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BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Examine the Commission's Post-2008 Energy Efficiency Policies, Programs, Evaluation, Measurement, and Verification, and Related Issues	Rulemaking 09-11-014 (Filed November 20, 2009)

OPENING COMMENTS OF THE UTILITY REFORM NETWORK ON THE ASSIGNED COMMISSIONER'S RULING AND SCOPING MEMO

Reuben Deumling
Energy Economics Inc.
3309 SE Main Street
Portland, OR 97214
Phone: (503) 231-5059
Email: 9watts@gmail.com

Marybelle C. Ang
Staff Attorney
The Utility Reform Network
115 Sansome Street, Suite 900
Phone: (415) 929-8876
Fax: (415) 929-1132
Email: mang@turn.org

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I. INTRODUCTION

In accordance with the Assigned Commissioner's Ruling and Scoping Memo (Scoping Memo), issued May 21, 2010, and Rule 14 of the California Public Utilities Commission's (Commission) Rules of Practice and Procedures, The Utility Reform Network (TURN) submits these Opening Comments. The Scoping Memo solicited comments on seven questions pertaining to the Commission's current EM&V policy and methodological framework.[1] Although in general agreement with the Commission's stated chief objectives for EM&V for future program years, TURN nonetheless has concerns over the methods offered for monitoring total consumption reduction and market transformation. TURN believes it is essential that the Commission establish a set of methodologies that complements existing frameworks, especially with regard to GHG emissions. Furthermore, in updating metrics and evaluation methodologies, only the uncompromised pursuit of best practices in the design and execution of energy efficiency programs will provide ratepayers with some certainty that those programs will help meet California's energy and GHG objectives.

[1] May 21, 2010 Scoping Memo at pages 9-10.

II. TURN'S RESPONSES TO COMMISSION'S QUESTIONS

1) D.09-09-047 restated the core objectives for EM&V in the context of 2010-2012 program year savings measurement and verification, program evaluation, market assessment, policy and planning support, and financial and management audits.

a. Should these objectives be modified or expanded for program years 2013 and beyond?

b. In particular, are these objectives sufficient for the Commission to assess California's progress in achieving the goals of the Strategic Plan and the utilities' contribution thereto?

Response:

TURN supports the core objectives stated in the Scoping Memo for program years 2013 and beyond, and agrees with the Scoping Memo's emphasis on achieving and measuring progress towards market transformation. As the Scoping Memo explained, the Commission's current policy on EM&V has been shaped by AB 32, and ensuing efforts to attain GHG reduction, as well as principles set forth in the California Long Term Energy Efficiency Strategic Plan (Strategic Plan). In light of these developments, energy efficiency programs need to be assessed in terms of progress towards market transformation and long-range demand reduction targets. In contrast, the pattern thus far for utility-run energy efficiency programs in California has been "readily-quantified, low-cost, near-term savings that promise "load reduction in easy, well-packaged measures with limited market impacts."[2] The Commission needs to ensure a timely transition to energy efficiency programs that reduce overall demand in a manner more consistent with the goals of AB 32.

After all, energy efficiency is not an end in itself, but a means toward reducing absolute consumption and affecting GHG emissions. At a minimum, therefore, future EM&V must develop and employ metrics to measure whether market transformation has been achieved.[3]

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[2] Strategic Plan, page 4.

[3] The Commission will also need to be attentive to the risk of throwing out the baby with the bath water. As an example, consider the net-to-gross (NTG) ratio. In discussions where measuring "savings" or payments to utilities

2) In light of changes in energy efficiency activities since 2006, particularly new non-utility service offerings, funding mechanisms, and additional policy objectives, what are the most important changes, if any, that should be made to the "California Evaluation Framework" and "California Energy Efficiency Evaluation Protocols"?

a. Should existing Protocols be amended? If so, how and why?

b. Should additional methodologies be added to the Protocols? If so, what methodologies should be added, how, and why?

c. Should the Commission add methodologies to measure non-energy benefits such as GHG impact, economic impact, or job creation?

