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NATURAL RESOURCES DEFENSE COUNCIL

June 30, 2009

Jerry Jordan
Executive Director
California Municipal Utilities Association
915 L Street, Suite 1460
Sacramento, CA 95814

RE: *Energy Efficiency in California's Public Power Sector*

Dear Mr. Jordan,

On behalf of the Natural Resources Defense Council (NRDC), I commend the California Municipal Utilities Association (CMUA) and the publicly-owned utilities (POU) for continuing to pursue additional cost-effective energy efficiency (EE). *Energy Efficiency in California's Public Power Sector: A Status Report*, March 2009 ("CMUA Report") provides valuable information about the progress of the POU's energy efficiency saving efforts, pursuant to Senate Bill 1037 (Kehoe, 2005) and Assembly Bill 2021 (Levine, 2006). We commend you for your work on this report and appreciate the opportunity to comment.

The 2009 CMUA Report is the third report the POU's have submitted to the California Energy Commission (CEC) pursuant to SB 1037. When SB 1037 and AB 2021 were enacted, we expected it might take the POU's some time to ramp-up their programs and reporting activities to fully comply with the law.

With this "start-up" period over, we begin by assessing the POU's progress since SB 1037 was enacted, before we delve into the most recent report. The summary below highlights our belief that the POU's have made significant progress to date, for which we commend the POU's, and that significant challenges remain.

Progress Since Enactment of SB 1037

- POU's have saved customers more than an estimated \$400 million since 2006 through highly cost-effective energy efficiency programs¹
- POU's in aggregate have doubled their energy savings since 2006²
- Most POU's established 10-year energy saving targets pursuant to AB 2021
- CMUA's annual SB 1037 report provides a single source of comprehensive information on the POU's' general energy efficiency investments and savings achievements
- POU's are collaborating extensively among themselves on energy efficiency issues, and are also collaborating with the CEC and stakeholders
- CMUA's common reporting template facilitates comparisons and compilations of the POU's' efficiency information, and facilitates the CEC's statewide analysis since it is largely consistent with the investor-owned utilities' (IOU) reports
- Annual SB 1037 report now provides additional useful metrics to analyze the POU's' efficiency progress, including comparisons of reported savings to targets and investments as a percent of revenues
- Some POU's have developed plans for or begun independent evaluation, measurement, and verification (EM&V) of their efficiency programs

Remaining Challenges

- POU's, in aggregate, need to nearly double their 2008 energy savings to achieve the 2009 AB 2021 targets, however their projected savings for 2009 fall short of AB 2021 targets
- Most POU's still need to integrate efficiency into resource procurement, and supplement public-benefits funding with procurement investments to capture all cost-effective savings
- Most POU's still need to conduct independent EM&V of program results
- Expand collaboration with CEC and key stakeholders
- Provide additional detail on each POU's assumptions underlying its reported data
- Integrate recommendations from NRDC's AB 2021 target analysis³ to enhance the next AB 2021 10-year target setting process currently underway
- Incorporate additional metrics to compare utility progress, explain cost-effectiveness, and breakdown funding sources for energy efficiency efforts in future SB 1037 reports⁴
- Expand portfolios to ensure POU's with high TRCs reach all the untapped cost-effective energy efficiency savings⁵

¹ NRDC estimate of net benefits from POU efficiency programs based on data in CMUA's annual SB 1037 reports.

² Based on POU reported savings. NRDC has not verified the POU savings reports, and most utilities are just beginning to conduct independent evaluation, measurement and verification of their savings.

³ NRDC. "Analysis of California's Publicly-Owned Utilities' Ten-Year Energy Efficiency Targets," January 9, 2008. pp.3-4.

⁴ As noted below, **additional metrics include:** total net benefits, annual energy savings as a percent of SB 1037 projected savings and AB 2021 target, annual energy savings as a percent of electricity sales, and the portfolio average cost per kWh. **Additional funding information includes:** breakdown of public benefit fund versus procurement investments for EE efforts, breakdown of public benefit fund allocation to EE, renewable energy, low-income assistance, and research development, and deployment.

⁵ Significantly high TRCs could indicate both cream skimming and lost opportunities.

OVERVIEW OF 2009 CMUA REPORT

NRDC is encouraged to see that the POU's are striving to capture greater energy savings in 2009⁶ than the total reported savings in 2008.⁷ Achievement of these 2009 projections will save 625 gigawatt hours (GWh) and 128 megawatts (MW) over the course of just the first year and produce more than an estimated \$300 million in net benefits for customers. While we are heartened that many of the POU's reported energy efficiency program savings in 2008 exceeded the savings projected in the 2007 report, some utilities did not meet their targets.⁸ (See Figures 1 and 2 in Attachment A)

We commend the POU's for the awards received and achievements accomplished this past year. The 2009 CMUA Report reports savings for 2008 were more than 50% higher than the prior year (p.15). The Report also highlights laudable examples of innovation within the POU community, including:

- Burbank's partnership with Southern California Gas Company to provide comprehensive in-house audits and retrofits for electric, water, and gas efficiency recommendations and upgrades (p. 2)
- SMUD's home electronics program and home electricity reports (p. 4)
- SCPPA and NCPA's collaborative programs to share best practices of successful programs (p. 5)

The March 2009 report is the third report that CMUA has submitted pursuant to SB 1037, and it continues to provide a strong foundation for future reports. We acknowledge the significant steps that POU's have taken as noted above, however, we are also concerned that the POU's have yet to incorporate many of our recommendations below from previous analyses.⁹ We offer the following updated suggestions for discussion on further improvements to the POU's efficiency programs and to the next SB 1037 report.

RECOMMENDATIONS

Annual saving projections should meet or exceed AB 2021 targets

The POU's must exceed their 2009 energy savings projections to ensure that they are able to meet their ten-year energy saving targets pursuant to AB 2021 (see Figure 3 in Attachment A). We are concerned that a number of utilities were unable to achieve their 2008 targets and that, on average, the POU's 2008 reported savings fell approximately 30% short of their AB 2021 targets for 2008.¹⁰ In addition, on average, the POU's 2009 projected savings will fall short of their AB 2021 targets. We would like to learn more about the reasons that a number of utilities have been unable to meet their AB 2021

⁶ 2009 savings = Fiscal Year (FY) 2008-2009 as noted in the 2009 CMUA Report, footnote 2, p.14.

⁷ Total projected 2009 savings is approximately 55% greater than the reported 2008 savings.

⁸ Twelve POU's reported savings less than 90% of their 2008 targets, including: Alameda, Colton, Corona, LADWP, Lassen, Plumas Sierra, Rancho Cucamonga, Redding, Riverside, and Shasta Lake. **Of these twelve utilities, this was the second year in a row that the following utilities missed their targets: LADWP, Lassen, Rancho Cucamonga, Redding, and Shasta Lake.**

⁹ See: "Analysis of California's Publicly-Owned Utilities' Ten-Year Energy Efficiency Targets," January 9, 2008; NRDC Letter to CMUA (RE: 2006 SB 1037 report), February 6, 2007, NRDC Letter to CMUA (RE: 2007 SB 1037 Report), June 18, 2008.

¹⁰ Based on the weighted average w/ LADWP; w/o LADWP, the POU's met 97% of their AB 2021 goals

targets to date and offer ourselves as a resource to support successful target achievements moving forward.

