



**California Technical Forum (Cal TF)  
Technical Forum (TF) Meeting #5  
Thursday, November 20, 2014  
NRDC, San Francisco**

**I. Participants**

Doug Mahone, TF Member  
John Proctor, TF Member  
Srinivas Katipamula, TF Member  
Bing Tso, TF Member  
Spencer Lipp, TF Member  
Christopher Rogers, TF Member  
David Springer, TF Member  
George Hernandez, TF Member  
Brandon Tinianov, TF Member  
Yeshpal Gupta, TF Member  
Pierre Landry, TF Member  
Larry Kotewa, TF Member  
Sherry Hu, TF Member  
Steven Long, TF Member  
Martin Vu, TF Member  
Ron Ishii, TF Member  
Steven Long, TF Member  
Sherry Hu, TF Member  
Ron Ishii, TF Member  
Andy Brooks, TF Member  
Martin Vu, TF Member

Annette Beitel, Facilitator  
Jenny Roecks, Cal TF Staff  
Alejandra Mejia, Cal TF Staff

Chan Paek, Presenter, Southern California Gas (SCG)  
Jesse Martinez, Observer, SCG  
Priscilla Johnson, Pacific Gas & Electric, (PG&E)  
Christine Hanhart, UCONS  
Steve Blanc, PG&E

**On the Phone**

Bruce Harley, TF Member  
Brian Warren, TF Member



George Roemer, TF Member  
Armen Saiyan, TF Member  
Tom Eckhart, TF Member  
Jon McHugh, TF Member

Joe Prijata, Applied Energy Group  
Eli Caudill, Conservation Services Group

## **II. Key Decisions and Action Items**

### **Measure Selection Procedure**

- ACT: Qualitative criteria at Gate 0 to be treated as 'flags' for subcommittee. Cal TF review of Gate 0 criteria will be provided to "Measure Selection" subcommittee for their review.
- ACT: Make "Measure Champion" criterion binary.
- ACT: Include Cal TF staff review of work in other jurisdictions.
- ACT: Circulate list of standing subcommittees with list of members before launching selection subcommittee.

### **Low Flow DC Circulation Pool Pumps**

- Limit measure to direct install.
- Add a workforce training/QI component to the workpaper
  - Phase II ET study may suffice for this recommendation
  - **Change WP Template:** Add sections to allow TF to provide recommendations on training or installation requirements to ensure savings from measure, data collection that should be done in course of implementing measure and any restrictions or requirements for measure implementation to ensure forecasted savings realized.
- Share ET report with Michel Orr and Gary Fernstrom
- Verify that energy measurement accounts for efficiency and cost of inverter
  - Investigate linkage to solar PV deployment programs.
- **Workpaper approved**, pending compliance with TF recommendations
  - Developer to update TF on compliance during upcoming teleconference

### **Commercial Dishwashers**



- Add distribution of racks per day based on type of restaurant to WP
- Reduce run time by one day per week—current year total minus 52 days.
- Add demand savings.
  - Chan will ask Kong Sham to work with Steven Long on the demand reduction analysis
- Add section to workpaper for early M&V/data collection.
- Explain baseline methodology very clearly.
- Limit current workpaper to a downstream program.
- Add load profile for DR if Fisher – Nickel Emerging Technology Report has not already included it
  
- **Workpaper approved**, pending compliance with TF recommendations

#### Subcommittee Procedure

- Selected abstracts can go straight to subcommittee, but full TF to be notified periodically, perhaps through consent calendar approach.

#### 2015 Business Plan

- Feedback from TF:
  - In TF member's experience, it can be extremely difficult to understand the methodology or assumptions behind some DEER values. Several members of the group recommended that Cal TF staff limit the amount of time devoted to any one individual value and ensure that all selected measure groups are allotted reasonable resources.
  - Goal 6, "Future of Cal TF Document," can be removed for year two.
  - Continue memorializing as much as possible, including subcommittee participation and action items.
  - Defining ISP is a pressing issue that would benefit from TF consideration.

### III. Opening and Introductions

#### IV. Measure Selection Procedure

Annette Beitel—We recently received a comprehensive list of new measures for 2015 from IOUs. That list will be content for subcommittee on measure selection to review. The list has 67 potential measures, the subcommittee will be narrowing it down to 15-20 using the measure selection criteria. We will be looking for subcommittee volunteers, and will be taking your suggestions on measures that



are new or need updating. We are looking for 1 or 2 IOU, 1 or 2 POU members, and the same number of non-POU/IOU Members.