Response:

TURN supports the Commission's efforts to measure GHG impact as a non-energy benefit. TURN supports the Scoping Memo's suggestion that the Commission develop a methodology for measuring GHG impacts.[4] In light of the fact that energy efficiency has been invoked as the "cornerstone" of California's approach to reducing GHG emissions"[5] for several years, the continued absence of a methodology to measure GHG impacts is surprising.[6]

In D.05-01-055 the Commission identified the objectives of EM&V to include the measurement and evaluation of the "achievements of energy efficiency programs, groups of programs and/or the portfolio in terms of the 'performance basis' established under Commission-adopted EM&V protocols."[7] GHG impacts could be classified with and measured by a performance based metric. Precisely because the relationship between energy efficiency

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for the portion of those savings they can lay claim to, the NTG ratio has been pilloried of late. But the NTG ratio could serve a useful function for assessing market transformation, as a lower ratio could be an important indicia that market transformation has been achieved. A recurring theme for the Commission here will be the need to separate its "incentive" decisions from determinations of how best to use EM&V tools so that ratepayer-funded energy efficiency programs are in sync with California's GHG reduction and other broader goals.

[4] This need was anticipated in the California Energy Efficiency Evaluation Protocols "For example, California may need to establish Protocols for crediting greenhouse gas reductions resulting from the energy efficiency program portfolios or for addressing demand response programs that are currently outside the scope of the Protocols." (p. 21)

[5] D.08-10-037 (in R.06-04-009), p. 6 (http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/92591.pdf).

[6] The arguments outlined here were anticipated in a 2007 Energy Division White Paper "Separating Means and Ends: Reorienting Energy Efficiency Programs and Policy Toward Reducing Energy Consumption in California, by Reuben Deumling.
http://www.cpuc.ca.gov/NR/rdonlyres/D5CFAD3F-A4EC-4721-BD79-D4BD6AC72257/0/EDWhitePaper_MeansAndEnds_090402.pdf

[7] D.05-01-055 at 12.

programs and GHG emissions reductions is still so poorly understood, it is imperative for the Commission to develop a set of methodologies that complement existing frameworks, focused as they are on cost effectiveness and energy savings (narrowly defined as the differential between the amount of energy consumed and the amount that would have been consumed in the absence of the measure, program or intervention. Without the ability to gauge the impacts of energy efficiency programs and policies on GHG emissions, a major justification for pursuing energy efficiency lacks accountability.

It is crucial that in the course of updating metrics and evaluation methodologies, the Commission not lose sight of the fact that frustration with the results of these evaluations does not mean the evaluation methods were flawed. In TURN's view, the frustrations experienced to date do not so much reflect inadequacies in evaluation methods as they do a lack of innovation in program design, and conflicting commitments on the part of IOUs (on the one hand, to their shareholders who expect a rate of return, and on the other, to the ratepayers who fund these programs and deserve cutting-edge programs and assurance that the state's energy and GHG goals are being met).

Although simplifying EM&V may be tempting from a procedural perspective, without addressing how the IOUs' commitment to shareholders can overshadow best practices in the design and execution of EE programs, and without examining the degree to which some of the major programs actually lag the market rather than chart new waters, the Commission must not reduce the degree of oversight which the EM&V currently provides. A new focus on EM&V efforts that will better enable assessment of market transformation and demand reduction must develop in parallel with the ongoing efforts to conduct meaningful EM&V of existing programs, rather than at the expense of those efforts.

3) The Commission has been made aware of two methodologies that may be used to produce an aggregate-level metric of energy efficiency impact on consumption over time. The first has been introduced by the Natural Resource Defense Council. The second was recently published online in the journal Energy Efficiency. Both metrics resemble the proposed metric which D.10-04-029 directs be developed on a pilot basis. Please comment on whether it would be useful for the Commission to use such a metric?

a. What are the advantages and limitations of such a metric?

b. What challenges are associated with adding this metric to our existing EM&V methodological framework?

c. Please provide specific analysis on the referenced methodologies

Response:

TURN agrees that the pilot described as "EM&V Project Number 12: Energy Consumption Surveys" provides an appropriate foundation for addressing on an aggregate level energy efficiency's impact on consumption over time. In D.10-04-029, the Commission committed to a total energy consumption evaluation pilot study to measure reduction in energy consumption from energy efficiency programs in California.[8] TURN agrees that it is imperative that the Commission develop and use a metric that will assess the impact of energy efficiency on energy consumption over time. To that end, TURN recommends that this pilot study be set in motion at the earliest opportunity, and be applied at a minimum to assess both energy savings and energy consumption generated from whole-building retrofits.[9] As the Scoping Memo noted (in footnote 17), D.10-04-029 identifies a key limitation of present energy efficiency and its evaluation: "The value of individual energy efficiency efforts is uncertain without the measurement of performance of the whole system to link the efforts to actual reduction in energy

[8] D. 10-04-029, Attachment 1, at p. 26 states "The value of individual energy efficiency efforts is uncertain without the measurement of performance of the whole system to link the efforts to actual reduction in energy consumption."

