BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Reform the Commission's Energy Efficiency Risk/Reward Incentive Mechanism	Rulemaking 12-01-005 (Filed January 12, 2012)

COMMENTS OF THE NATURAL RESOURCES DEFENSE COUNCIL (NRDC) ON THE ADMINISTRATIVE LAW JUDGE'S RULING CALLING FOR COMMENTS ON INCENTIVE REFORM ISSUES

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I. INTRODUCTION AND SUMMARY

Pursuant to Rules 1.9 and 1.10 of the California Public Utilities Commission's (CPUC or Commission) Rules of Practice and Procedure, the Natural Resources Defense Council (NRDC) respectfully submits these comments on the "Administrative Law Judge's Ruling Calling for Comments on Incentive Reform Issues," (ALJ Ruling) issued June 15, 2012. NRDC is a non-profit membership organization, with nearly 100,000 California members with an interest in receiving affordable energy services and reducing the environmental impact of California's energy consumption.

NRDC urges the Commission to make aligning the financial incentives it provides to the utilities with its energy efficiency policies a top priority. We commend the Commission for moving this proceeding forward, and aiming to ensure that any revised efficiency incentive mechanism coincides with the start of the 2013-14 efficiency program cycle.

In these comments, NRDC recommends a new framework for an incentive mechanism to better align with the Commission's new objectives for the energy efficiency programs. To develop this proposal, NRDC started with a clean slate, outlined the principles and objectives a new mechanism should aim to achieve, and examined the incentive mechanisms in other states to take the lessons learned to apply to a new approach for California. In particular, we found that several states in the northeast (including MA, RI, and VT) have mechanisms that aim to achieve some similar objectives to the CPUC's new objectives. We spoke with experts that work in these various states to learn what has worked well, what challenges they've experienced and what

recommendations they have for California. NRDC's new proposal aims to best meet the principles and objectives we describe below, while taking into account these lessons learned from the mechanisms in the Northeast.

NRDC's recommendations are summarized as follows:

- NRDC urges the Commission to adopt a new incentive mechanism to better align the utilities' incentives with the CPUC's current energy efficiency policy goals.
- The Commission should clearly state principles and criteria for evaluating incentive mechanism proposals that reflect its overarching policy objectives.
- The Commission should explicitly separate the discussion of the *magnitude* of potential earnings and penalties from the discussion of whether the *structure* of a new incentive mechanism spurs the right outcomes.
- NRDC recommends that the CPUC adopt a new incentive mechanism that would spur superior performance by making utility earnings directly proportional to achievement of the CPUC's primary objectives – maximizing lifetime energy savings and other key performance metrics – while ensuring that efficiency investments remain cheaper than alternative resources.
- NRDC's proposed mechanism meets the key criteria for a new incentive mechanism more effectively than the existing shared savings approach.
- The ALJ Ruling raises questions about the value energy efficiency provides to customers and its ability to reduce the need for supply-side resources. This Commission has long held that energy efficiency is in fact a resource that can and should be relied upon in lieu of conventional resources, and that continues to be true today.
- If the CPUC is unable to make a timely decision on a new incentive mechanism for 2013-14, then the CPUC should make the simple changes to the shared savings mechanism that NRDC recommended previously.

II. PROPOSAL FOR A NEW EFFICIENCY INCENTIVE MECHANISM

A. NRDC urges the Commission to adopt a new incentive mechanism to better align the utilities' incentives with the CPUC's current energy efficiency policy goals.

Incentive mechanisms must always be designed to meet specific policy objectives. When the Commission adopted the 2006-08 shared savings mechanism, it was very clear that its primary objectives were to both maximize benefits and minimize costs – in other words to maximize *net economic benefits* for customers. This approach maximizes bill savings for customers. NRDC strongly supported the Commission's existing shared savings incentive mechanism, and we continue to support shared savings mechanisms in other states around the country. Although

implementation of the 2006-08 shared savings mechanism faced a number of challenges (that were discussed at length in R.09-01-019), it worked as intended with regard to spurring the utilities to maximize net economic benefits for customers.