Tom Eckhart—Will this process be for abstracts or workpapers?

Annette Beitel—We would like to try sending select abstracts through subcommittees, the full TF will still see the full workpaper. We also want to minimize the amount of work that proponents need to do in advance of measure selection. We want to require just enough information for the subcommittee to ask questions based on selection metrics.

Spencer Lipp—Are you looking for other content, such as DEER industrial hours?

Annette Beitel—We currently have two categories: full measures and crosscutting policy issues. We have not considered a third category, such as gaps in DEER. We will consider this, and the measure selection committee will have to decide whether it is more important to review issues with DEER or to review another measure.

George Hernandez—Are you doing anything with emerging technologies?

Annette Beitel—All of the utilities have ET processes. Our thought is for the emerging technologies to go through the existing ETCC process, and after that they may go through Cal TF review. In fact, one of the workpapers you will review today came out of the IOU ET programs. A technology should be ready for commercialization before going to the TF.

Group—Consensus.

Alejandra Mejia, Cal TF Staff—

### Power Point Presentation

John Proctor—I have a question about the ‘political considerations’ criteria: If anything controversial is not considered, then good measures may be overlooked.

Alejandra Mejia—We need to be aware of political considerations, but we are not against considering controversial measures. It is just one criterion to consider when prioritizing work.



Annette Beitel—We have to determine if it's worthwhile to pursue a controversial measure instead of doing more, less controversial work. The subcommittee could ultimately decide on this criterion.

Doug Mahone—I would think the committee would first review the Gate 0 decisions and determine if they agree/disagree with them, so it may not be necessary to move the “political considerations” threshold to Gate 1.

John Proctor—That sounds like a good idea.

Annette Beitel—We are trying to strike a balance between committee substantive control and efficiency.

Doug Mahone—Part of this may be reviewing what DEER may or may not have done. We need to know this in advance.

John Proctor—Years ago the CPUC decided to funnel some funding to third parties because third parties may consider measures that IOUs won't. If those measures do not make it through Gate 0, we want to make sure it doesn't hurt California or prevent addressing global warming.

Our stakeholders to me are the people of California. If a proprietary item comes through California, will it hurt the people of California? Your level of innovation may go down without proprietary measures, since the proprietary nature of products helps motivate people to develop those products.

Alejandra Mejia—With those suggestions in mind, should we make the last three criteria “flags” that the subcommittee can re-review?

Group—Yes.

- ACT: Qualitative criteria at Gate 0 to be treated as ‘flags’ for subcommittee.

Annette Beitel—To address John's comment, we will be reviewing the NEST thermostat, which is a proprietary measure. Should we change this topic to generic smart thermostats? Will our work be more impactful for generic products?

John Proctor—NEST is not the only group claiming the capabilities that they do.



Annette Beitel—Most measures fall into the category of, a lot of people could do it.

John Proctor—Oftentimes the measures with the least innovation fall into that category.

Annette Beitel—Cal TF staff will characterize issues associated with the last three criteria in Gate 0 to help the subcommittee make the final decision on those criteria.

Bing Tso—Will the tools used for this process and the results be made public?

Annette Beitel—We will err on the side of transparency, and still intend to post on the website. In the event of intellectual property or other privacy considerations, we will screen them in advance. However, people need to be aware of our intention to be transparent and publish as soon as possible.

Doug Mahone—We could take the Supreme Court model, where we don't necessarily give a reason when we decide not to review something.

Annette Beitel—We want to be transparent so people know how the decisions were made.

Priscilla Johnson— Should there be considerations of conflict of interest for members on the review committee?

Alejandra Mejia—A TF member cannot review their own work, and if a TF member has a direct vested interest, we've asked them to identify this up front when making comments. This will likely be our policy for subcommittees too.

Ron Ishii—For the cost effectiveness criterion, are you looking at running measures through E3?

Alejandra Mejia—No, we are looking for very preliminary estimates. Measure engineers and product managers should be available to participate in the subcommittee calls so they can answer questions like this one.

