California Technical Forum (Cal TF)
Technical Forum (TF) Meeting #13
September 24, 2015
Pacific Energy Center
San Francisco

I. Participants

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

Mary Matteson Bryan, TF Member
Pierre Landry, TF Member
Sherry Hu, TF Member
Spencer Lipp, TF Member
Gary Fernstrom, TF Member
Armen Saiyan, TF Member
George Beeler, TF Member
Ryan Hoest, TF Member
Ron Ishii, TF Member
Ahmed Ganii, TF Member
Martin Vu, TF Member
Ed Reynoso, TF Member
Jon McHugh, TF Member
Steven Long, TF Member
Alina Zohrabian, TF Member
David Springer, TF Member

Juliana Collwell, Presenter, Southern California Gas Company (SCG)
Jesse Martinez, Presenter, SCG
Brian Smith, Presenter, Pacific Gas & Electric (PG&E)
Rick Ridge, Presenter, Ridge & Associates
Andrea Salazar. Presenter, EMI Consulting

Jia Huang, PG&E
James Tuleya, PG&E
Pete Ford, San Diego Gas & Electric (SDG&E)
Rob Kassman, PG&E
Peter Franzese, California Public Utilities Commission Energy Division (ED)
Gay Powell, PG&E
Mike Myser, Energy Platforms

David Shallenberger, Synergy Companies
Domenico Gelonese, Embertec

On the Phone
Brandon Tinianov, TF Member
Bruce Harley, TF Member
Mike Casey, TF Member
Andy Brook, TF Member
Bryan Warren, TF Member

Joe Priyjanonda, EnerNOC
Chan Paek, SCG
Kevin Messner, Association of Home Energy Manufacturers (AHAM)
Tim Melloch

II. Key Decisions and Action Items

RPP UES

- ACT: Jia Huang and Andrea Salazar to report on differences between DEER and federal-level UES estimates for freezers.
- ACT: Andrea Salazar to confirm if Energy Solutions has better parameters for air cleaner estimates.
- ACT: Andrea Salazar to report back on exact methodology for air cleaner run time from AHAM study.
    - Note: Completed during meeting.
- ACT: Gary Fernstrom to provide Andrea Salazar with power factor savings resources for analysis.
- ACT: RPP team to explore better way to calculate demand reduction from room AC units.
    - Consider room AC CF values from literature provided by Gary Fernstrom or “cross walking” demand and energy estimates by SEER to the equivalent CEER values to apply specific estimates to each product subcategory. TF concerned that CF values vary significantly and non-linearly by efficiency.
- ACT: Andrea Salazar to investigate if there is a fourth “mode” (power down) that needs to be incorporated in sound bar calculations.
- ACT: Andrea Salazar to ensure sound bar estimate uses the most recent coincident demand factor values.
- ACT: Andrea Salazar to confirm that portable and window unit room air conditioners are not differentiated in federal standards.

- It is not appropriate to extrapolate from DEER split AC systems to room ACs.
    - ACT: RPP team to perform a literature review to explore other options for room air conditioner savings estimates.
- ACT: Jia Huang to address whether theare significant electric savings for gas driers that should be incorporated into the clothes dryers estimates.

Energy Division Feedback on RPP

- ACT: RPP team to document exact frequency of reporting for each parameter.
- ACT: RPP dashboard to provide monthly reports for room ACs.
- ACT: RPP team to address how shifting product mix will be addressed in forecasting and then later model calibrations. For example, is it possible that a measure will be dropped from the program long before it has had a chance to be cost-effective. Will RPP still include the measure's cost and savings information in the program TRC calculation?
- **Four year pilot duration approved.**
- ACT: RPP team to update incentive levels, installation rates, and load profiles as needed as part of key parameter updates.
- **As condition of WP approval, group agrees following updates must be made annually to WP:**
    a) Updated product parameters (MEA_NTGR estimates, IMCs, UESs, EULs, qualifying tiers, and TRCs)
    b) Additional products proposed will be updated
    c) Products to be retired will be updated
    d) Changes to qualifying tiers
    e) Recalculation of the portfolio TRC
    f) Incentive Levels
    - **Approved: Annual forecasted NTGs and TRCs should be calculated and reported as condition of WP approval, but they are not sufficient indicators for program success.**
    - ACT: Others metrics of program success need to be developed and presented in October TF meeting for TF review.
    - **Portfolio-level methodology "living workpaper" approach approved.**
    - ACT: RPP team to respond to Peter Franzese question about how workpaper, methods and assumptions will change due to changing product mix, and how changes to product mix will be reflected in "living workpaper."