Today, the Commission has shifted the primary focus of its overarching objectives for the energy efficiency programs – a shift that NRDC supports. In the CPUC's guidance decision for the 2013-14 portfolio, the Commission made clear that its overarching objectives are now to capture all cost-effective energy savings through deeper, more comprehensive, and longer-lasting savings. (D. 12-05-015, pp. 10-11) This is reflected in the ALJ Ruling's direction that parties' incentive proposals should address "how to place greater emphasis on programs offering deeper savings, measures with higher up-front costs and longer design lives, and market transformation efforts…" (ALJ Ruling, p. 3) The Commission's increased focus on maximizing energy savings is also consistent with the statewide effort to cut greenhouse gas emissions. Since the Commission's primary objectives for the efficiency programs have changed, it is appropriate for the CPUC to consider new incentive mechanisms that will better align the utilities' incentives with the Commission's objectives.

B. The Commission's principles and criteria for evaluating incentive mechanism proposals should reflect its overarching policy objectives.

The CPUC should be clear about its principles and criteria for evaluating new incentive mechanism options. Energy Division's 2009 White Paper provided a good summary of the overall intent of the incentive mechanism:

> "The intent of the energy efficiency incentive mechanism is to provide the IOUs with an earnings potential that is directly related to the success of their energy efficiency portfolios in a manner that encourages energy efficiency to be a core business pursuit in the eyes of IOU management, shareholders, and the financial and energy utility industries. The incentive mechanism is viewed as one of the key policy tools motivating the IOUs to undertake their best efforts in implementing the energy efficiency activities that support the Commission's energy resource loading order policy."[1]

Based on this intent, NRDC recommends that any new incentive mechanism should meet the following principles:

- Ensure that utilities that perform better at securing energy efficiency savings are more profitable than those that perform poorly;

[1] CPUC Energy Division, *White Paper: Proposed Energy Efficiency Risk-Reward Incentive Mechanism and Evaluation Measurement & Verification (EM&V) Activities*, April 1, 2009.

- Level the playing field between energy efficiency and supply-side resources;
- Create a win-win opportunity for customers and shareholders;
- Provide a balance of potential risks and rewards, tied to performance; and
- Spur utilities to reach the Commission's overarching policy goals.

In addition, the ALJ Ruling cites the criteria Energy Division proposed in their 2009 White Paper.[2] NRDC agrees with many of the criteria proposed by Energy Division, however, we urge the Commission to expand upon and/or modify them in some important ways. NRDC recommends that the Commission use the following criteria in evaluating potential incentive mechanisms:

- **Effective:** Does the mechanism spur the utilities to capture all cost-effective energy savings through efforts that achieve deeper, more comprehensive, and longer-lasting savings? Does the mechanism seek to maximize GHG reductions and encourage both market transformation and resource acquisition programs?
- **Simple, transparent, and predictable:** Is the mechanism simple and easy to understand? Does the mechanism ensure timely implementation and predictable outcomes?
- **Utility commitment:** Will the mechanism help ensure the utilities are committed to energy efficiency as the top priority energy resource?
- **Prudent use of customer funds:** Will the mechanism spur the utilities to maximize energy savings in a cost-efficient manner? Will the mechanism ensure that customers are always better off when utilities invest in efficiency instead of alternatives?
- **Accurate, timely and collaborative EM&V:** Will the mechanism encourage parties and the Commission to work together to ensure evaluation results are accurate, timely and improve over time?
- **Codes and standards:** Will the mechanism spur the utilities to pursue the most effective and cost-effective approach to capture savings, whether through codes and standards improvements or programs?
- **Innovation**: Will the mechanism help foster innovation in approaches to capture energy savings?

C. The Commission should explicitly separate the discussion of the *magnitude* of potential earnings and penalties from the discussion of whether the *structure* of a new incentive mechanism spurs the right outcomes.

For some time, the Commission and all parties have recognized the friction between components of the existing shared savings mechanism and the CPUC's new direction on energy

[2] NRDC commented on Energy Division's proposed criteria in our *Opening Comments of the Natural Resources Defense Council on the Energy Division White Paper on "Proposed Energy Efficiency Risk Reward Incentive Mechanism and EM&V Activities,* R.09-01-019, April 29, 2009.

efficiency; however, it has been difficult to discuss any modification to the mechanism in part because many parties assume that any change to the underlying structure will automatically increase or decrease potential earnings. In considering a new mechanism, it is essential that the Commission separate the discussion of the *structure* of the incentive mechanism (i.e., does it give the right incentives to spur the actions that the Commission wants?) from the discussion of the appropriate *magnitude* of potential earnings/penalties.