[9] As part of the Energy Division workshop process regarding the IOUs' 2010-2012 Whole House Retrofit Program (WHRP) Implementation Plan, TURN on several occasions recommended that the WHRP should anticipate and account for the potentially positive (or negative) effects of behavior on household energy consumption.

consumption."[10] While this is true and important, not all the authors cited in the Scoping Memo's Question 3 are singing from the same sheet of music, and even language in the D.10-04-029 introduces concepts that are not helpful in trying to gauge the role of energy efficiency in reducing energy consumption.

Energy consumption is sometimes measured not outright (kWh/yr) but using a denominator such as per dollars of GDP, per square feet of conditioned space, or simply per person. "Energy intensity" is a term often used to connote such a ratio. While this approach may be analytically tempting, it is easily misused. "A good measure of energy intensity should identify (or remove from a measure) as many of the behavioral and structural changes that affect the energy intensity (but are generally agreed upon to be unrelated to energy efficiency) … as feasible."[11] In other words, using a ratio risks undermining the goal of a more complete accounting just suggested. Not only are the ratios based on denominators that are subject to change (population growth, economic growth, growth in house size), the reliance on ratios such as energy intensity adds complexity and does little to clarify the underlying relationships.

Relying on these ratios confuses independent and dependent variables, means and ends as illustrated by this statement: "A decrease in energy intensity over time may correspond to an increase in energy efficiency depending on the level [of] other structural and behavioral effects."[12] Neither energy intensity nor energy efficiency is the variable of interest if the goal is to reduce energy consumption. Both are second-order concepts with a poorly understood relationship to total, aggregate consumption of energy. Whether these two terms co-vary or are unrelated is of little import.

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[10] Id.
[11] Id.
[12] Id.

The Commission's goal in this context must be to develop and use metrics which permit it to ascertain what energy efficiency's contribution (if any) is to reducing the aggregate consumption of energy. To that end, it would be helpful to (a) track total energy consumption (kWh/yr), and (b) evaluate the extent to which energy efficiency measures and programs advance the goal of reducing consumption. Existing attribution methods are designed to ascertain how much credit (in units of energy saved) is due a program or portfolio. In the context of the Scoping Memo, credit would need to be assessed in terms of reduced consumption rather than savings (see also discussion of Question 7 below), but this can be accomplished by incorporating methods such as billing analysis into EM&V design.

Consider this illustration: An energy efficiency program evaluation suggests it has yielded "savings" of 20 million kWh. The aggregate amount of electricity consumed by the participating households, however, was found to have remained constant. In the present evaluation framework, if this discrepancy were noted at all, it would likely be attributed to external effects over which the program had no control. The program would receive credit based on the 20 million kWh saved, and no further attention would be paid to the absence of any absolute drop in consumption of electricity.

What the questions in the Scoping Memo (and, to a lesser extent, the studies cited therein) point to, however, is a need to reconcile two realms, the realm of "savings" familiar to energy efficiency practitioners, and the realm of reduced energy consumption that reflects the accounting practices associated with GHG emissions reductions. The steps the authors under review have taken to incorporate energy consumption quantities into their analyses must also make this transition in accounting. Intermediate ratios such as energy intensity distract from the challenges associated with this shift.

Horowitz[13] is concerned that evaluating individual energy efficiency programs without considering larger, emergent impacts from the overall energy efficiency effort risks undercounting energy savings. To avoid the pitfalls of the limitations he attributes to present evaluation approaches, he proposes a regression model that captures all effects shaping energy consumption besides energy policy. His objective is to "compare [a state's] actual energy demand to that which would have been demanded in the absence of an energy efficiency policy."[14] His model specifications are numerous (income, energy prices, climatic conditions, changes in equipment stock, etc.), but it is not clear that they are comprehensive. And that is a substantial potential flaw, since in practice, anything that is not specified in his model is treated as an effect of energy policy. Economists can espouse great faith in their ability to identify parameters that capture the full range of experience, even more so than do other social scientists. Be that as it may, TURN submits that the Commission should harbor doubts about the validity of such an assumption and, by extension, the resulting model output.