Every POU should have EM&V plans and results

We are encouraged to see the initial progress that the POUs have made this past year towards expanded and improved independent evaluation, measurement, and verification. While we understand that the POUs have needed time to ramp up EM&V efforts, next year's report will be three years after AB 2021 became law, so the report should contain EM&V plans and results from *all* utilities.¹¹ We also continue to support the CEC's role in working with the utilities to ensure that the methodologies are thorough, transparent, and comparable to those used by the California Public Utilities Commission to evaluate the investor-owned utilities' portfolios. Consistent, robust, and independent evaluation is critical to ensure that energy efficiency can be depended upon as a resource.

Energy efficiency must be treated as a procurement resource

While we understand the difficulties posed by the current financial climate and that many utilities' efficiency staff continue to face resistance from other utility staff when requesting funding to replace supply-side resource procurement with expansions of successful and cost-effective energy efficiency programs,¹² we strongly reiterate that the law specifically requires that POUs "treat investments made to achieve energy efficiency savings and demand reduction targets as procurement investments." (Public Utilities Code Section 9615(b)) Moreover, POUs "in procuring energy to serve the load of its retail end-use customers, shall first acquire all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible" (Public Utilities Code Section 9615(a)) and the annual report to the CEC must include "the sources of funding for its investments in energy efficiency and demand reduction program investments." (Public Utilities Code Section 9615 (e)(1))

In addition, we agree with the CEC's conclusion that "public goods charge allocations for the publicly owned utilities are insufficient to achieve the savings needed to meet all cost-effective energy efficiency."¹³ We therefore urge the utilities to ensure they are making procurement investments in energy efficiency to capture all cost-effective savings as the law requires. This will not only allow the POUs to achieve additional energy efficiency savings, but will also save customers money by reducing their energy bills. NRDC offers our assistance to utilities to help overcome the barriers they potentially face when requesting expanded funding for cost-effective energy efficiency programs.

We appreciate the initial efforts to report on the amount of utility procurement investments in demand-side energy efficiency programs, including Alameda (p.38),

¹¹ Not all utilities have developed an EM&V plan (p.14), and most do not have EM&V results in this year's report.

¹² A number of utility representatives at the June 9, 2009 CEC IEPR AB2021 workshop indicated that while they would like to increase EE investments to capture savings above what is available through the public benefits fund, they are constrained by the budget approval process since not all constituents responsible for budget approval are fully convinced that EE can be relied upon as a resource. This indicates a need for further involvement by the POUs' governing boards that are responsible for both allocating the utilities budget, and meeting the requirements of SB 1037 and AB 2021.

¹³ California Energy Commission 2008, *2008 Integrated Energy Policy Report Update*, CEC-100-2008-008-CMF, p.48

Imperial Irrigation District (p.92), Modesto Irrigation District (p.115), and Roseville (p.156). We recommend that for the next SB 1037 Report, *all* POU's should include an explicit breakdown of the amount of public benefit funds allocated to energy efficiency and the amount of procurement investments in energy efficiency programs. In addition, we recommend that the POU's provide a breakdown of the public benefits fund investments that are allocated to (1) energy efficiency, (2) renewable energy, (3) low-income, and (4) research development and deployment.

Moreover, while we are encouraged that the POU's intend to tap into the American Recovery and Reinvestment Act (ARRA) funds to capture additional energy efficiency savings, we want to emphasize that these funds are intended to *supplement* and not *supplant* existing funding mechanisms. Therefore, we recommend the POU's include an analysis in the next SB 1037 report detailing how the utilities first used all available public benefit funds and procurement dollars before using ARRA funding to enhance or expand their energy efficiency programs.

Provide additional metrics to compare utility progress

While we are encouraged by the positive trends showing increased energy efficiency savings and investments as noted by a number of POU's at the June 9, 2009 CEC Integrated Energy Policy Report (IEPR) workshop, we emphasize here that in addition to trends, it is important to simultaneously measure their achievement relative to aggressive energy saving targets and industry benchmarks. While progress towards increasing energy savings is commendable, analyzing the industry metrics (such as energy efficiency savings as a percent of electricity sales and energy efficiency investments as a percent of revenue) provides crucial information that indicates the level of utility achievement towards capturing all cost-effective energy efficiency savings, and can be used to compare achievements across utilities.

For example, while we are encouraged by LADWP's increase in savings over the past two years, LADWP must continue to significantly increase savings in order to reach its AB 2021 targets and capture all cost-effective savings. Analyzing LADWP's performance in terms of industry accepted benchmarks, such as levels of percent of sales and percent of revenues, provides one indication that LADWP still needs to double savings to reach an aggressive performance level.¹⁴ We understand this is LADWP's intention moving forward and look forward to collaborating with LADWP to ensure that these goals are met.

We appreciate the inclusion of *Table 7: Energy Efficiency Expenditures as Percent of Retail Sales* in the 2009 CMUA Report (p.20). This table provides valuable information enabling the selected POU's to benchmark their efficiency investments against other utilities, both within the California POU community and across the country.

¹⁴ LADWP's 2008 EE savings equaled 0.45% of sales, whereas a minimum of 1% of sales would indicate an aggressive EE achievement. Similarly, LADWP's 2008 EE investments equal 1% of revenue, whereas a minimum of 2% of revenue would be needed to classify it among the utilities making substantial EE investments. We are encouraged to see that LADWP is striving to reach these preferred metrics for next year and look forward collaborating to ensure these metrics are met.

For example, the table indicates that only five utilities have efficiency investments exceeding 2% of revenues, which is a common industry benchmark to identify aggressive portfolios.¹⁵ We recommend that all POUs be included in this table next year and suggest clarifying the data in the table by referring to “Retail Sales” as “Retail Revenue” to ensure it is not confused with electricity sales (kWh).¹⁶ In addition, we caution that the use of individual metrics can only tell a portion of the story. For example, while investment metrics are informative, it is imperative that these metrics be reviewed in conjunction with energy savings benchmark metrics, such as energy efficiency savings as a percent of electricity sales, to fully understand how utilities compare to the industry accepted levels of energy savings that indicate aggressive efforts to meet all cost-effective energy efficiency savings.

Moreover, we appreciate the inclusion of the utility AB 2021 targets for comparison to the SB 1037 reported information in *Table 9: Comparing Reported and Projected Savings to AB 2021 Targets* (p.22). The comparison of cumulative program savings to the cumulative AB 2021 target is a particularly useful addition, since it is the cumulative savings that will determine whether all cost-effective savings have been captured, and provides an indication of which utilities are generally on track regardless of annual variations in target achievements.

While these additional metrics are quite useful, we reiterate the recommendations we made last year in response to the 2008 CMUA Report that future reports should include the following additional metrics, which are useful tools for benchmarking and are commonly used in the energy efficiency industry.¹⁷ Specifically, we urge you to include these metrics for each POU in the next status report: (1) total net benefits, (2) annual energy savings as a percent of SB 1037 projected savings and AB 2021 target, (3) annual energy savings as a percent of electricity sales, and (4) the portfolio average cost per kWh which can be compared to supply-side procurement costs.¹⁸

For example, Figures 4 and 5 in Attachment A illustrate the wide range of POU annual energy savings as a percent of sales, and shows that on average the POUs achieved 0.62% of sales in 2008, although they are expecting to achieve annual savings of 1% in 2009. However, as a point of comparison, the state’s investor-owned utilities, on average, achieved annual savings that were approximately 2.5% of sales.

These metrics can yield valuable insights as to utility achievement towards their energy efficiency goals as well as for comparison to industry standards for achieving aggressive energy efficiency savings. In addition, the cost-effectiveness metrics (total net benefits

¹⁵ See, for example, the following two reports by the American Council for an Energy-Efficiency Economy (ACEEE), which show that the top states invest more than 2% of revenues in energy efficiency. Eldridge, M. et al, *The State Energy Efficiency Scorecard for 2006*, ACEEE Report E075, June 2007. Kushler, M. et al, *Meeting Aggressive New State Goals for Utility-Sector Energy Efficiency: Examining Key Factors Associated with High Savings*.