Many parties can agree on the overarching objectives for the efficiency portfolios and the actions that any incentive mechanism should aim to drive. Numerous details within any mechanism influence the ultimate incentives that the mechanism provides. For example, factors like the use of the PAC versus TRC cost-effectiveness test or capping measures' effective useful lives have a significant impact on the actions that the mechanism would ultimately incentivize. The Commission should ask parties first to examine these factors through the lens of whether they will spur outcomes that meet the Commission's objectives, and parties should be free to explore and discuss these details without concern about whether it will increase or decrease the ultimate level of potential earnings/penalties. Once the Commission has parties' input on the structure of a new mechanism to best meet the Commission's objectives, then the CPUC should ask for parties' input on the appropriate magnitude of potential earnings and penalties based on the structure(s) under consideration.

D. Overview of NRDC's proposal for a new incentive mechanism.

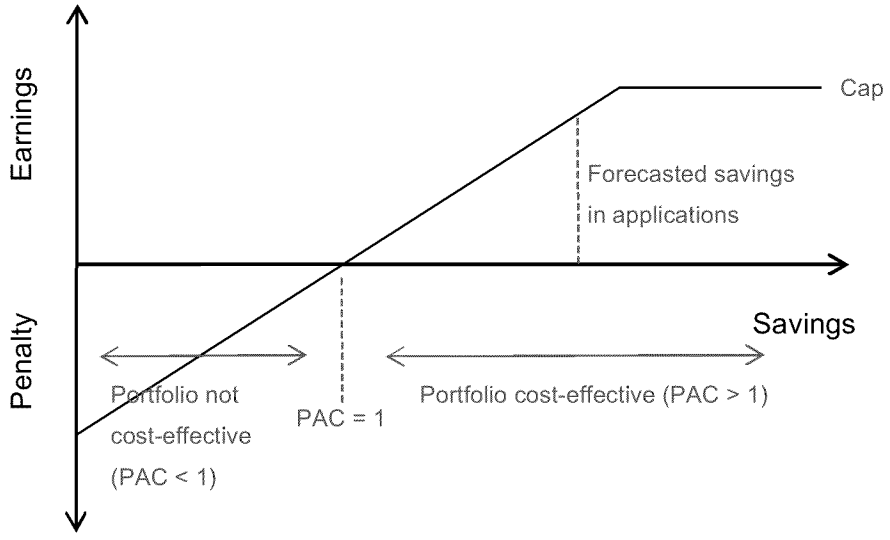
a. Summary

NRDC recommends that the CPUC adopt a new incentive mechanism that would spur the utilities to maximize energy and demand savings, while ensuring that efficiency investments remain cheaper than alternative resources. NRDC's proposal would give the utilities an opportunity to earn a profit based on their performance at saving energy and demand, and for meeting specific performance metrics to meet additional CPUC objectives. Once the portfolio is cost-effective, earnings would increase linearly as a function of lifetime energy and demand savings. Earnings would be capped at a predetermined level, and the utilities could only reach the cap if they exceed the level of energy and demand savings they expect to achieve in their applications (which exceeds the CPUC's goals). The mechanism would count savings from all net

program lifetime savings (using ex-ante values for all key metrics except actual installations) as well as the lifetime savings from all codes and standards savings from measures installed in a given year in the utility's service territory. Utilities would also face a penalty in the form of a "cost-effectiveness guarantee" that ensures that customers will never lose money on their investment in efficiency efforts.

Figure 1 illustrates the design of the part of the mechanism aimed at maximizing energy and demand savings. The component for advancing specific performance metrics to meet additional CPUC policy objectives is discussed further below.

Figure 1: Illustration of NRDC's Proposed Incentive Mechanism



This mechanism would:

- Spur superior performance by making utility earnings directly proportional to achievement of the CPUC's primary objectives – maximizing energy savings and other key performance metrics;
- Spur long-lived savings by focusing on the lifetime savings of measures;
- Ensure that customers are always financially better off when utilities invest in efficiency rather than alternative resources, and are protected against financial losses on their investment in efficiency;
- Only provide earnings if the efficiency portfolio is cheaper than the alternative resources;
- Provide potential risks and rewards to the utilities, with caps to ensure earnings or penalties stay within expectations; and

- Spur the utilities to pursue the most effective and cost-effective approach to capture savings, whether through codes and standards improvements or programs.

b. Outline of NRDC's proposal

This section provides a detailed framework for NRDC's proposed new incentive mechanism. We have attempted to provide as detailed an outline as possible, but additional details remain to be worked out, in particular to define the quantitative elements of the framework (e.g. the specific earnings cap). As noted above, we recommend that the Commission and parties design a framework that will incentivize the right outcomes before turning to the question of the appropriate magnitude of potential earnings/penalties. We recommend a workshop and comment process to develop and discuss those additional details, below.