Annette Beitel—If we require abstracts for subcommittee review, it will be too time consuming. We think decisions can be made more generally, such as using a low/medium/high ranking.



Pierre Landry—Do we need a “Measure Champion”, is this a deal breaking criteria? If so, it should be a binary decision and not qualitative.

Annette—Yes, we need a Champion. That is a good point.

➤ ACT: Make “Measure Champion” criterion binary.

Brandon Tinianov—Shouldn't the measure proponent be the champion?

Annette Beitel—Not necessarily, because the proponent could be a non-profit that doesn't have the resources or the engineering support to develop a measure.

Alejandra Mejia—Is the group comfortable with the proposed procedure?

Group—Yes.

Annette Beitel—If you're interested in volunteering, let Jenny know in the next two weeks. We will send out a summary email with the specific date. We will start the process next year. The meetings will probably be on Thursdays via teleconference, on a monthly basis. We will reach out to you.

Lastly, if there are measures being considered in other jurisdictions outside of California, we'd really like to see those suggestions.

Bing Tso—If the RTF is looking at an important measure, how should that be considered in our process? There may be additional resources and data. How can we piggy back on the RTF process?

Annette Beitel—We are planning on collecting TRMs around the country as resources. We can use them to compare to California. The Northwest is one process we would be looking to, but will consider others as well. We can add a threshold criterion of whether another jurisdiction has done work on a measure and have Cal TF staff look into this.

Spencer Lipp—In my experience many TRMs blindly reference California, and it is difficult to determine where the work originated.

Bruce Harley—I agree. My experience looking at TRMs is that a reference to previous TRMs is a higher priority to the author than a physical explanation. It's a circle in which people don't know where it starts, and many people would rather



be “safe” and reference someone else’s work that develop their own work based on physics, thereby avoiding errors that are out there.

Annette Beitel—The other source to look at would be the Uniform Methods Project. However, we will do due diligence at Gate 0.

Brandon Tinianov—Do you want to do this for measures that fail? Perhaps only do this for measures that pass Gate 0.

Annette Beitel—Good suggestions, we will move it to Gate 1.

- ACT: Include Cal TF staff review of work in other jurisdictions.

Doug Mahone—It would be good to know what all the subcommittee opportunities are before we commit to any new subcommittees.

- ACT: Circulate list of standing subcommittees with list of members before launching selection subcommittee.
- Procedure Approved.

### **III. Workpaper 1: Low Flow DC Circulation Pool Pumps**

Martin Vu, MRS Energy Consulting—

#### **Power Point Presentation**

Bruce Harley—Is the time frame on a daily basis?

Martin Vu—Yes, that’s correct.

Yeshpal Gupta—How many pools were monitored by the ET study?

Martin Vu—Three.

Yeshpal Gupta—Were any of those over-sized, as many pumps usually are?

Martin Vu—Yes, all of them.

George Hernandez—What is the advantage of this over a DC pump off the shelf?

Martin Vu—This is an alternative technology, and it also has PV connectivity.





George Hernandez—And have you thought about additional pool features?

Martin Vu—Yes, we will be excluding fountains and the like.

David Springer—This is a DC pump with a separate inverter?

Martin Vu—Yes, that is my understanding.

Steven Long—Was there any weighting done by pump size?

Martin Vu—There were three sizes, but I believe all were less than three hundred RPM.

Brandon Tinianov—Are there flow meters that are capable of monitoring such low flows?

David Springer—Yes, the technology exists.

Doug Mahone—Aren't there Title 24 requirements for variable speeds?

David Springer—Those are for residential pools.

Jon McHugh—There are various code requirements, including turnover and flow rate health requirements.

Martin Vu—Thanks Jon, I believe the workpaper references those, but please let me know if we are missing any.

Ron Ishii---The consumption measures included both pumps?

Martin Vu—Yes.

Steven Long—Are you planning it as ROB and REA?

Martin Vu—This decision was made with the program manager last night, so we would have to update the workpaper as posted, but Retrofit Add On seems to make the most sense here.

Steven Long—So are you planning on a single baseline?

Martin Vu—It's an REA measure calculated with ROB methods.



Spencer Lipp—I definitely agree with the REA classification, and I think you are truncating some of your lifecycle costs with the RET approach.

Martin Vu—I believe the E3 calculator net present values those costs.