¹⁶ “Retail Sales” is often referred to in the industry metric “energy efficiency savings as a percent of sales” and represents kWh versus “Retail Revenue Sales” as indicated in Table 7

¹⁷ See: “*Analysis of California’s Publicly-Owned Utilities’ Ten-Year Energy Efficiency Targets*,” January 9, 2008, p.4; NRDC Letter to CMUA (RE: 2007 SB 1037 Report), June 18, 2008, p.3.

¹⁸ The 2009 CMUA Report data show that the average POU cost per kWh equals \$0.02/kWh. This indicates that energy efficiency is extremely cost-effective when compared to supply-side procurement resources.

and portfolio average cost per kWh) can be extremely useful to use in explaining the significant benefits the POU's efficiency portfolios are providing to customers.

Provide more details on assumptions

The POU's should provide more details on the various assumptions they use to report their savings. These details should be provided to the CEC and the public so all parties can understand how the savings data is derived and if and how they can be used to compare utilities' progress against one another. Moreover, as noted last year, it remains unclear whether or not any POU's modified the net-to-gross assumptions from those used by their corresponding investor-owned utilities. If any assumptions have been changed, we request that any modifications be reported in the next SB 1037 report.¹⁹

In addition, as noted last year, a number of POU's include renewable energy achievements within their energy efficiency program overviews. While the data presented within the tables of 2009 CMUA Report appear to be energy efficiency savings only, we reiterate here that the next report should clearly indicate that the POU's are not classifying solar as energy efficiency, as could be interpreted in Appendix A of the 2009 CMUA Report. If these projects are generating rather than saving electricity, they need to be accounted for as part of the California Solar Initiative pursuant to Senate Bill 1 (Murray, 2006) and should not be included in the SB 1037 reports.

While we appreciate the general discussion of the EM&V process (p.11), we urge CMUA to clearly define the default assumptions (and any modifications to these assumptions) used by all utilities (e.g., DEER database values including estimated useful life and net-to-gross values). Therefore, we urge each utility to clearly indicate in the next SB 1037 report any changes in the assumptions used for either self-reported or EM&V reported data.

Increase energy efficiency investments

NRDC is pleased to see that the aggregate POU energy efficiency programs are cost-effective, providing more than three dollars of societal benefits for every dollar invested (as indicated by the weighted average TRC of 3). However, we emphasize again (as we did last year) that although these high TRC ratios indicate that the energy efficiency programs yield significant benefits for customers, they also indicate that there is still a significant opportunity to increase energy efficiency activities while remaining cost-effective. Indeed, some of the higher TRCs likely indicate "cream skimming," where only the cheapest energy savings are being captured while other significant energy savings remain untapped, which may result in lost opportunities at a customer site to achieve deeper energy savings when the easier energy efficiency upgrades are implemented.

For example, *Table 5: All POU Summary by Sector* in the 2009 CMUA Report indicates that residential and non-residential lighting make up 50% of the 2009 projected kWh savings and 51% of the kW savings. (p.18) Although we agree with the report that lighting is greatly cost effective and can yield substantial savings,²⁰ there is still a significant opportunity to expand the current portfolios to focus more on comprehensive

¹⁹ See: NRDC Letter to CMUA (RE 2008 SB 1037 Report), June 16, 2008, p.4

²⁰ 2009 CMUA Report, p.17

programs that capture deeper savings in addition to lighting, while remaining cost effective. In addition, it is important for POU's to conduct EM&V to verify the actual savings from the lighting programs, since they make up such a large portion of the portfolio.²¹

We recommend that rather than eliminating these potentially valuable savings associated with lighting, each POU with a TRC significantly higher than 1 should review their current energy efficiency portfolio to determine where there is potential to expand the current portfolio or add new programs to reach deeper energy savings. Along with this review, the POU's should analyze the amount of additional funding required to successfully capture these additional cost-effective savings, and request additional procurement funding be allocated to capture these additional savings opportunities.²²

Moreover, the POU's' ten-year energy saving targets pursuant to AB 2021 continue to require significant ramp-up in energy savings. However, a number of utilities increased their 2009 energy efficiency targets significantly (relative to last year's target) without a comparable increase in investments (see Figure 6 and 7 in Attachment A), which may jeopardize achievement of their targets.²³ Figure 6 shows that increasing investments and savings are clearly correlated; every POU that decreased its planned investments also decreased its projected savings.

We urge CMUA to work with each POU to ensure that it is consistently ramping up investments and expanding its efficiency portfolio to enable successful achievement of its targets and to capture all cost-effective energy efficiency. As noted above, NRDC offers our support to any POU effort to acquire additional funding or overcome other barriers to enhance or expand their cost-effective energy efficiency programs.

CONCLUSION

In sum, the March 2009 report provides a significant amount of information on the POU's' energy efficiency achievements. Furthermore, NRDC appreciates the improvements on CMUA's first two reports and we commend CMUA, NCPA, SCPPA, and the participating POU's for compiling this useful report. At the same time, much work remains to maximize benefits for the POU's' customers and to meet the requirements of SB 1037 and AB 2021.

²¹ While most lighting programs provide real energy savings that can be depended upon as a resource, we caution that the results of program designs such as free efficient lamp give-aways must be carefully evaluated and verified since they are likely to have lower installation rates than other program designs.

²² A TRC that is significantly greater than 1 indicates that the utility is not capturing all cost-effective energy efficiency. Many POU's will require supplemental funding to capture the significant additional EE savings opportunity.

²³ Ten POU's reduced *both* their projected savings and investments for 2009 relative to their 2008 reported savings (versus only three as reported in the 2008 CMUA Report). This is a significant concern as it will not enable them to meet SB 1037's requirement to achieve all cost-effective efficiency savings. The ten utilities include: Biggs, Burbank, Glendale, Healdsburg, Lodi, Modesto, Needles, Port of Oakland, Roseville, and Ukiah.

We look forward to collaborating with the POU's and the CEC to continue and expand upon this progress in order to make California's POU's leaders on energy efficiency by saving customers money, improving air quality, and helping California meet its global warming pollution reduction goals.