- ACT: RPP Team to demonstrate whether and how they NTG values they are calculating through Bass Diffusion model properly isolates utility influence in NTG calculation (attribution question).
- ACT: RPP team to present final program success metrics during October Technical Forum meeting.

Laminar Flow Restrictor Workpaper

- ACT: Laminar flow restrictor team to return to Technical Forum in October with a savings calculation approach that factors in an entire "straight line" configurations for 145 degree hot water and a 15 pound steam boiler systems.

Upcoming Cal TF Items

- ACT: TF members to review draft 2016 Business Plan for discussion during October meeting.

III. Retail Plug Load Portfolio Unit Energy Savings, Part One

Annette Beitel—This group, as well as Cal TF staff, has been hoping for more participation from CPUC Energy Division staff from the very beginning of the Cal TF. So we were very pleased when Peter Franzese and Paula Gruendling from Energy Division reached out to us with specific feedback about the RPP pilot measure. We are very excited to have both of them here to participate in this discussion.

Andrea Salazar, EMI Consulting—

PowerPoint Presentation

UES Overview Presentation

Gary Fernstrom—How are you defining peak period?

Jia Huang—We are using the DEER peak definition.

Gary Fernstrom—Why aren't you including clothes washers?

Brian Smith—Because we already have a downstream rebate in the market for clothes washers. The long term goal is to transition downstream products to this platform as their individual TRCs decline.

George Beeler—ENERGY STAR has a big range of efficiencies. It would be great if you could focus on the premium efficiency products.

Andrea Salazar—We are working on incorporating tiers to help us incent those

James Tuleya—It is important to keep in mind that we are still in a design/pilot/refine cycle with this project. We want to firm up the platform first so have to minimize the number products and complications as we pilot/roll it out.

Gary Fernstrom—I wonder how these freezer DEER values compare to manufacturers and Energy Guide reports.

Annette Beitel—This is a very valid question. When we first started this project, CPUC staff asked us to use DEER data but report back to them if we did find cases of between "best available data." It would be helpful to have the RPP team to research the answer and report back to us in response to Gary's question.

Gary Fernstrom – Also, it is not clear why interactive effects are applied to secondary refrigerators. How many of the recycled refrigerators are in unconditioned spaces? Mine is in an unconditioned space. Can I have a show of hands of people in this room who have second refrigerator or freezer? Of those who have secondary ones, who has them in unconditioned spaces?

Show of Hands: Large majority of people in room have their secondary fridges and freezers in unconditioned spaces.

- ACT: Jia Huang and Andrea Salazar to report on differences between DEER and federal-level UES estimates for freezers.
    - Include literature review on residential interactive effects and location of residential freezers.

Steven Long—We have received specific guidance on lighting to use the most conservative savings estimates. How are you applying that in your approach?

Andrea Salazar—We are using sales-weighted averages when possible.

Ahmed Ganji—Aren't those demand reduction numbers within the margin of error of any measurement?

Gary Fernstrom and Spencer Lipp—Those values are actually the diversified demand reductions, so they are a larger fraction than you would expect them to be but probably still within the margin of error.

Alina Zohrabian—Actually, I didn't see interactive effects in your non-DEER calculations on the previous slides.

Andrea Salazar—The slide doesn't show them for simplicity's sake, but we do use them in the workpaper.

Jon McHugh—Energy Solutions is working on a plug load model for Title 24 standards, so you may want to check with them to see if they have a better number for wattage and coincidence factors.

Andrea Salazar—Energy Solution is involved in this project, but we will double check with them.

Gary Fernstrom—What did you do about the electric load of gas dryers?

Jia Huang—We ignored it because it is less than 5% of the use.

Gary Fernstrom—I understand that is the conservative approach, but it grossly undervalues the electric savings.

Steven Long—It depends on where the efficiency comes from.

Jia Huang—Most of the savings come from modulating airflow.

Gary Fernstrom—Do you take into account different speeds

Ron Ishii—Is the AHAM report nationwide?

Andrea Salazar—I believe it was a study done for California. It was one of multiple studies we looked at, it was the most robust and conservative source we found.

- ACT: Andrea Salazar to confirm if Energy Solutions has better parameters for air cleaner estimates.
- ACT: Andrea Salazar to report back on exact methodology for air cleaner run time from AHAM study.
    - Note: Completed during meeting.

Ron Ishii—Did you look into interactive effects for air cleaners?