George Hernandez—Thinking about this going forward, most current PV panels come with built-in invertors, so you would only have AC in the home.

Ron Ishii—Was the flow controlled in the baseline calculations in the ET study? I just want to make sure the loading on the pump is the same. Otherwise you have to adjust it to the post-install scenario.

Martin Vu—This is where the goal of achieving the turn over was the key driver, and the energy savings associated were the secondary benefit.

Bing Tso—Could you speak a little about the failure rates on this? I just want to know customers will be comfortable with the tech, and also that can we ensure the DC is running as estimated.

Martin Vu—There is a lot of health code-related auditing with these pools so we can rely on that rigor to give us clues that the pumps are running correctly.

John Proctor—So, please clarify for me, where are the savings coming from?

Martin Vu—The savings come from staging the DC pump during the peak periods.

George Hernandez—This comes down to the details of pool maintenance. There is range of run times and turnover rates you can play with and still meet health codes.

The issue that concerns me about this one is that pool installation contractor quality isn't very consistent.

Annette Beitel—This is actually an issue of rising importance in California. We were asked to add workforce-training details to workpapers, and this may be a good test case for approach.

David Springer—This is in competition with a measure we already approved. I question if the DC component and inverter make it any more efficient. It can also confuse the marketplace.



Steven Long—In particular since this solution is so much more complicated.

Martin Vu—My understanding is that this is a little more costly than the variable speed pump, but the savings are somewhat higher.

Group—So the sales pitch to the vendor must be the savings, and this may be seriously threatened with bad installation.

Martin Vu—But lets be honest, this could happen with any measure. At some point we need to draw a line of acceptable risk that also reaps all of the possible savings without making the measure not cost effective.

George Hernandez—Maybe one thing to consider going forward is for the workpaper to address workforce quality assurance.

Steve Blanc—Well, it needs to be addressed by the program administrator, but adding more verbiage in the workpaper doesn't ensure that.

Spencer Lipp—So if failure is such a real issue, maybe direct install is the appropriate delivery mechanism.

Martin Vu—That's an excellent point.

Dough Mahone—I think this is a question of persistence. The program managers will have to figure out how to prevent pool managers from overriding the appropriate settings.

John Proctor—I am very skeptical of this because there are so many things that could go wrong with it. Specially since there are alternate technologies.

Martin Vu—That is a valid point, but are we applying the same kind of rigor to the variable speed pumps? Those controls can also be overridden.

Yeshpal Gupta—Why not just make this a custom program?

Martin Vu—That would make it much more expensive.

Annette Beitel—What about limiting it to direct install?

Martin Vu—That's also a possibility.



Steven Long—In terms of NTG, this measure benefits from the fact that the only benefit it creates is energy savings.

Ron Ishii—This is a good question for us: Are we going to limit the measures we approve to just one of each kind?

Doug Mahone—I wouldn't be opposed to having competing measures. That's the whole point of an ex ante database—having an answer for everyone. My doubts come from persistence.

Pierre Landry—But that has historically been the case with pool pumps.

George Hernandez—Well, if that's the case, then we should allow this as long as it addresses persistence with the same rigor as the variable speed pump measure.

Annette Beitel—So, I believe we are seeking approval of this workpaper, as long as the following remain true:

- Limit measure to direct install.
- Add a workforce training/QI component to the workpaper
  - Phase II ET study may suffice for this recommendation
- Share ET report with Michel Orr and Gary Fernstrom
- Verify that energy measurement accounts for efficiency and cost of inverter
  - Investigate linkage to solar PV deployment programs.
- **Workpaper approved**, pending compliance with TF recommendations
  - Developer to update TF on compliance during upcoming teleconference

#### **IV. Workpaper 2: Commercial Dishwashers**

Chan Paek, Southern California Gas; Kong Sham, Fisher-Nickel—

##### **Power Point Presentation**

George Hernandez—Is there one fixed size?

Chan Paek—Yes, just one standard size rack.



Spencer Lipp—Thinking back to last time we discussed this measure, I seem to remember the racks per day rate was higher.

Chan Paek—Yes, at the TF's urging we dug deeper for more data. It was great to find out Fisher-Nickel had this number already.

Pierre Landry—This new number still seems like a lot, but I believe you if you have the data.

Brandon Tinianov—These things go fast. It only takes a minute per rack.