Sincerely,



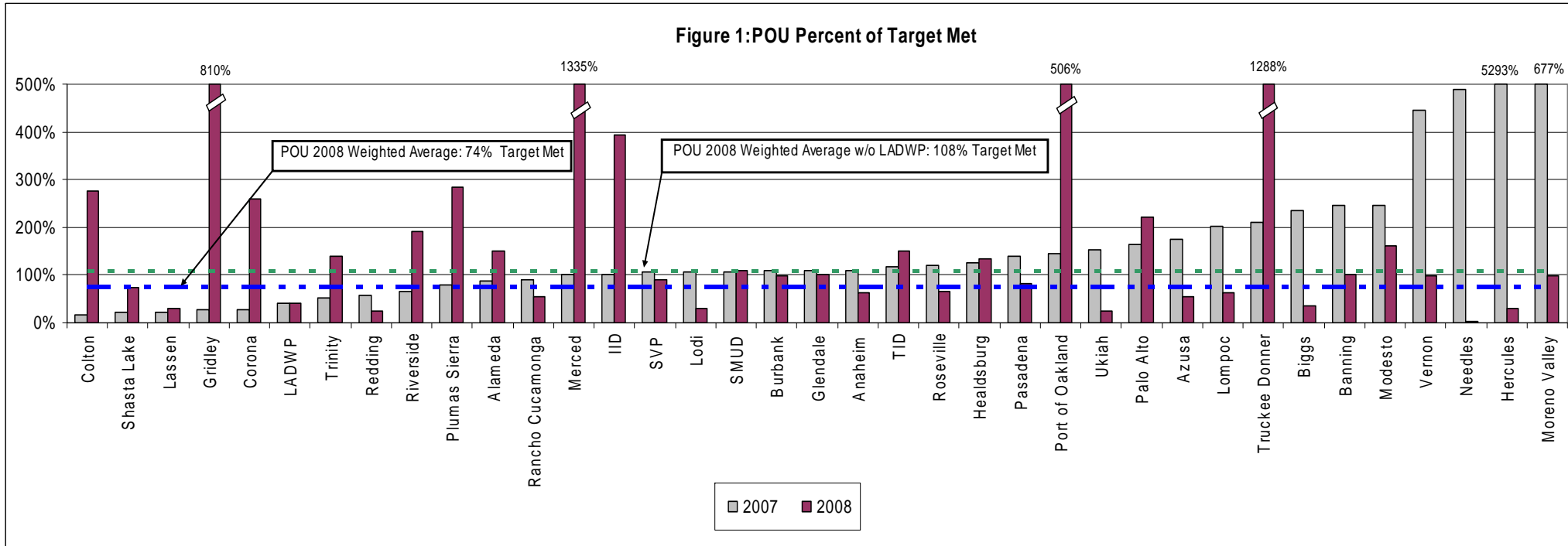
Lara Ettenson
Director, CA Energy Efficiency Policy



Devra Wang
Director, California Energy Program

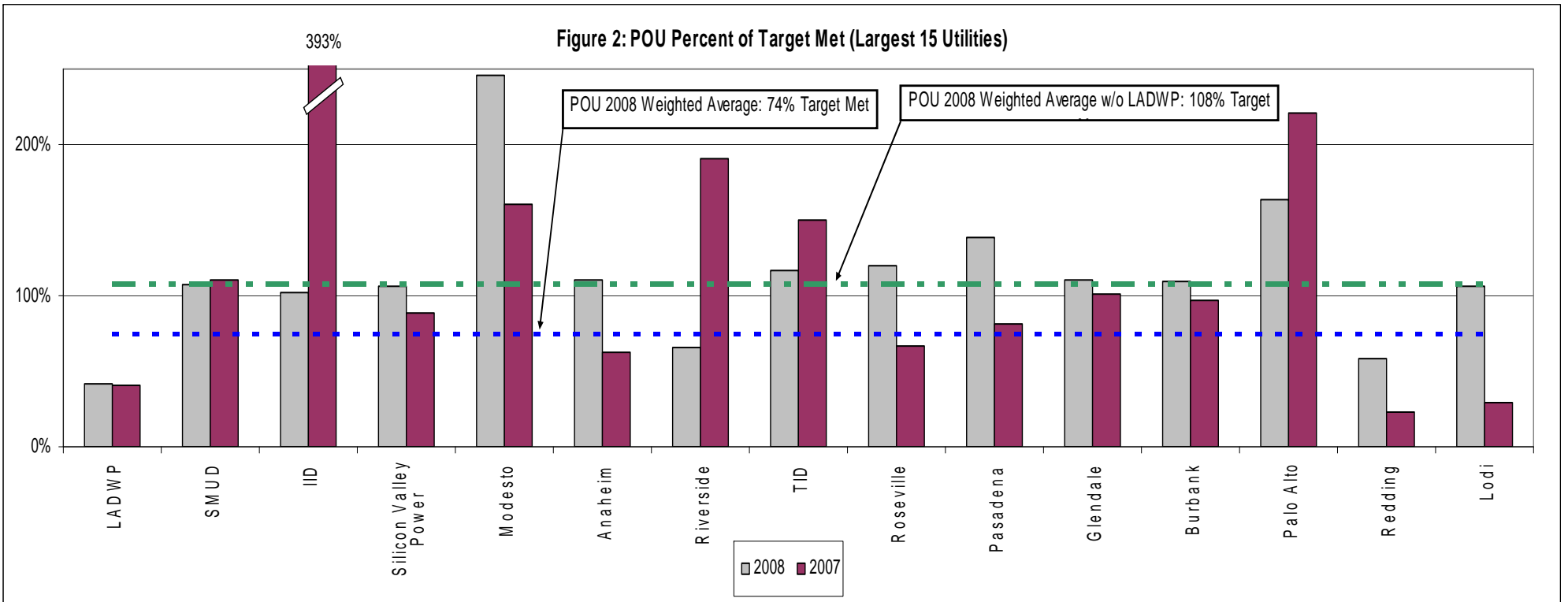
cc: Karen Douglas, Chair, California Energy Commission
James Boyd, Commissioner, California Energy Commission
Jeffrey Byron, Commissioner, California Energy Commission
Arthur Rosenfeld, Commissioner, California Energy Commission
Julia Levin, Commissioner, California Energy Commission
Melissa Jones, Executive Director, California Energy Commission
Senator Kehoe
Senator Padilla
Assembly Member Fuentes

Attachment A



Sources: See page 17 for details on data sources
 Note: Weighted average is based on all POU's

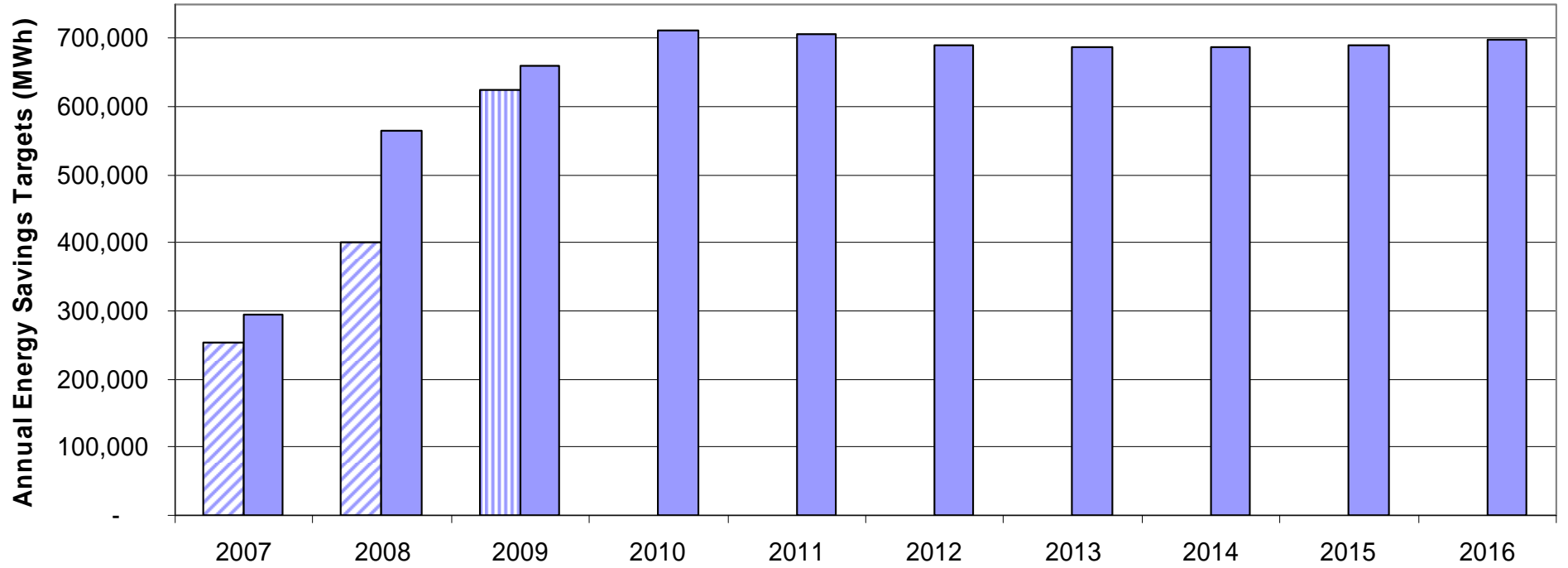
Attachment A



Sources: See page 17 for details on data sources
 Notes: Weighted average is based on all POU