Andrea Salazar—We multiplied the UES by the DEER interactive effects factor for all of the non-DEER products.

Jon McHugh—Why aren't you using sales data for the savings estimates?

Armen Saiyan—Not only does their approach really simplify the program, but you would be constantly calibrating against the target you are trying to affect which would be arithmetically complicated.

Gary Fernstrom—Neglecting the power factor benefits from retiring inefficient air cleaners sacrifices about 5% of your savings.

- ACT: Gary Fernstrom to provide Andrea Salazar with power factor savings resources for analysis.
- ACT: RPP team to explore better way to calculate demand reduction from room AC units.
    - Consider room AC CF values from literature provided by Gary Fernstrom or "cross walking" demand and energy estimates by SEER to the equivalent CEER values to apply specific estimates to each product subcategory. TF concerned that CF values vary significantly and non-linearly by efficiency.

Gary Fernstrom and Pierre Landry—It seems like the coincidence factor for air cleaners is very conservative.

[At this point in the meeting, this discussion was put on hold to ensure Energy Division could participate in the following discussion. The UES discussion was continued in the afternoon.]

IV. Energy Division Feedback on RPP and Discussion

Brian Smith, PG&E; Rick Ridge, Ridge & Associates—

PowerPoint Presentation

Armen Saiyan—How are you deciding the initial number of product types and the duration of the pilot?

James Tuleya—We believe that the half dozen we have right now is enough to get retailer interest without growing the budget or scope too much. The four year timeline will allow us to have three whole years of ordering and sales seasons to analyze before we make a decision whether to stop or continue it. We do not want a stop-start nature to this program so we will have to make that decision about six months before the official four year timeline ends.

Gary Fernstrom—What goes into the E3 calculator?

Rick Ridge—Gross sales and savings, IMCs, incentives, load shapes, and installation rates all go into the E3 calculator.

Gary Fernstrom—Does the calculator use time-dependent values?

Rick Ridge—Yes, everything gets weighted by the load shapes. The incentive and IMCs decrease at a pre-determined rate.

Peter Franzese—Which of those parameters will be reported more frequently than annually?

Rick Ridge—You will be getting quarterly reports on recorded sales, energy and demand savings for electricity and gas, budget and marketing costs.

Peter Franzese—It may be good to have monthly reports for room ACs.

Rick Ridge—That is definitely something worth asking the dashboard contractor for.

- ACT: RPP team to document exact frequency of reporting for each parameter.
- ACT: RPP dashboard to provide monthly reports for room ACs.

Martin Vu—Have you been talking with the Energy Division EM&V group to preempt any gaps in what you and they are expecting to get from studies?

Brian Smith—Yes, we have gotten their feedback on our evaluation white paper. That document will also be available for stakeholder comment.

Peter—All of this will actually be filed as an Advice Letter because of the scope and budget of the pilot.

Rick Ridge—We are also working with NEEA (one of our partners) to make sure that they understand that the evidentiary standards are higher in California.

Brian Smith—EPA has also contracted with Cadmus to create a nationwide evaluation framework. That should be published in the next six weeks or so.

Spencer Lipp—Do you expect the re-forecasting process to change over time as you get increasingly more data? There are other factors driving sales—how will you address those?

Peter Franzese—I think the year of historical data will help with that.

Rick Ridge—I think you need to keep a close eye on *all* key parameters. We will have short term, or smart, objectives to also measure the progress on key performance indicators.

Paula Gruendling—So the baseline is at the end of the first year?

Rick Ridge—No, the baseline needs to be set before the start, as soon as possible. There are parameters we have good baseline for right now, but others we will have to borrow and/or create new short-term estimates for.

Annette Beitel—Is the market share a sales-weighted value?

Rick Ridge—Yes.

Gary Fernstrom—I remember really struggling to find an ENERGY STAR freezer just a few years ago. I was not able to find any models in my local stores and so had to order it online. It was very inconvenient. Cost premiums are not the only barrier to efficiency; a lot is determined by ease of purchase and therefore retailer stocking decisions.

Jon McHugh—Related to Jon's questions, are you limited to actions on the sales floor? Would you be able to influence online stocking for instance?

James Tuleya—We try not to be too prescriptive, but allow vendors to determine their marketing and outreach strategies.

Peter Franzese—That's a good question, because so many people do their research online first even if they end up purchasing at the store.

Spencer Lipp—And competitors match prices online.