Assessing Performance:

The Commission should base potential earnings on three metrics to encourage the utilities to maximize lifetime energy and demand savings, including savings from both electricity and natural gas: electric savings (GWh), demand savings (MW), and natural gas savings (therms). These three metrics should:

- Be based on ex-ante values, with ex-post updates for actual installations only. Ex-ante values should be fixed in advance of the start of the program cycle and held constant for the purpose of assessing the incentive mechanism;
- Count all net[3] lifetime savings of measures actually *installed* in a given year from programs; and
- Count all lifetime savings from codes and standards (C&S) upgrades from measures installed in a given year in the utility's service territory.[4] Savings from C&S upgrades should be subject to a time limit (i.e. utilities can count *lifetime* savings from new C&S from measures actually installed in their territory that year, and for measures installed in their territory for X number of years after the new C&S goes into effect).

In addition, the Commission should eliminate or raise the cap on measures' effective useful lives (EULs),[5] so that all the savings from long-lived measures are actually counted.

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[3] Note that net-to-gross ratios are fixed ex-ante.

[4] Note that this would include all savings from codes and standards upgrades, without attempting to "attribute" what portion of the savings each utility "caused" as is presently done. The rationale for this proposal is discussed further below.

[5] In prior versions of the Policy Manual, the Commission explicitly stated a cap on EULs of 20 years. See, e.g., *Energy Efficiency Policy Manual,* Version 1, October 2001, p. 20. Although we are not aware of an explicit cap on EULs in the current Policy Manual or Commission rules, none of the current EULs for DEER 2011 are higher than 20

Threshold:

The utilities should only be allowed earnings if their portfolio's actual performance passes the Program Administrator Cost (PAC) test.

Cap:

The CPUC should define the magnitude of the potential earnings opportunity up-front by setting a cap based on the five criteria the Commission established in D.07-09-043 to determine the appropriate earnings opportunity:[6]

> (a) What level of earnings will balance the level of potential penalties under the mechanism and offset existing financial and regulatory biases in favor of supply-side procurement.
>
> (b) What level of earnings potential will provide a clear signal to utility investors and shareholders that achieving and exceeding the Commission's savings goals (and maximizing ratepayer net benefits in the process) will create meaningful and sustainable shareholder value.
>
> (c) Differences in the risk/reward profiles of utility resource choices in applying the comparable earnings benchmark to the incentive mechanism.
>
> (d) The level of performance expected in return for higher and higher earnings potential.
>
> (e) What is "fair" to ratepayers in terms of the return on their investment in energy efficiency.

In addition, the CPUC should ensure that the portfolio remains cost-effective once earnings are included; in other words, the portfolio (including earnings) must pass the PAC cost-effectiveness test, otherwise earnings should be capped so that the overall cost of the efficiency efforts will never exceed alternative resources.

Finally, the mechanism should include a sub-cap on earnings from codes and standards savings to ensure that those savings do not accumulate to become excessive over time.

Penalty:

The mechanism should include a penalty in the form of a "cost-effectiveness" guarantee, to require utilities to compensate customers if the ultimate cost of the portfolio exceeds the benefits. This will ensure that customers face no risk with their funds that the utilities are investing on their

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years. See *DEER Database for Energy-Efficient Resources, Version 2011 4.01, For Use in the California IOU 2013-14 Energy Efficiency Planning,* "EUL/RUL Values," http://www.deeresources.com/index.php?option=com_content&view=article&id=68&Itemid=60, May 23, 2012.

[6] D.07-09-043, Finding of Fact 92.

behalf, and ensures that all funds put towards efficiency will yield a positive return on investment or at least break even. This penalty should be capped at the budget of the efficiency programs.

Earnings:

The incentive mechanism should have two parallel components – the first focused on maximizing energy and demand savings, and the second focused on meeting additional specific CPUC policy objectives. The CPUC should determine up-front what portion of the potential earnings (i.e. the cap) will be available for each part of the mechanism. In other words, the Commission should make some percent of the potential earnings available for energy and demand savings and make the remainder available for specific performance metrics.