Attachment A

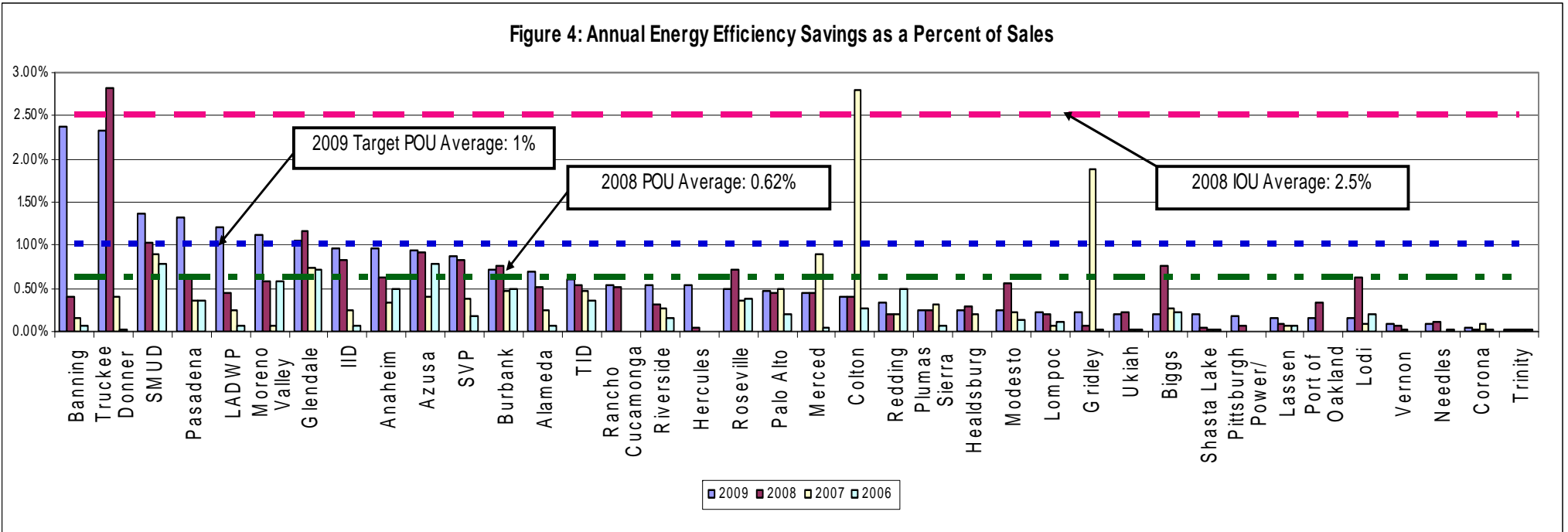
Figure 3: Total POU Energy Efficiency Reported Savings and Targets



- Diagonal Striped Bar: 2007 and 2008 SB 1037 Reported savings (from 2008 and 2009 CMUA Reports)
- Vertical Striped Bar: 2009 SB 1037 forecasted savings targets (from 2009 CMUA Report)
- Solid bars: AB 2021 forecasted savings targets per CMUA AB 2021 Target Report (October, 2007)
- See page 17 for details on data sources

Attachment A

Figure 4: Annual Energy Efficiency Savings as a Percent of Sales

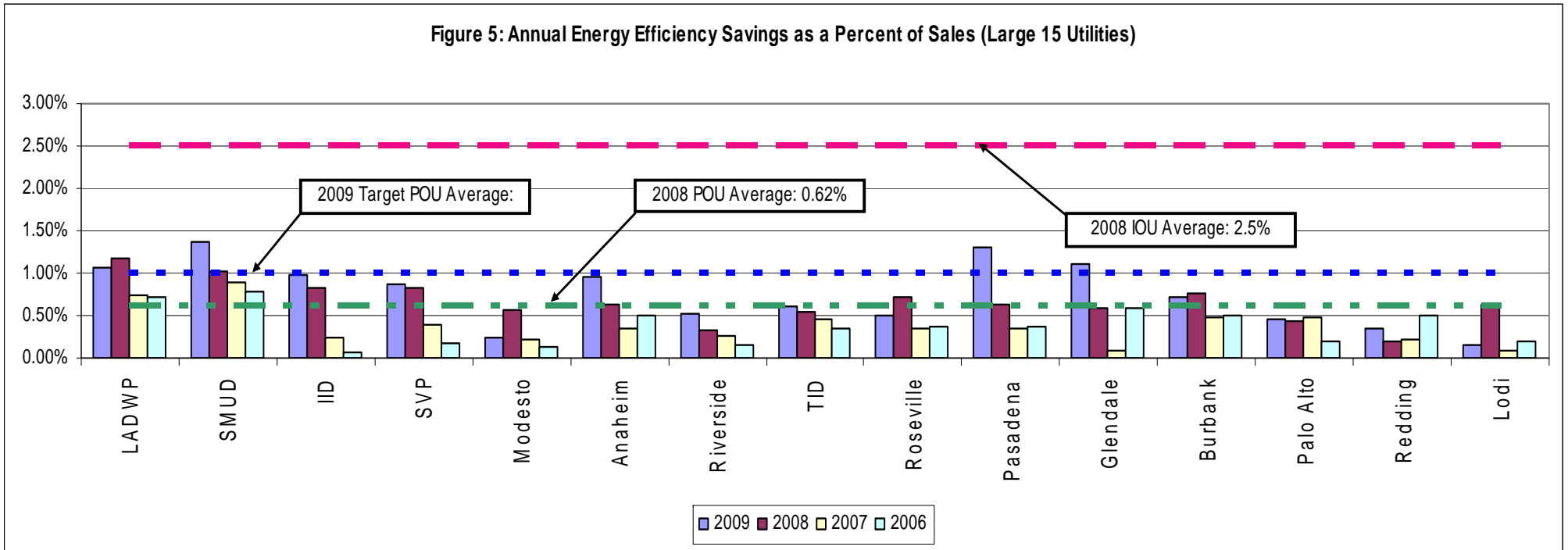


Sources: See page 17 for details on data sources

Note: IOU average percent of sale is from the California Energy Commission and is approximate