Annette Beitel—These TRCs and NTGs are represented as point values, but really they are estimates with errors bands. From our earlier conversation we know that the various inputs—like air cleaner UES CF—are fairly conservative. Is there any way you could include error bands?

Rick Ridge—I think what is important is not to jump to conclusions. If in the first year you get a higher NTGR of air cleaners, you shouldn't automatically conclude that the program is doing better. What is really happening is that you are now working with more accurate data.

Spencer Lipp—So, you'll have three years worth of data and program implementation before you make a go/no-go decision. At that point you are expecting to have a TRC under .3. How are you going to be able to tell if it will ever be cost effective?

Peter Franzese—With the added complexity that you will have a shifting product mix?

> ACT: RPP team to address how shifting product mix will be addressed in forecasting and then later model calibrations. For example, is it possible that a measure will be dropped from the program long before it has had a chance to be cost-effective. Will RPP still include the measure's cost and savings information in the program TRC calculation?

Annette Beitel—So there is a concern about the team's ability to measure success with iterative forecast models.

Brian Smith—We will be re-forecasting and comparing on a yearly basis, but not all of our metrics are about program effects. We will also be tracking many market-specific parameters.

Rick Ridge—This is all about risk management.

Spencer Lipp—I agree, I just don't think you'll have enough information at year three to decide to fund the next seven years or not.

Rick Ridge—Of course. We wouldn't make that decision. We would decide whether to continue for the next three or so years.

Annette Beitel—To echo what Spencer is saying, we cannot judge on forecasting alone. Delphi panels are another tool, but still not hard and fast.

Ron Ishii—I think the approach is reasonable. The periods of time we are contemplating will allow the best educated decisions possible.

Armen Saiyan—Will you be using the long term NTG and TRC estimates for decision making in the first few years, or will you be levelizing the values?

Rick Ridge—There has to be a way to report savings and adjust incentive values that accurately reflect deviations from the forecasts.

Pierre Landry—I personally think decision makers need to take the risk of pulling the trigger for the whole ten years, because I don't see how reliable the yearly checks against the forecasts will be.

Rick Ridge—I believe we still need to continuously improve the accuracy of the estimates by calibrating with the yearly empirical data.

Paula Gruendling—But your Bass Diffusion curve only tells you how the market moves—not the influence that the IOUs will have had on that movement. The NTG values must isolate the utility influence from other factors.

> ACT: RPP Team to demonstrate whether and how they NTG values they are calculating through Bass Diffusion model properly isolates utility influence in NTG calculation.

Peter Franzese—What if only one retailer wants to drop a particular product? Will you have a line-up of upcoming products to replace the ones being dropped?

James Tuleya—We don't actually expect all retailers to sell all of the products.

Rick Ridge—But we will be collecting data on all products available from all participating retailers.

Andrea Salazar—A retailer not offering a particular product is different from the program dropping that product. RPP does have a strategy document that details the criteria to be used when making those program-level decisions. They are all related to market penetration.

Annette Beitel—So, the group needs to make decisions on four questions listed on slide 12:

2. Pilot Duration: Does the TF support a four-year pilot?

   Pierre Landry—I think the team has made a good case for four years.

   Spencer Lipp—I definitely think anything shorter than four years would not be long enough to produce the necessary information.

   Group—All in agreement.

   - **Four year pilot duration approved**.

3. Plan for Updating Key Parameters: What should be the frequency for updating key parameters:

   Annette Beitel—Does the group see any other data that needs to be updated regularly?

   Steven Long—I would like to see the incentive levels updated regularly.

   - ACT: Incentive levels should be updated regularly.

   Steven Long—And possibly the load profiles.

   Group—To be considered, but not updated automatically—only if profiles are updated through the DEER process.

   Martin Vu—Have you considered installation rates?

   Rick Ridge—We currently have them set at 100% because we don't expect the large items on our current product mix to be purchased but not installed.

   Jon McHugh—What about the number of units sold?

   Rick Ridge—That is not exactly a savings parameter; it is a program success metric. We are currently working on a final list of that type of metrics per Energy Division's request.

   Annette Beitel—So, with those additions, does the group affirm this list of program parameters on slide 11 to be updated regularly? The parameters are:
   a) Updated product parameters (MEA_NTGR estimates, IMCs, UESs, EULs, qualifying tiers, and TRCs)

b) Additional products proposed will be updated
c) Products to be retired will be updated
d) Changes to qualifying tiers
e) Recalculation of the portfolio TRC

As condition of WP approval, group agrees following updates must be made annually to WP:

a) Updated product parameters (MEA_NTGR estimates, IMCs, UESs, EULs, qualifying tiers, and TRCs)
b) Additional products proposed will be updated
c) Products to be retired will be updated
d) Changes to qualifying tiers
e) Recalculation of the portfolio TRC
f) Incentive Levels

4. Are annual forecasted NTGs and TRCs good indicators for program success?

   Steven Long—Those are good indicators, but not the only ones needed.