Horowitz's central claim that his model produces an estimate of *net* savings is even less satisfactory given his one-dimensional conception of what a NTG[15] ratio is: "Typically, a net-to-gross factor for energy efficiency programs is composed of a single estimate of free ridership derived via consumer surveys of stated intentions."[16] His assertion that a "properly-specified econometric model"[17] can control for the variables governing free ridership (energy prices,

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[13] "Measuring the savings from energy efficiency policies: a step beyond program evaluation." Horowitz, M.J. April 2010 (http://www.springerlink.com/content/120908/?Content+Status=Accepted).
[14] Id. at 4.
[15] Lisa Skumatz is considerably more thorough in her description of the elements commonly included in NTG calculations. *See* Lisa A. Skumatz, "Lessons Learned and Next Steps in Energy Efficiency Measurement and Attribution: Energy Savings, Net to Gross, Non-Energy Benefits, and Persistence of Energy Efficiency Behavior," White paper prepared for CIEE and the California Public Utilities Commission. November. Berkeley: California Institute for Energy Efficiency (2009).
[16] Horowitz at 3.
[17] Id.

consumer incomes, and capital stock trends) hinges on the author's ability to properly specify the inputs, and on the simplified conception of NTG. The Commission should find this unpersuasive.

Despite these criticisms, Horowitz's reliance on aggregate energy consumption data to assess the effect of energy (efficiency) policy represents an important step toward bringing energy efficiency into relation with GHG emissions reduction goals, something Horowitz discusses. However, as in other similar efforts discussed above and below, his inability to recognize the difference between "savings" and aggregate reductions in energy consumption does more to obscure the path toward comprehensive attribution than his model does to clarify or improve our understanding.

The SERC[18] (Schatz Energy Research Center) study seeks to establish an aggregate measure of state energy consumption intensity by generating an Energy Consumption Index (primary energy consumption per capita per year) adjusted for annual variations in the weather using data on Cooling Degree Days (CDDs) and Heating Degree Days (HDDs). The project sponsors anticipate that this metric could be used as the basis for awarding incentives to states for improving their adjusted ECI (aECI) over time. The suggested approach has the advantages of using existing state-level data (albeit with the recommendation that the data collection process be improved) and being relatively straightforward. There are just two key variables that feed into the final metric: total energy consumption per capita and HDDs/CDDs.

The analysis is based on calculating a weather adjusted ECI. The first step involves generating state-level total energy consumption per capita for each year, using EIA's energy

[18] Colin Sheppard, Charles Chamberlin, Arne Jacobson (2009). Exploring Strategies for Implementing a Performance Based State Efficiency Program: State Energy Consumption Metrics – Residential Sector Analysis. Schatz Energy Research Center, Humboldt State University, May 15, 2009: http://www.schatzlab.org/projects/psep/files/uploads/report/Res_ECI-NRDC-SERC-May15_09.pdf

consumption data and the Census Bureau's estimates of population. In order to account for the effect of weather on year-to-year fluctuations in ECI, the authors used multiple regression to estimate the sensitivity of state ECI to the weather in each year and then used the weather-related coefficients from this analysis to adjust the observed ECI for each year in each state.[19] This generated an adjusted ECI which the authors then used to plot each state's energy consumption over time. Given that their ultimate aim is to create a metric to measure the impact of energy efficiency on consumption and reward states with reductions in aECI, the analysis then proceeds to estimate the slope of the line created by plotting the aECI over intervals of five years. If the slope is negative (meaning that the aECI declined over the period) and an 80% confidence interval for the slope does not include zero, the state is determined to have reduced its aECI to within a reasonable degree of certainty. Under the proposed incentive mechanism, that state would be eligible for federal incentives.

TURN has identified three main concerns with this approach. First, it focuses on changes in per capita energy consumption rather than on absolute energy consumption. Within the context of the authors' objective (to encourage states to unlock America's energy efficiency potential), the focus on per capita consumption is necessary in order to control for variations in population between states. But the use of such a metric would mean that a state could be rewarded, or deemed to be a "good performer," even if overall energy consumption continues to increase. Moreover, the imperatives of global warming and the identified need to reduce GHG emissions mean that absolute, not relative, reductions in consumption are required. While the approach used in the SERC study may be appropriate for the stated aims of the project, it does not seem suitable for the Commission's purposes.