(i) Energy and Demand Savings Category:

Once the Commission determines what portion of the total earnings cap will be available to reward utilities for increasing energy and demand savings, it should further divide it into three caps (the "savings pots") for earnings based on each metric (GWh, MW and therms). (The cap could be divided into the three "savings pots" based on the contribution of each metric to the total economic benefits of the portfolios in the IOUs' applications.) For each of these three "savings pots," the Commission should use a linear function to allow earnings to increase as savings (GWh, MW or therms) increase. For example, for the "electric savings pot" (in which utilities earn based on performance at saving GWh), the utilities would earn nothing at zero savings, earn 5% of the "electric savings pot" at X GWh in savings, 10% at 2X GWh in savings, and on up to that pot's cap. The linear function would hit the cap for each savings pot above the level of savings (GWh, MW or therms) the IOUs expect to achieve in their applications. Formulaically, the earnings function for each of the three savings pots would be:

$$\text{Earnings} = \text{Savings}_{\text{actual}} \times \frac{\text{Cap}_{\text{Savings}}}{(100\%+Y\%) \times \text{Savings}_{\text{forecasted}}}$$

Where:

$\text{Savings}_{\text{actual}}$	=	The energy or demand savings after implementation
$\text{Cap}_{\text{Savings}}$	=	The cap on the "savings pot" (i.e. the portion of the overall cap allocated to maximizing energy and demand savings, that has been further allocated to each savings metric)
Y%	=	The margin above the forecasted savings at which earnings from the "savings pots" are capped
$\text{Savings}_{\text{forecasted}}$	=	The savings at the forecasted level of performance in the IOUs' applications

The total earnings for the energy and demand savings category would be the sum of the earnings calculated using the three linear functions (one for each of the three savings pots). In other words, the utilities earnings would be based on their performance at saving GWh, MW and therms.

(ii) Performance Metrics Category:

The remainder of the cap (that does not go to the "energy and demand savings category") could be used to provide potential rewards for specific performance metrics focused on meeting specific additional CPUC policy objectives. These potential rewards could be awarded as simple payments if a utility meets or exceeds a specific performance metric, or could be graduated to vary the level of reward based on the varying level of performance for each metric. NRDC makes this recommendation with caution since California's past experience with "milestone"-based incentives conflicted with several of the criteria outlined above (including effectiveness, simplicity, predictability, etc.). To ensure that an overall incentive mechanism that includes performance metrics continues to meet the principles and criteria outlined above, the potential rewards based on performance metrics should be:[7]

- **Limited in number -** The incentive mechanism should include very few performance metrics based on the Commission's top priority efficiency policy objectives.

[7] These criteria are based on California's experience more than a decade ago with "milestones" as well as recent interviews with experts in Northeast states (e.g., MA, VT, CT, etc.) to understand what has worked well and what lessons they have learned in using performance metrics in their incentive mechanisms.

- **Distinct from the energy and demand savings goal -** Performance metrics should only focus on policy objectives that are in conflict with, or cannot be sufficiently achieved through, the "energy and demand savings" category discussed above.
- **Quantifiable -** Only quantifiable metrics that are clearly specified up-front and have a predictable process for evaluating performance should be included.
- **Outcome-oriented -** Metrics should focus on the desired outcome that the Commission is seeking, not activities or processes.

For example, avoiding "lost opportunities" is more valuable than the simple "energy and demand savings" category approach recognizes,[8] since the "lost opportunity" savings, once lost, may no longer be cost-effective in the future. New construction projects are a prime example of potential lost opportunities, so an example of a performance metric could be focused on the CPUC's objectives of maximizing cost-effective savings and working towards zero-net-energy homes by rewarding the utilities if some fraction of new construction / major renovation projects exceed code by a minimum percent.

Further discussion is needed to develop specific performance metrics that would meet the criteria outlined above. As we discuss in further detail below, NRDC recommends that this issue be addressed further through workshops and an additional comment process.

Timing:

The Commission should adopt a process and timeline for assessing earnings and/or penalties that is clear and efficient for both the Commission and the utilities. For the 2013-14 cycle, this could include simple annual assessments of the "energy and demand savings category" earnings/penalties following each program year, subject to a modest holdback, followed by a final assessment after the end of the cycle to both true-up the "energy and demand savings category" earnings/penalties with verified installations and assess any earnings for achievement of performance metrics.

[8] The Commission defines lost opportunities as: "Energy efficiency measures that offer long-lived, cost-effective savings that are fleeting in nature. A lost opportunity occurs when a customer does not install an energy efficiency measure that is cost-effective at the time, but whose installation is unlikely to be cost-effective if the customer attempts to install the same measure later." Energy Efficiency Policy Manual, Version 4.0 (August 2008) Appendix B, p. 9.