   Pierre Landry—They seem to b the key parameters that the Commission is looking for.

   Armen Saiyan: I agree that those are good parameters, but we should be levelizing them. They need to use using ten-year-blended values.

   Rick Ridge—The ten-year values *are* blended averages.

5. The last question from staff is about the portfolio-level methodology workpaper. Is the TF comfortable with having the workpaper be a living document to be updated every single year with product mixes, parameters, point values, and other changes?

   Peter Franzese—How would this be affected by inter-year changes to the product mix?

   James Tuleya—The workpaper would only really be affected by additions to the product mix. And really, those decisions wouldn't be made from one day to the next. You would have enough lead-time to incorporate your new values through the regular yearly workpaper updates.

Ron Ishii—It will be important to be aware of upcoming market disruptions and other external economic factors.

Group—Yes.

- **Portfolio-level methodology "living workpaper" approach approved**.
- ACT: RPP team to respond to Peter Franzese question about how workpaper, methods and assumptions will change due to changing product mix, and how changes to product mix will be reflected in "living workpaper."

Annette Beitel—The last request from Energy Division was for a list of concrete metrics for program success. The RPP team is working on this. They will share that list with ED as soon as it is ready and brief the TF on it in October.

Paula Gruendling—It will also be important to make sure we can attribute the savings to the statewide program, not the other program partners.

- ACT: RPP team to present final program success metrics during October Technical Forum meeting.

V. Laminar Flow Restrictor Workpaper

Annette Beitel—One of the action items that came from our discussion of this measure's abstract in July was for me to research several medical databases for studies on the possible effects of water flow on hand washing time. I did do various searches on that subject in subscription databases that I have access to (Pubmed; Medline), but was not able to find any significant studies. I therefore propose that we continue to assume that there is no such rebound effect on hand washing times from installing these restrictors in the regulated health care industry.

Bing Tso—I would caution us against sticking with that assumption. We once did a pre/post study on use time for pre-rinse spray valves for commercial dishwashers and found a 25-30% longer use time after installation.

Mary Matteson Bryan—I think this is a very different case, since dishwashers can see the grime they are trying to get of dishes and medical professional cannot see the bacteria on their hands. In fact, all health care works are trained really well to wash their hands for a certain period of time. That regulatory-set time is actually really long.

Annette Beitel—That is something for the group to consider as we discuss this measure: what are some early EM&V studies that could be done during implementation to help answer some of the unanswered questions.

Juliana Colwell and Jesse Martinez, SCG—

PowerPoint Presentation

Armen Saiyan—Did you consider facilities that may already have aerators?

Juliana Colwell—No because we did not have that granularity of data. However, our market potential estimate *is* very conservative since we are using bed count as a proxy variables, which ignores public and surgery room faucets, etc.

Spencer Lipp—On that EUL estimate, how does it fail?

Juliana Colwell—Most likely hard water that plugs it up.

Jesse Martinez—Most of these customers will sign up for a maintenance program that will send technicians out to clean the restrictors every year.

Spencer Lipp—I think ten years is way too low, especially since they are tamper-proof and involve maintenance programs.

Juliana Colwell—Implementers offer a ten-year guarantee, but manufacturers will tell clients to replace them every year, so we picked what appears to be a reasonable yet conservative estimate.

Steven Long—How likely is it that some of these restrictors will be installed on cold water-only faucets?

Jesse Martinez—Well, the GISR will address the instances where the equipment is purchased and not installed, and we are hoping that restricting the measure to tamper-proof equipment will reduce the instances of non-use.

Bing Tso—How accurate do you think the self-reported faucet use survey results are?

Juliana Colwell—According to health care workers, it really varies from site to site. Head nurses basically are the ones that set out the rules at each hospital.

Jon McHugh—I think you really need to control the volume all the way back to the boiler.

Jesse Martinez—I appreciate that, but I am not sure that factoring in distribution losses and introducing the complexity of a myriad of system configurations improves the accuracy of the final estimate.

Jon McHugh—And I agree that you don't need to factor in the distribution losses, but I think you still need the delta T (change in temperature) in the equation.