Attachment A

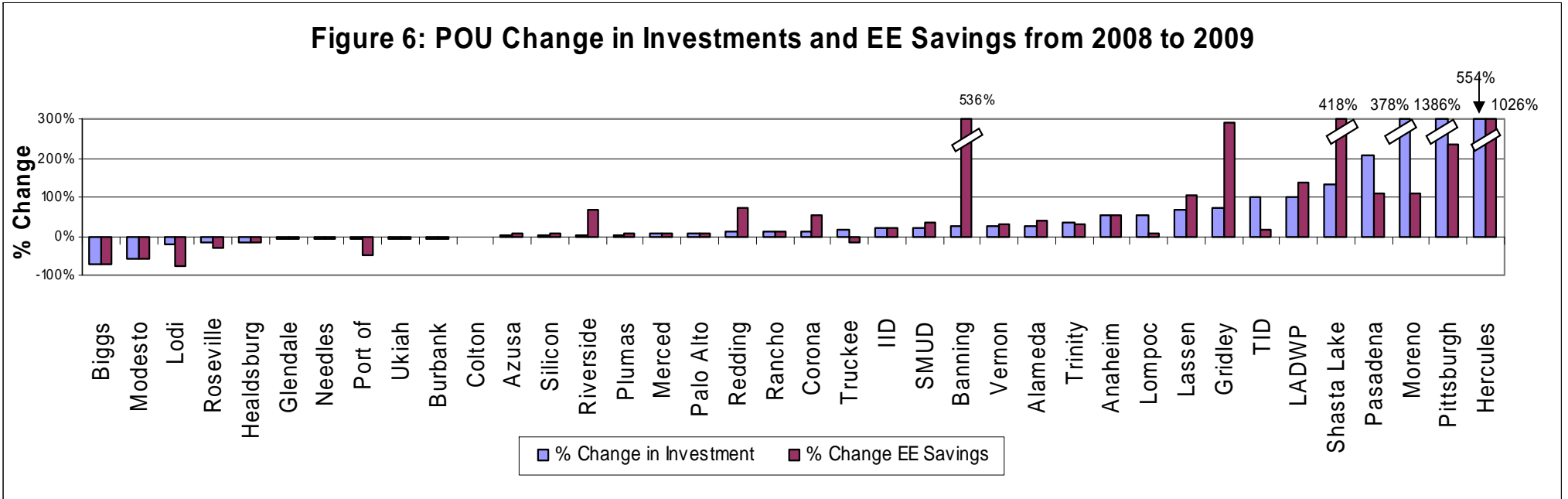
Figure 5: Annual Energy Efficiency Savings as a Percent of Sales (Large 15 Utilities)



Sources: See page 17 for details on data sources

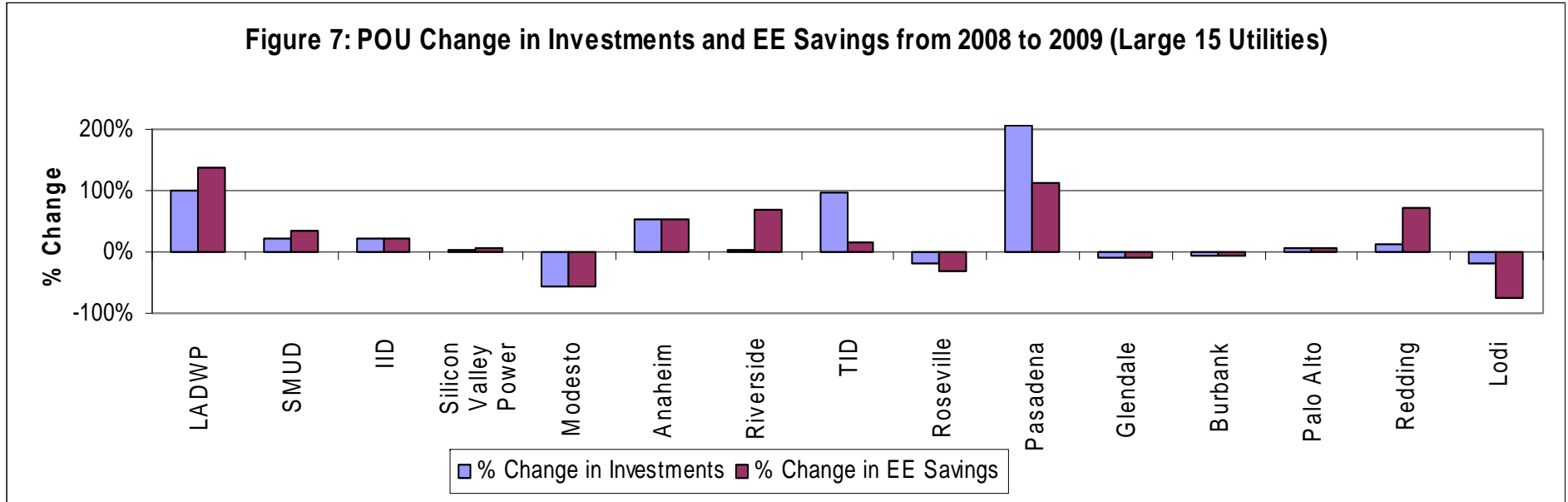
Attachment A

Figure 6: POU Change in Investments and EE Savings from 2008 to 2009



Sources: See page 17 for details on data sources

Attachment A



Sources: See page 17 for details on data sources

Notes:

- (1) Calendar Year 2009 = Fiscal Year 2008-2009 as indicated in CMUA, *Energy Efficiency in California's Public Power Sector: A Status Report*. March 2009. (footnote #2, p. 14) Prior years follow the same pattern.
- (2) All data is reported by the POU's and not verified by NRDC
- (3) All averages are weighted

Sources:

- (1) Reported FY 07-08 data and target FY 08-09 POU Data are from the March 2009 POU EE status report: *Energy Efficiency in California's Public Power Sector: A Status Report*. March 2009. CMUA, NCPA, SCPPA "2009 CMUA Report"
- (2) Reported FY 06-07 data and target FY 07-08 POU data are from the March 2008 POU EE status report: *Energy Efficiency in California's Public Power Sector: A Status Report*. March 2008. CMUA, NCPA, SCPPA."2008 CMUA Report"
- (3) Reported FY 05-06 data and target FY 06-07 data are from the December 2006 POU EE Status report (EE in California's Public Power Sector: A Status Report) - " 2006 CMUA Report"
- (4) AB 2021 Target data for 2009-2016 from: CMUA, *Establishing Energy Efficiency Targets: A Public Power Response to AB 2021 Final Update*. October 2007.
- (5) Forecasted POU Sales Data are from the 2007 AB 2021 CMUA Report and reported by LADWP, Palo Alto, SMUD, and Redding

**Comments of the Natural Resources Defense Council (NRDC) on the
2009 Integrated Energy Policy Report (IEPR)
Assembly Bill 2021 Implementation**

Docket Number 09-IEP-1F
2009 IEPR – AB 2021
June 30, 2009

Submitted by:
Lara Ettenson and Devra Wang

I. Introduction and Summary

The Natural Resources Defense Council (NRDC) appreciates the opportunity to offer these comments on the issues discussed at the California Energy Commission’s (CEC) *2009 Integrated Energy Policy Report (IEPR)* committee workshop on the implementation of Assembly Bill 2021 (AB 2021) held June 9, 2009 and on the draft staff “*Achieving Cost-Effective Energy Efficiency for California: Second Annual AB 2021 Progress Report*,” June 2009 (Draft Progress Report). NRDC is a nonprofit membership organization with a long-standing interest in minimizing the societal costs of the reliable energy services that Californians demand. We focus on representing our more than 130,000 California members’ interest in receiving affordable energy services and reducing the environmental impact of California’s energy consumption. We provide our comments on the workshop and Draft Progress Report below and include for your reference a letter from NRDC to CMUA that includes our analysis of CMUA’s 2009 SB 1037 Status Report (2009 CMUA Report) and NRDC’s additional recommendations for improvements to future reports. As our comments below elaborate, we urge the CEC to add the following recommendations to the Draft Progress Report:

- Every POU should provide EM&V plans and studies, and verified program results in next year’s report. Only about one quarter of the POUs had completed EM&V studies for the 2009 CMUA report.
- The POUs should work with the CEC and interested stakeholders in preparing their efficiency potential studies and AB 2021 ten-year energy and demand saving targets, in order to increase consensus around the final targets. The POUs should conduct a more rigorous assessment of the feasible potential for cost-effective energy efficiency than they did in 2007, and should use the following frameworks and input assumptions in conducting the potential studies:

- the Total Resource Cost (TRC) cost-effectiveness test;
- energy efficiency measure savings and unit costs based on either an existing credible resource such as the Database for Energy Efficiency Resources or other reasonable, documented, assumptions;
- avoided costs should include all cost elements including generation, transmission, distribution, and environmental costs, and should reflect the time-varying value of savings;
- a societal discount rate of 3% real
- The POU should provide detail on their methodology for determining feasible potential when they submit their AB 2021 ten-year targets, and they should include an estimate of the total net economic benefits (calculated using the TRC framework) for each utility from achieving the targets.
- Most POU did not comply with the CEC's request last year to provide information about procurement funding of energy efficiency programs. Each POU should identify in the next report the use of funds other than public goods charge (PGC) allocated to energy efficiency, and provide responses to the following questions to indicate whether they are using procurement funding to supplement the public funds charge to achieve all cost-effective energy efficiency: (i) How is energy efficiency accounted for in long-term procurement plans or integrated resource plans? (ii) What mechanisms are used to recover the costs of the energy efficiency programs? (iii) What portion of the public benefits fund is invested in: energy efficiency, low-income assistance, renewable energy, and RD&D? (iv) What percent of efficiency program funding comes from procurement budgets?
- The next SB 1037 report should include the following metrics for each POU in addition to the data currently provided: (1) total net benefits, (2) annual energy savings as a percent of SB 1037 projected savings and AB 2021 target, (3) annual energy savings as a percent of electricity sales, and (4) the portfolio average cost per kWh.
- POU with a TRC significantly higher than 1 should review their current energy efficiency program portfolio to determine where there is potential to expand the current portfolio or add new programs to reach deeper energy savings, and revise program designs, where appropriate, to avoid cream skimming and lost opportunities.

II. Discussion

NRDC appreciates the ongoing effort of the Energy Commission staff to continue the AB 2021 implementation process and for soliciting input from stakeholders.

Aggressively pursuing energy efficiency across the state will be necessary to meet California's goals of providing affordable, reliable energy services to customers while meeting the greenhouse gas emissions limits required under Assembly Bill 32. We

generally support the Draft Progress Report's recommendations, but urge the CEC to significantly expand the recommendations to cover the issues discussed below.

1. NRDC urges the CEC staff to work with the POU's to fully integrate energy efficiency into resource procurement investments as the law requires.¹

NRDC appreciates the increase in utility investments in energy efficiency programs over the past few years that have enabled the POU's to significantly increase their energy savings and lower customers' bills by hundreds of millions of dollars. We recognize the difficult financial climate that energy efficiency planners face today but continue to note that there are still significant energy savings to be captured and, as noted in the 2008 IEPR Update, the "public goods charge allocations for the publicly owned utilities are insufficient to achieve the savings needed to meet all cost-effective energy efficiency."² In addition, we are concerned that the POU's' projected savings as reported in the 2009 CMUA Report will not meet their stated AB 2021 targets.³ (p. 14) This indicates that the utilities are not pursuing all cost-effective energy efficiency and will likely require additional procurement funding (above current public goods charge allocations) to achieve their AB 2021 targets.

We therefore continue to recommend that Commission staff work closely with the POU's to fully integrate efficiency into their resource procurement plans and to identify procurement funding to supplement the public goods funding for efficiency (i.e. to redirect funds that would have gone to purchase more expensive supply-side power to the cheaper efficiency options). Moreover, as energy efficiency continues to be the cheapest, fastest, and cleanest resource that saves customers money on their energy bills, we recommend that the CEC offer assistance to and provide a forum for utilities to address the potential barriers they face when requesting additional funding to expand their energy efficiency portfolios.

As the Draft Progress Report notes, last year the CEC specifically requested that the POU's "identify in their next report the use of funds other than PGC allocated to energy efficiency." (p.12) However, only very few of the POU's complied with this

¹ See attached NRDC Letter to CMUA June 30, 2009, p. 4-5 for a more detailed discussion on this matter

² California Energy Commission 2008, *2008 Integrated Energy Policy Report Update*, CEC-100-2008-008-CMF, p.48

³ AB 2021 targets and goals are used interchangeably

request. Without this information, the CEC may need to conclude that most POU's are not complying with AB 2021's requirement to treat efficiency investments as procurement investments. We support the CEC request for historic and forecast total public goods charge amount allocated to various energy efficiency programs, and urge the Commission to ensure that the POU's follow through with this request. (p.27) However, while this information is necessary, it is not sufficient for the CEC to evaluate whether the POU's are meeting the law's requirement.

We recommend that the CEC specifically renew its request that each POU identify in their next report the use of funds other than PGC allocated to energy efficiency, and provide the following information to indicate whether the utilities are in fact using procurement funding to supplement the public goods charge to achieve all cost-effective energy efficiency:

- How is energy efficiency accounted for in long-term procurement plans or integrated resource plans?
- What mechanisms are used to recover the costs of the energy efficiency programs?
- What portion of the public benefits fund is invested in: energy efficiency, low-income assistance, renewable energy, and RD&D?
- What percent of efficiency program funding comes from procurement budgets?

Moreover, while we are encouraged that the POU's intend to tap into the American Recovery and Reinvestment Act (ARRA) funds to capture additional energy efficiency savings, we want to emphasize that these funds are intended to *supplement* and not *supplant* existing funding mechanisms. Therefore, we recommend that the CEC work with the POU's to ensure that the utilities are using all available funding to pursue energy efficiency before accessing the ARRA funds. Furthermore, we recommend that the POU's include an analysis in the next SB 1037 report detailing how they first used all available public benefit funds and procurement dollars before using ARRA funding to enhance or expand their energy efficiency programs.

2. NRDC urges the CEC to continue working with the POU's to ensure they carry out a robust EM&V process that meets the law's requirement and industry-accepted standards for rigorous independent evaluation of energy savings.

We are encouraged to see initial progress that the POU's have made this past year towards expanded and improved independent evaluation, measurement, and verification, but it is clear the POU's still need to significantly expand their EM&V efforts to meet AB 2021's requirements. The Draft Progress Report discusses some of the activities the POU's have undertaken and provides a few detailed EM&V recommendations, but the Draft Progress Report currently lacks a general overview of the status of the POU's' EM&V efforts. As Table A-6 summarizes, only 10 of the POU's – approximately one quarter of the utilities – have completed EM&V studies. While a handful more have EM&V plans, this clearly indicates that the POU's need to focus on expanding their EM&V efforts over the next year. We urge the CEC to provide a high-level summary of the status of the POU's' EM&V efforts in its final report, and the CEC should also make it clear that it will expect EM&V plans and results from *all* utilities next year, which will be three years after AB 2021 became law.⁴

We support the CEC recommendation that the CFL distribution program should be targeted for the 2009-2010 impact evaluation. (p.28) A number of utilities include CFL distribution programs (e.g., CFL drop offs and free giveaways) that likely will result in lower installation rates than a more targeted lighting approach. Rigorous assessment of the savings associated with these (and all energy efficiency) programs is essential to ensure that efficiency measures yield *actual* savings that can be counted on as a procurement resource.