Spencer Lipp—I am not sure a sample of 5 is large enough, but it is better than what we had before.

Group—Agreement that racks per day data is reasonable enough.

Sherry Hu—So, for 365 days you didn't consider any down time?

- ACT: Reduce run time by one day per week—current year total minus 52 days.

Steven Long—Is there any demand reduction?

Chan Paek—The current workpaper doesn't discuss it, but the number may be available for the electric utilities to use.

- ACT: Add demand savings.

Martin Vu—How would two utilities in the same territory run this measure through the E3 calculator?

Steven Long—We have protocols for shared programs, I believe the host utility is the one that runs it through the calculator.

Jesse Martinez—This brings up a good point, that moving forward we should include both benefits.

Spencer Lipp—Does the Fisher-Nickel data allow them to look at the peak period?

Steven Long—I have seen this number before, but I'm not sure where it came from. It would be good to know.



Pierre Landry—The workpaper cites DEER methodology for that number.

Group—The Fisher-Nickel data-driven racks per day number is more robust than the vendor estimates.

Doug Mahone—Why aren't you coming up with five different deemed savings, one for each type of establishment?

Annette Beitel—That number could be refined through data collection during implementation.

Chan Paek—But even if we had the data, increasing granularity would make implementation difficult. This is the case with the 27 different building types in DEER. It doesn't map to real life most of the time.

Jon Proctor—Administratively, I understand increasing building types would be extremely complicated. However, you can keep a tally of what types of building you are doing.

Steven Long—Even that is a big administrative burden. To me this is more of an ex post or early EM&V task.

Spencer Lipp—Yes, tracking doesn't need to be for the entire period, but for the initial installations.

Jon Proctor—This can be simplified by online applications. It doesn't need to be racks per day, but they can tell me what type of restaurant they are.

Pierre Landry—I think you have a good enough estimate to move forward with the workpaper, and then make midterm corrections based on first few installations. I can't imagine these estimates are too far off.

➤ ACT: Add section to workpaper for early M&V/data collection.

Annette Beitel—How could you know if a restaurant is fine dining?

Steven Long—The NAICs code generally indicates this at a facility and site level. Some codes are very specific.

Spencer Lipp—These codes are very specific, but might potentially be categorized incorrectly.



George Hernandez—Do you know if this a DOE-efficiency covered product? You don't want the efficiency requirement to change mid-program.

Chan Paek—No, there is no requirement on water consumption.

Steven Long—The peak period may be where usage goes down, and you may be overestimating peak demand reduction.

Chan Paek—I will ask the Fisher-Nickel engineer to work with Steven on demand reduction analysis.

- ACT: Chan will ask Kong Sham to work with Steven Long on the demand reduction analysis

Brandon Tinianov—The hours of the dishwasher him/herself would tell you what the peak hours are.

Steven Long—Hours vary by restaurant type.

Jon McHugh—Are you considering heat recovery? I understand this presents significantly larger savings than reducing water consumption in the dishwasher.

Chan Paek—That would be a separate measure.

Jesse Martinez—I agree with Chan, this would have to be a separate measure.

John Proctor—Why does your slide say the Energy Star report is biased?

Chan Paek—That report is 60% Energy Star-participating partners, so to be realistic we are considering lower numbers.

Steven Long—Are you considering adding a higher tier that goes above beyond Energy Star specs?

Chan—That would limit the size of the offering.

John Proctor and Doug Mahone—It would be a great idea to at least segment into Energy Star and Energy Star plus tiers, so a low NTG doesn't affect the entire offering.



Spencer Lipp—Since Energy Star is so prevalent, I would think that would be the appropriate baseline for the ROB.

Jesse Martinez—Our concern was that there would be some lag between percentage of available units and actual bringing of units online.

Yeshpal—I'm concerned ED will cite industry standard practices.

Steven Long—But since there is no code, and there is a lag in adoption, the offering would be left with only a rebate that nobody will take.

Doug Mahone—Well the language in the last CPUC decision makes it pretty clear that in most circumstances baseline should be either code or ISP.

Jesse Martinez—The problem is forecasting what will happen in the future.

Spencer Lipp—But since this is ROB, what is installed doesn't matter.

Jon Proctor—Do you know if customers even know what they are leasing?

Chan—There are models that are more popular than others, but it's hard to pin down numbers.