[19] For details see Sheppard at 26.

A second concern that TURN has identified relates to the use of a "fixed-effect" multiple regression model. A fixed effects model essentially seeks to capture state-level variation in aECI within one term. This approach can generate some impressively high R-squared values but it also means that the model is unable to specify what proportion of the state-level variation (after accounting for weather) is due to policy interventions:

> The simulations that we have conducted indicate that it is possible to track trends in residential ECI by state. While ECI trends can be tracked, it is not possible to isolate changes in ECI that are due to policy choices from changes due to other factors with 100% reliability….Other factors that may be responsible for the remaining variation include short-term behavioral changes in response to national events such as 9/11, historical events limited to individual states such as the real and imaginary shortages during the 2000-2001 California energy crisis, national energy policy initiatives, and the variable quality of the energy consumption data, as well as – of course – the state level policy changes such as changes in building codes or appliance efficiency standards that the method is designed to capture. In any case, although statistical approaches are unlikely to be able to separate policy related changes in energy consumption from other factors with 100% reliability, they can nonetheless provide a very useful approach for tracking states' progress over time.[20]

The authors recognize that changes in aECI over time are simply assumed to be due to state policy interventions rather than other factors. The authors recognize this as a limitation of the general approach they have adopted:

> The end result of the regression is that changes in energy intensity attributable to any of the factors are statistically controlled in the analysis. What remains (the residuals of the regression) encapsulates the variation in energy intensity unexplained by the observed factors. It is assumed that policy efforts to increase energy efficiency are contained within these residuals, in addition to other factors not included in the analysis and random variation.[21]

[20] Sheppard at 27.
[21] Id. at 33.

Given that the Commission's express aim is to "assess the reduction in energy consumption resulting from the various energy efficiency programs and efforts in California,"[22] this limitation within the SERC study means that it falls short as a means of generating the kind of metric the Commission is seeking. It is a tool for tracking changes in aECI, not a tool for tracking the impact of energy efficiency policy interventions per se.

Additionally, TURN is concerned about the consequences of assuming that over time, average weather in a state does not change. The SERC study adjusted the observed ECI to 30-year normal HDD and CDD values for each state.[23] If, as has been observed in California[24], there has been a trend to warmer temperatures in the United States, we are concerned that the metric utilized in the SERC study, with its assumption of no change to average weather, may introduce systematic bias into the results. This may, or may not, constitute a limitation or disadvantage to the study's approach to developing a metric to measure the impact of energy efficiency policy, but it is an issue that TURN would like to see resolved.

The results of the SERC study regarding state residential sector rankings from 1996-2006 also raise the issue of consistency with other comparative studies of state-level energy efficiency performance. According to the analysis in Table 1.2 of the report, Nevada would rank 3rd in the United States in terms of the number of years for which it would receive incentives for reducing the state aECI. Utah would rank 4th and Idaho would tie for 5th place with New York, Massachusetts, Connecticut and a range of other states, including Montana and Indiana. TURN realizes that the methodology used to create this ranking is very different from that used by the

[22] Decision Determining Evaluation, Measurement and Verification Processes for 2010 through 2012 Energy Efficiency Portfolios, D10-04-029, April 21, 2020, Attachment 1, page 26
[23] Sheppard at 39.
[24] See, for example, Sarah Pittiglio, Guido France and Jessica Gonzalez, Annual Minimum Temperature Anomalies in California by Climatic Region, 1920-2003. CEC-200-2008-085: http://www.energy.ca.gov/2008publications/CEC-500-2008-085/CEC-500-2008-085.PDF

ACEEE to generate its Scorecard, but it is worth noting that in its latest assessment the ACEEE ranked Nevada 15th, Utah 25th, and Idaho at 13th.[25] Montana and Indiana, two states that in the SERC study tied with Idaho for gaining incentives for five of the 10 years, ranked 27th and 38th on the ACEEE's latest Scorecard. These results may be due to the emphasis placed in the SERC study on reductions in aECI from any starting point, but care should be taken that any metric adopted by the Commission should generate results that are consistent with other evaluations of changing patterns of energy consumption at the state level.

7) D.09-09-047 stated that this review of EM&V practices should include consideration of the needs and activities of the California Energy Commission, municipal utilities, and California Air Resources Board. Please comment on what changes, if any, should be made to the Commission's EM&V policy and methodological framework to meet the needs of these entities?

a. Do existing metrics adequately account for GHG reductions?

