humes will try to recruit a third party implementer, plus an educator she is thinking of to the Market Adoption Subcommittee.**

Bob Sundberg asked what part of the industry Julie Humes felt would be most helpful in terms of educators and trainers.

Julie Humes was thinking of those that are training contractors and installers for new technologies.

Bob Sundberg reminded also of the Director of Marketing, Commercial at Lennox that Julie Humes mentioned in a prior conversation as having insights in what happens in a great solution and the type of acceptance it may or may not have. Bob will think about trainers that might be amenable to joining the subcommittee, especially the ones who are "on the street" introducing the new products when they come out. A lot of times it would be an equipment distributor, or possibly a controls distributor as well.

**ACTION: Bob Sundberg will think about trainers or distributors who might be amenable to joining the Market Adoption Subcommittee.**

Julie Humes felt distributors would be a great addition.

Bob Sundberg suggested that Dave Waters from RSD would be a good resource.

Daniel Jones agreed that Dave Waters would be a good resource since RSD is very "gung ho" about getting some of this stuff adopted and making sure that their contractors are being educated about this. They have more classes and events that talk very heavily about what the subcommittee does and how energy plays into increasing their business.

Julie Humes asked if Daniel Jones knew Dave Waters and had recommended him.

Daniel Jones had not recommended Dave Waters but was glad to see he was involved. Daniel will be meeting Dave in a couple of weeks for the first time when he undergoes a training class for webvision.

Bob Sundberg confirmed that Dave Waters is signed up and getting notifications, but that Dave was on an anniversary trip last month and unable to make the meeting. Bob was not sure what happened for this meeting.

**ACTION: Bob Sundberg and Daniel Jones will follow-up with Dave Waters to encourage his participation in the Market Adoption Subcommittee calls.**

Bob Sundberg commented that Mike Schwan, who was a senior person with Controlco, joined RSD. When Bob was following through on some of the training surveys with the Alliance earlier in the year, Mike had recommended that one of the leads out the Southern California for RSD would be an excellent contribution. The General Manager recommended that Dave Waters be their person at this point in time. It would be good to get him engaged. Bob Sundberg encouraged Daniel Jones to recruit additional distributor representatives involved in education and training.

Daniel Jones has been working on Sherman Strawn with a contractor of Bogner Sheet Metal out of Santa Cruz. Sherman is sales and technical, but also a trainer for the local union hall.

**ACTION: Daniel Jones will continue to talk with Sherman Strawn about joining the Market Adoption Subcommittee.**

Bob Sundberg had hoped that Carl Cimino from Pipe Trades Training Center would be more involved, but it appears that he may not be as committed or interested in staying with the subcommittee. If there is someone involved in training, local and with background technically and sales, that would be quite a combination.

Julie Humes will also check to see if she has some remote trainers in California that they work with.

**ACTION: Julie Humes will check with the Lennox training department to see if there are any California based trainers to talk with about the Market Adoption Subcommittee.**

## Next Meeting – Bob Sundberg

No new business was discussed.

Julie Humes stated that the beginning of 2012 will be focused on “kicking this off” and “putting our feet on the street”.

Bob Sundberg pointed out that the first Wednesday is January 4<sup>th</sup>. He asked if that gives everyone enough time after the holidays to get started.

Julie Humes believed that worked for her. All agreed.

Bob Sundberg mentioned that the appointments should be showing as recurring on the calendars.

Serafima Higginson said that hers was not showing up as recurring.

**ACTION: Bob Sundberg will have Wendy Worrell verify that the meeting maker is going out as recurring but updating monthly if needed.**

**Next Meeting: Wednesday, January 4, 2011 from 12:00 – 1:30pm PDT.**

Adjourn

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## Action Items Summary

### NEW ITEMS

- **ACTION: Serafima Higginson will pull together data to help the Market Adoption Subcommittee better understand the degree of rapid acceptance or adoption in the marketplace.**
- **ACTION: Bob Sundberg will send Launch Committee and Subcommittee introductory slides to KC Spivey and Julie Humes.**
- **ACTION: KC Spivey and Julie Humes will put together follow-up slides to share with the ETCC. These would include a WHPA overview from existing introductory slides, a recap of follow-up items, and Julie’s contact information.**
- **ACTION: Mark Cherniack will send the links for the analytics used for the FDD measure submitted for Title 24 to Bob Sundberg who will forward it to the Market Adoption team.**
- **ACTION: Julie Humes will contact Jon Douglas to see if he or a counterpart would be interested in joining the Market Adoption Subcommittee.**
- **ACTION: Daniel Jones will continue to talk with Sherman Strawn about joining the Market Adoption Subcommittee.**

- **ACTION:** Julie Humes will check with the Lennox training department to see if there are any California based trainers to talk with about the Market Adoption Subcommittee.
- **ACTION:** Bob Sundberg will have Wendy Worrell to verify that the meeting maker is going out as recurring but updating monthly if needed.

**PUSH THROUGH TO JANUARY, 2012**

- **ACTION:** Chris Forth to get a summary of the Johnson Controls series of brands to the team.
- **ACTION:** Chris Forth to check with his distributor to see if he can find a contractor with diagnostics experience to be part of the Market Adoption Subcommittee.
- **ACTION:** Welcome Ruzwa Cooper during January Market Adoption Subcommittee meeting.