In addition, NRDC supports the CEC recommendation to ensure that updates to “source materials for the savings and cost-effectiveness model” be considered when the POU's revise their efficiency planning model. (p.28) This not only ensures that the POU's are utilizing the most up-to-date information when determining their actual energy savings, but it will also ensure a fair comparison across utilities (both public and investor-owned). Moreover, we continue to support the CEC's role in working with the utilities to ensure that the methodologies are thorough, transparent, and comparable to those used by

⁴ Not all utilities have developed an EM&V plan (p.14)

the California Public Utilities Commission to evaluate the investor-owned utilities' portfolios. Consistent, robust, and independent evaluation is critical to ensure that energy efficiency can be depended upon as a resource.

3. NRDC strongly recommends that the CEC urge the POUs to consistently report industry-accepted metrics to provide a more complete indication of utility energy efficiency savings and investment achievements.

NRDC appreciates the additional metrics that were presented by CEC staff at the June 9, 2009 CEC IEPR workshop and looks forward to seeing their inclusion in the final staff AB 2021 status report. While we are encouraged by the positive trends showing increased energy efficiency savings and investments as noted by a number of POUs at the June 9, 2009 CEC Integrated Energy Policy Report (IEPR) workshop, we emphasize here that in addition to trends, it is important to simultaneously measure their achievement relative to aggressive energy saving targets and industry benchmarks. This information indicates the level of utility achievement towards capturing all cost-effective energy efficiency savings and can be used to compare achievements across utilities.

We strongly urge the CEC to recommend that the POUs consistently report the following metrics for each POU in addition to the data they currently provide: (1) total net benefits, (2) annual energy savings as a percent of SB 1037 projected savings and AB 2021 target, (3) annual energy savings as a percent of electricity sales, and (4) the portfolio average cost per kWh which can be compared to supply-side procurement costs.

Both the Draft Progress Report and the CMUA Status Report provided new useful information this year on each POUs' annual investments as a percent of revenue. While the Draft Progress Report's Figure 2 provides a very useful comparison across California's POUs, we urge the CEC to also include a discussion and benchmarks to compare these utilities to the investor-owned utilities in California and best-practices across the nation. For example, the Draft Progress Report finds the POUs on average invested approximately 1.3% of revenues in energy efficiency (p.13), whereas highly aggressive program tend to invest 2% of revenues.⁵ Several POUs reported aggressive

⁵ See, for example, the following two reports by the American Council for an Energy-Efficiency Economy (ACEEE), which show that the top states invest more than 2% of revenues in energy efficiency. Eldridge, M. et al, *The State Energy Efficiency Scorecard for 2006*, ACEEE Report E075, June 2007.

levels of investments above 2% of revenues, but many POU have very low levels of investment and the POU average provides another indication that POU in aggregate have room to significantly expand their efficiency savings.⁶

All of these metrics yield considerable information and offer industry benchmarks to compare the level of utility achievement towards capturing all cost-effective energy efficiency. In addition, the cost-effectiveness metrics (total net benefits and portfolio average cost per kWh) can be extremely useful in explaining the significant benefits the POU's efficiency portfolios are providing to customers.

4. In advance of the AB 2021 goals update due next year, NRDC urges the CEC staff to work closely with the POU and stakeholders to ensure the next goals are based on a rigorous assessment of the feasible potential.

We appreciated the CEC staff and POU's collaborative efforts to develop the first ever energy saving targets under significant time constraints in 2007. While many POU set aggressive targets, unfortunately, some POU did not set aggressive targets or provide enough information for the Commission to assess the reasonableness of their targets. The POU will have had plenty of time to analyze their efficiency potential for the next targets they set, so the CEC should make it clear that it expects every POU to set aggressive targets to meet the laws requirement of capturing all cost-effective and feasible potential.

In addition, the CEC should ensure that all assumptions associated with the target setting process are fully transparent. Without a full understanding of the target setting process, it is difficult to determine whether or not meeting or exceeding a target is due to outstanding energy efficiency program implementation or whether the success is due to weak targets. Conversely, it is difficult to determine whether shortfalls are due to lack of performance or to targets that are unrealistic. We therefore strongly urge the Commission to provide clear guidance for improving the next POU target-setting process currently underway. *A collaborative effort to define expectations up-front can save all parties significant time and increase consensus around the final goals.*

Kushler, M. et al, *Meeting Aggressive New State Goals for Utility-Sector Energy Efficiency: Examining Key Factors Associated with High Savings*

⁶ See attached NRDC Letter to CMUA, June 30, 2009 p.5-6 for a more detailed discussion of POU metrics

Below we include an excerpt from our “*Analysis of California’s Publicly-Owned Utilities’ Ten-Year Energy Efficiency Targets*” dated January 9, 2008 (p.3-4) with our recommendations for CEC guidance to the POU’s to ensure a rigorous assessment of the feasible potential:

- ◆ Recommend that the POU’s conduct a **more rigorous assessment of the feasible potential** when they update their targets in three years, and require that the POU’s provide detail on their methodology for determining feasible potential as part of AB 2021’s requirement that the POU’s provide the Commission with the “basis for establishing [their] targets.”
 - ◆ **Provide clear guidance for improvements to the next potential study** the POU’s conduct. There are numerous decisions utilities will make about the analytical framework and input assumptions used to develop their energy efficiency potentials and targets. The Commission should clearly delineate its expectations that the:
 - **cost-effectiveness test** should be the Total Resource Cost (TRC) test;
 - energy efficiency **measure savings and unit costs** should be based on either an existing credible resource such as the Database for Energy Efficiency Resources or other reasonable, documented, assumptions;
 - **avoided costs** should include all cost elements including generation, transmission, distribution, and environmental costs, and should reflect the time-varying value of savings;
 - **discount rate** should be a societal discount rate of 3% real, consistent with the discount rate used by the Commission in evaluating energy efficiency standards, and in no case should be greater than the utility’s weighted average cost of capital; and
 - report should include an estimate of the **total net economic benefits** (calculated using the TRC framework) for each utility from achieving the targets.
5. **NRDC recommends that the CEC urge those utilities with TRCs that are significantly above 1 to analyze their energy efficiency portfolios to enhance or expand their programs in order to capture *all* cost-effective energy efficiency savings.**

Although we are pleased that the POU’s are developing cost-effective energy efficiency portfolios, the reported TRC of 3 indicates there is significant opportunity to reach deeper energy savings while remaining cost-effective, thereby further increasing the net benefits to customers. Indeed, some of the higher TRCs likely indicate “cream skimming,” where only the very cheapest energy savings are being captured while other significant energy savings remain untapped, which may result in lost opportunities at a

customer site to achieve deeper energy savings at the time that the easier energy efficiency upgrades are implemented.

NRDC agrees with the first staff AB 2021 Progress Report finding that “it is clear from the cost-effectiveness data...that POU programs can be further expanded to benefit their customers and society.”⁷ Therefore, NRDC recommends that the CEC work together with those POUs that have a TRC significantly higher than 1 to review their current energy efficiency program portfolio to determine where there is potential to expand the current portfolio or add new programs to reach deeper energy savings.⁸ Concurrent with this review, the CEC should work with the POUs to determine the amount of additional funding required to successfully capture these additional cost-effective savings, and urge the POUs to request that additional procurement funding be allocated to capture these additional savings opportunities.

III. Conclusion

Thank you for the opportunity to comment on the issues relating to the AB 2021 workshop and CEC Draft Progress Report and for considering our recommendations. We look forward to continuing to work with the POUs and CEC to capture all cost-effective energy savings for California.

⁷ Kae Lewis and Irene Salazar, *Achieving Cost-effective Energy Efficiency for California: An AB 2021 Progress Report*, California Energy Commission, Electricity Supply Analysis Division, CEC-200-20078-007, p.21

⁸ See attached NRDC Letter to CMUA, June 30, 2009 p.7-8 for a more detailed discussion on this matter