Response:

No, they do not. Existing metrics feed into and undergird the concept of "energy savings," a metric poorly suited to accounting for GHG reductions: "[S]avings are estimated relative to a baseline of what would have happened otherwise on an end-use by end-use basis. End uses are uncontrolled, and 'what would have happened otherwise' is, by definition, a hypothetical outcome rather than a real one."[26] Because energy savings have been observed to coincide with growth in aggregate consumption of utility-supplied fossil fuels (electricity & natural gas), tallying "savings" without regard for consumption growth is both unhelpful in the effort to track GHG emissions and, in practice, potentially misleading to the state policy-makers

[25] Maggie Eldridge, Max Neubauer, Dan York, Shruti Vaidyanathan, Anna Chitum and Steve Nadel. The 2009 State Energy Efficiency Scorecard, ACEEE Report Number E086, October 2008: http://www.aceee.org/pubs/e086.htm

[26] Moezzi, Mithra & Rick Diamond, *Is Efficiency Enough? Towards a New Framework for Carbon Savings in the California Residential Sector.* California Energy Commission, October 2005, p. 8.

and the public because of how the benefits of energy efficiency are represented. The clear implication is that there will be GHG reductions from energy efficiency programs.[27] To account for such GHG reductions the dominant "savings" framework must either be abandoned or substantially modified to reflect progress toward absolute reduction goals.

The terminology used to measure progress toward saving energy via energy efficiency—*energy savings, energy intensity, increased energy efficiency*, etc.—all refer to relative changes with no direct bearing on absolute consumption. Continuing to evaluate the energy efficiency programs and policies according to these metrics obstructs progress toward GHG emission reductions by mixing relative with absolute scales and obscuring the difference between energy consumed (as metered) and energy saved (generally a ratio of program effects divided by a hypothetical energy growth trajectory). As the existing energy efficiency infrastructure and the metrics used to evaluate program and portfolio performance are adapted to the changing regulatory landscape, and reducing GHG emissions becomes a more central objective within the energy policy realm, it will be necessary to translate findings hitherto measured as energy savings into terms that correspond to the analytic requirements of GHG emissions reductions.

> *b. Do existing metrics meet the CEC's needs in load forecasting? If not, what changes are required to better assess energy efficiency's impact on future energy demand?*

Response: The Demand Forecast Working Group is charged with aligning the outputs of the CPUC's EE efforts, and the requirements of the CEC's requirements. TURN is not privy to the details of the efforts by this working group, but given the discrepancy in units outlined above, it seems unlikely that the savings as calculated to date in CPUC processes would be easily

[27] To date no GHG reductions (at least related to electricity and natural gas consumption) have been registered in CA. Total consumption of these two 'fuels' continues to rise.

absorbed into or inform the CEC's load forecasts. The CEC's analytic tasks related to load forecasting are complicated by detailed attribution requirements, which are different than the requirements the CPUC has implemented in recent years.

To assess energy efficiency's impact on future energy demand it is necessary to measure the relationship between energy efficiency, as practiced, and energy demand. As discussed above, this is currently done in an indirect manner via the concept of energy savings, which do not translate into units that bear on energy demand. To improve the usefulness of these outputs to the CEC one might ask how, for instance, members of the Demand Forecast Working Group make sense of the discrepant metrics in use by the two agencies. As energy efficiency's impacts on energy demand are unclear it is hard to imagine how these impacts could inform load forecasts. Better metrics and a more widely shared appreciation of the need to track program impacts in terms of how many kWh were consumed pre- and post, and what if any change in that parameter was attributable to the program, would go far toward aligning existing metrics with the needs of the CEC's load forecasters.

c. Are there any steps the Commission should take to better integrate and coordinate EM&V activities with the other California entities?

Response: This question should be put to members of the Demand Forecast Working Group, perhaps in a joint workshop setting with CEC and CPUC representatives, along with other interested parties.

III. CONCLUSION

TURN looks forward to continuing to work with the Commission towards making EM&V (and utility energy efficiency programs) a more effective tool in reaching California's consumption and GHG reduction goals.