Spencer Lipp—You have to look at the options available to the customers. They can buy Energy Star, used, or lease. In the sense the 60% Energy Star is misleading.

Jon Proctor, and group—What I would do for the baseline is an average of Energy Star and non-Energy Star values. So the .99 value on slide 7 would be a measure case.

Pierre Landry—So the baseline has to be a midpoint between all available options.

Spencer Lipp—If Fisher-Nickel has been doing kitchen audits for so many years, I would be surprised if they can't come up with a better, if not as detailed, data set.

Group—This thought logic for baseline needs to be explained really clearly for Energy Division.

- ACT: Explain baseline methodology very clearly.





David Springer—I would argue that you could even have two programs: One for bought units and leased units.

Jon Proctor—I think payment of rebate should be contingent on return of old unit.

Chan Paek—The current proposal is a midstream payment to the equipment leaser.

Spencer Lipp—How does the cost per month of the regular vs. Energy Star units compare?

Chan Paek—That is hard to gauge, because vendors won't give us the cost information. These are values we got through Internet research.

Steven Long—The lease option seems complicated enough, so maybe we can start with the downstream measure and then do a separate workpaper for leasing.

Jesse Martinez and Spencer Lipp—Yes, because the leasing midstream program would be a completely different delivery animal.

Group—Agreement.

- ACT: Limit current workpaper to a downstream program.

David Springer—I like the recycling approach John suggested.

George Hernandez—Does SoCal gas have any experience with similar programs?

Martin Vu—Adding a recycling component would add significant costs to the program

Annette Beitel—So, I believe we are seeking approval of this workpaper, as long as the following remain true:

- Add distribution of racks per day based on type of restaurant
- Reduce run time by one day per week—current year total minus 52 days.
- Add demand savings.
  - Chan will ask Kong Sham to work with Steven Long on the demand reduction analysis



- Add section to workpaper for early M&V/data collection.
- Explain baseline methodology very clearly.
- Limit current workpaper to a downstream program.
- Add load profile for DR if Fisher-Nickel has not already included it
- **Workpaper approved**, pending compliance with TF recommendations

## **V. A New Kind of Retrofit Type: Repair Indefinitely**

Doug Mahone, TF Member—

### **Power Point Presentation**

Spencer Lipp—To your examples of individual pieces of equipment, I would add entire systems. When one piece breaks, they don't replace the entire system.

Steven Long—Are you thinking this would apply to deemed or just custom?

John Proctor—I think it applies to both.

Jesse Martinez—Why couldn't it?

Steven Long—The challenge is that documenting this and the necessary preponderance of evidence would be more difficult. The rules would have to be adjusted to reflect this difficulty.

Doug Mahone—Theoretically you could show that this is the case for an entire industry and then apply to relevant deemed measures.

Pierre Landry—I'm thinking the number of examples might be finite.

Spencer and Yeshpal—But once you apply it to the systems, then it expands a lot.

Yeshpal Gupta—I worry that the delta may be too small.

Steven Long—There may also be a problem with data, like with noncompliance it may all be anecdotal at this point.

Annette Beitel—Why isn't that in the saturation survey data? Age of equipment for sure should be there.



Pierre Landry—The saturation data is residential and commercial, and a lot of indefinite repairs show up with the industrials.

Annette Beitel—This seems like a concept that would benefit from consideration in a policy subcommittee.

Groups—General agreement.

## **VI. Subcommittee Procedure**

Jenny Roecks, Cal TF Staff—

### **Power Point Presentation**

Annette—We are considering that some abstracts may go straight to subcommittee review so we can increase the TF's review capacity.

David Springer—I think it may be enough to know the titles and brief descriptions of measures that bypass full TF review of abstract.

Group—Abstracts can bypass full TF review.

- ACT: Selected abstracts can go straight to subcommittee, but full TF to be notified periodically.

Doug Mahone—For non-TF participants, will they also be included in the decision making?

John Proctor—It would also be helpful to know not just the final decision but who was in the majority and who was in the minority.

Annette Beitel—Yes, that is a tool that we have ready for use that we have called a comparison exhibit. It has worked really well in the Illinois process.

Pierre Landry—I would be interested in seeing a one-pager summarizing the issues considered, the logic, and the dispositions. It doesn't need to come to the TF, it can just be made publically available on the website.