Spencer Lipp—But you aren't doing anything to the temperature, you are just controlling the volume.

Jon McHugh—But you don't have an equation for energy here, just a change in flow. You are assuming that the energy required to bring both cases (measure and base) to the required temperature is the same.

Ron Ishii—I don't think you can convert this to fuel. The different distribution set-ups don't matter—you don't have to take them into account for the equation—all that matters is that each case stays the same pre- and post-installation.

David Springer—I think it would be more transparent if you had some kind of efficiency conversion factor.

Spencer Lipp—We aren't saying that you have to take into account the complexity in the distribution room, just the change in temperature as street water comes in to the building.

Armen Saiyan—I think it would be very helpful if you could show that this simplified approach actually produces more conservative savings estimates.

Spencer Lipp—How do these deemed savings compare with the custom projects you have done so far?

Jesse Martinez—We were hitting the custom projects with a huge behavioral adjustment—because use cases were not limited to the regulated health care industry uses—so this proposed deemed approach does produce larger savings.

Jon McHugh—I would suggest a simplified approach that still allows for a calculation "black box" in the distribution room. I think you'll find your approach is less conservative than you think.

Annette Beitel—So what would be some reasonable yet conservative simplifying assumptions you could make?

Jesse Martinez—We could calculate savings starting from the "street water" temperature for a streamlined 145 degree hot water system and a 15 pound steam system.

Group—Agreement.

Pete Ford—I think the best approach is to assume a conservative change in temperature, the enthalpy between 110 and 60 degree street water.

Jesse Martinez—And a straight line system?

Group—Agreement.

- ACT: Laminar flow restrictor team to return to Technical Forum in October with a savings calculation approach that factors in an entire "straight line" configurations for 145 degree hot water and a 15 pound steam boiler systems.

V. RPP UES, Part Two.

Andrea Salazar, EMI Consulting—

Continued PowerPoint Presentation

Andrea—I was able to start working on a few of my action items from this morning. In regards to your questions about the AHAM study we use, it *was* survey, not metered data. Secondly, my preliminary engineering analysis shows DEER values are about 10-20% lower. I'm pretty sure that what this really depends on is the size of equipment used to model the estimates. I will continue to work on this analysis and report back in October.

Sound Bars

Gary Fernstrom—I think using the TV coincidence factor for sound bars cuts out the use of the equipment for music listening.

Andrea Salazar—I agree that is probably right, but we don't have any other data

Alina Zohrabian—If the coincident demand factor numbers from the TV disposition are based on CFL's they have been updated in the last few years. Make sure you are using the right numbers.

- ACT: Andrea Salazar to ensure sound bar estimate uses the most recent coincident demand factor values.
- ACT: Andrea Salazar to investigate if there is a fourth "mode" (power down) that needs to be incorporated in sound bar calculations.

Steven Long—I would differentiate the window units from the ones with hoses to the windows.

Andrea Salazar—The problem is that window units and portable units are not differentiated in codes and standards

- ACT: Andrea Salazar to confirm that portable and window unit room air conditioners are not differentiated in federal standards.

Spencer Lipp—What full load cooling hours are you using?

Andrea Salazar—Statewide weighted averages.

Steven Long—That probably sacrifices some accuracy, but I see how there is no better option available.

Steven Long—I really don't think the DEER estimates for split AC systems cannot be used for room ACs. They are two very different technologies.

Group—Agreement.

Andrea Salazar—The ENERGY STAR calculator limits our calculations to individual cities, not the whole state.

- It is not appropriate to extrapolate from DEER split AC systems to room ACs.
    - ACT: RPP team to perform a literature review to explore other options for room air conditioner savings estimates.
- ACT: Jia Huang to address whether theare significant electric savings for gas driers that should be incorporated into the clothes dryer estimates.

Gary Fernstrom—I think when pursuing programs like this we need to be fully aware of the whole market, and how one incentive may interact with the cost of

other items. For instance, I once went to Home Depot with the intention of purchasing a wall fan, but ended up buying an AC unit because it was more affordable after utility incentives were applied.

VI. Closing

Annette Beitel, Cal TF Facilitator—

Annette Beitel—Unfortunately, due to time constraints we were not able to discuss the 2016 Business Plan. However, the current draft is posted on the website. Please review it and let us know if you have any input you would like us to factor in as we get ready to submit it to the PAC for final approval at the end of the year. We will schedule some time to have an in-depth discussion about it during the October meeting.

- ACT: TF members to review draft 2016 Business Plan for discussion during October meeting.