Date: June 4, 2010

Respectfully submitted,

By: _*/S/ Marybelle C. Ang*__

Marybelle C. Ang
Staff Attorney

The Utility Reform Network
115 Sansome Street, Suite 900
San Francisco, CA 94104
Phone (415) 929-8876
Fax: (415) 929-1132
Email: mang@turn.org

Reuben Deumling
Energy Economics Inc.
3309 SE Main Street
Portland, OR 97214
Phone: (503) 231-5059
Email: 9watts@gmail.com

CERTIFICATE OF SERVICE

I, Larry Wong, certify under penalty of perjury under the laws of the State of California that the following is true and correct:

On June 9, 2010, I served the attached:

OPENING COMMENTS OF THE UTILITY REFORM NETWORK ON THE ASSIGNED COMMISSIONER'S RULING AND SCOPING MEMO

on all eligible parties on the attached lists **R.09-11-014** by sending said document by electronic mail to each of the parties via electronic mail, as reflected on the attached Service List.

Executed this June 9, 2010, at San Francisco, California.

/S/
Larry Wong

Service List for R.09-11-014

abb@eslawfirm.com
ABesa@SempraUtilities.com
achang@efficiencycouncil.org
aeo@cpuc.ca.gov
andrew.mcallister@energycenter.org
ann.kelly@sfgov.org
ashley.watkins@energycenter.org
awp@cpuc.ca.gov
bfinkelstein@turn.org
bhopewell@peci.org
bjunker@energy.state.ca.us
bkates@opiniondynamics.com
blaising@braunlegal.com
cadickerson@cadconsulting.biz
cal.broomhead@sfgov.org
cbe@cpuc.ca.gov
cem@newsdata.com
cf1@cpuc.ca.gov
cheryl.collart@ventura.org
cjn3@pge.com
ckavalec@energy.state.ca.us
ckmitchell1@sbcglobal.net
cln@cpuc.ca.gov
craigtyler@comcast.net
cxc@cpuc.ca.gov
dgilligan@naesco.org
dil@cpuc.ca.gov
dschultz@energy.state.ca.us
edf@cpuc.ca.gov
ELVine@lbl.gov
enriqueg@greenlining.org
erasmussen@co.marin.ca.us
eric@harpiris.com
irene.stillings@energycenter.org
j1pc@pge.com
jeanne.sole@sfgov.org
Jeff.Hirsch@DOE2.com
Jennifer.Barnes@Navigantconsulting.com
jennifer.green@energycenter.org
jerryl@abag.ca.gov
jl2@cpuc.ca.gov
jnc@cpuc.ca.gov
jody_london_consulting@earthlink.net
jst@cpuc.ca.gov
JYamagata@SempraUtilities.com
keh@cpuc.ca.gov

kmb@cpuc.ca.gov
ks3@cpuc.ca.gov
larry.cope@sce.com
LDRi@pge.com
lettenson@nrdc.org
lhj2@pge.com
liddell@energyattorney.com
lmh@eslawfirm.com
lp1@cpuc.ca.gov
M1ke@pge.com
marilyn@sbesc.com
mary.tucker@sanjoseca.gov
mbaumhefner@nrdc.org
michael.sachse@opower.com
mkh@cpuc.ca.gov
mmw@cpuc.ca.gov
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mrw@mrwassoc.com
msutter@opiniondynamics.com
mtierney-lloyd@enernoc.com
mwt@cpuc.ca.gov
nfw@cpuc.ca.gov
nlong@nrdc.org
pcanessa@charter.net
pcf@cpuc.ca.gov
pmiller@nrdc.org
ppl@cpuc.ca.gov
pstoner@lgc.org
puja@opower.com
PVillegas@SempraUtilities.com
pw1@cpuc.ca.gov
rafi.hassan@sig.com
RegRelCPUCCases@pge.com
rfg2@pge.com
rknight@bki.com
s1w2@pge.com
samuelk@greenlining.org
sbccog@southbaycities.org
sbender@energy.state.ca.us
SDPatrick@SempraUtilities.com
sephra.ninow@energycenter.org
service@spurr.org
Shayna.Hirshfield@sanjoseca.gov
slda@pge.com
SRRd@pge.com
sschiller@efficiencycouncil.org
ssmyers@att.net

stephaniec@greenlining.org
sthompson@ci.irvine.ca.us
susan.munves@smgov.net
tburke@sfwater.org
tconlon@geopraxis.com
wem@igc.org
yxg4@pge.com
zap@cpuc.ca.gov
ztc@cpuc.ca.gov