Jenny Roecks—Yes, we will be using a standard form.

Dough Mahone—That will also be helpful for keeping people on the same page.



Bing Tso—Oftentimes, ASHRAE subcommittees have huge global memberships but people show up sporadically so it's hard to accurately gage who is behind any one decision. It would be good to have a sense of the real level of support through disciplined memorializing.

George Hernandez—Yes, it would be helpful to track the issues.

Annette Beitel—Yes, we plan on using a standardized tracking tool that induces a lot of discipline.

## **VII. 2015 Business Plan**

Annette Beitel—

### **Walk Through of Draft Business Plan**

#### *Goal 1.*

Doug Mahone—Aren't there millions of measures in DEER?

Steven Long—That sounds like the number of measure combinations I've heard, but I would venture that there are only about 50 groups of measures.

Ron Ishii—What does DEER requirement mean?

Annette Beitel—That's a good question. The way we see it, there are three buckets of things that fall under that description: point values, methods, and assumptions. We would like to document all of those for the groups of measures we choose to review.

Ron Ishii—I think this is a very valuable task, but it will be a monumental undertaking.

Annette Beitel—Our current plan is to hire a graduate student to do this project under Jenny's supervision.

Pierre Landry—I would imagine that many of the answers would be that the methodological trail behind any given point value eventually goes cold.

Yeshpal Gupta—Yes, many of the models used are very difficult to break down.



Ron Ishii—Our experience is that it often goes down to asking someone at the CPUC for a verbal explanation.

John Proctor—I would suggest that you start with cataloging what the actual requirements are and *then* track the origins down.

Pierre Landry—From my experience, some values are harder to find than others. I think you should put a limit to the amount of resources you sink into any one value.

- Recommendation: Limit the amount of time spent on explaining any one point value or methodology.

*Goal 3.*

Ron Ishii—Does ‘submitting to the CPUC’ mean a formal filing?

Annette Beitel—Not necessarily. Energy Division told us the language could be treated like any other work produced by a CPUC working group.

*General Discussion*

Annette Beitel—Any reaction to the high level topics as being appropriate for the TF, or any missing items?

Pierre Landry—I think goal number 1 absolutely needs to be accomplished. It will be a lot of work but will add tremendous value to California. On number 2, do you think the CPUC ex ante team will really provide feedback? That hasn’t always been their history.

Annette Beitel—Initially the CPUC staff wanted to be involved in the entire Cal TF process but they were recently advised by their law department to not be part of the approval process. They however have committed to indicating whether DEER requirements have been met. We should not take item 1 on unless they commit to giving us feedback.

Pierre Landry—I agree with removing goal 6.

- Recommendation: Goal 6, “Future of Cal TF Document,” can be removed for year two.



Doug Mahone—One of the most important things we do, for our credibility, is to post things online.

Annette Beitel—We've been conscientious about documenting our process, our meetings, etc. We are trying to document and incorporate direction and feedback from the TF, which reflects what we actually do. We will start recording subcommittee items as well.

- Recommendation: Continue memorializing as much as possible, including subcommittee participation and action items.

Annette Beitel—What would be the top policy issues that this group would like to consider?

Yeshpal Gupta—Incremental cost is a crosscutting issue that should be considered.

Steven Long—There is a cost document for EM&V.

Steven Lipp—There is not always concurrence among stakeholders of the determination of ISP.

Pricilla Johnson—There needs to be thought on the cost of ISP studies. Low-rigor ISP studies were supposed to be \$5,000, but some ISP studies are costing \$50,000 with low uncertainty.

Jesse Martinez—Low rigor studies no longer make sense when they are beyond a certain cost. You can't run a program if the ISP is always moving.

Spencer Lipp—Furthermore, we need to decide where do to draw the line for industry standard practice, not customer standard practice.

Annette Beitel—So the ISP topic would be to define ISP.

George Hernandez—The problem is, you have distributions of performance, and it doesn't make sense to settle on one value to describe a distribution.

- Defining ISP is a pressing issue that would benefit from TF consideration.

Annette Beitel—Our task for January will be to pick three of these topics, identify the key issues, and then kick off to the subcommittees.



Pierre Landry—Will this be a PAC decision or a TF decision?

Annette Beitel—I will ask the PAC to leave it up to the TF to decide.