E. NRDC's proposed mechanism meets the key criteria for a new incentive mechanism.

We discussed above the key criteria that the CPUC should use in evaluating new proposals for efficiency incentives. In this section, we describe how the new mechanism we propose would meet these criteria, as well as our rationale for proposing some of the key components of the new mechanism.

a. Effective

The CPUC's and the state's overarching objective for energy efficiency is to capture all cost-effective energy savings. NRDC's proposed incentive mechanism would give the utilities an earnings opportunity tied directly to maximizing energy and demand savings. Maximizing energy savings also aligns directly with maximizing GHG reductions.

The ALJ Ruling directs parties to address "how to avoid encouraging undue emphasis on short-lived savings… and how to place greater emphasis on deeper savings, measures with higher up-front costs and longer lives, and market transformation efforts…" (ALJ Ruling, p. 3) In addition, in D.12-05-015, the Commission also directed the utilities to move towards programs that encourage customers to take comprehensive approaches to save energy. (pp. 10-11) We address each of these issues in turn.

- *Deeper and more comprehensive savings* – To the extent that comprehensive projects that provide deeper savings provide significant lifetime energy and demand savings, this mechanism would encourage them. In addition, using the PAC test as the threshold, instead of the current combination of TRC and PAC, will help spur more deep and comprehensive projects. (These types of projects are often costlier and have high incremental costs that lower the TRC, because the TRC currently does not include the many non-energy benefits that customers derive from the measure, which influences their willingness to incur the costs in the first place.)[9] However, to the extent

[9] The PAC test takes the perspective of the program administrator in comparing resource costs, and therefore only includes the cost of the program to the utility. In contrast, the TRC test is intended to take the perspective of society or customers as a whole; it includes the incremental measure cost that the customer incurs in addition to the cost of the program to the utility, and in theory it should include the full benefits that the customer gets from the measure. However, in practice, the non-energy benefits are not included in the TRC calculation. (For example, a customer might install new efficient windows as part of a whole home retrofit for multiple reasons including energy savings, comfort, and sound insulation, but the TRC test is only accounting for the benefits the customer gets from the energy savings.) Therefore, measures with high incremental measure costs have much more trouble passing the TRC than the PAC.

that comprehensive projects that provide deeper savings are costlier than others, i.e., a dollar of the efficiency budget can produce more total savings through other means, then the Commission should also consider creating a performance metric to achieve this objective.

- *Long-lasting savings* – By using lifetime energy and demand savings to determine earnings, this new mechanism would place much greater value on long-lasting savings (i.e. it would no longer heavily devalue future savings like the shared savings net benefits calculation, which uses a relatively high discount rate). In addition, by eliminating or raising the cap on measures' effective useful lives (EULs), this mechanism would be much more effective at spurring long-lasting savings. Many of the measures that will provide the "deep, long-lasting" savings that the CPUC is seeking through programs like Energy Upgrade California likely have actual EULs much longer than the maximum (e.g. home insulation or efficient windows likely last longer than their 20 year EULs). While a cap on EULs does not make a large difference in calculating cost-effectiveness when using a relatively high discount rate, with a mechanism based on lifetime energy savings, a cap on EULs presents a large obstacle to pursuing these long-lasting savings.[10] Lifting the cap on EULs and using lifetime savings as the key metric is essential if the Commission is serious about pursuing long-lasting savings. The Commission's current approach to direct the utilities to pursue long-lasting savings while requiring them to artificially cap EULs and use a high discount rate, both of which devalue those very savings, will result in certain failure.

In addition, using the PAC test as the threshold, instead of the current combination of TRC and PAC, will help spur more of the measures with long-lasting savings. (As

[10] To illustrate the impact of a high discount rate and cap on EULs in the shared savings approach, consider a measure that saves $1 every year for 40 years. Using a discount rate of 8%, the NPV is $12 over the full 40 years, and $10 when the EUL is capped at 20 years (or 17% lower). In contrast, with a discount rate of 3%, the NPV is $23 over 40 years and $15 (or 35% lower) when the EUL is capped at 20 years. Combining both factors, the difference between the longer EUL and lower discount rate ($23) and the capped EUL and higher discount rate ($10) results in more than double the benefits of this hypothetical measure that provides long-lasting savings.

The impact of a cap on EULs is even more apparent in considering lifetime energy savings as the key metric to determine earnings. A measure that provides long-lasting savings (e.g. 100 kWh/year for 40 years) but is subject to the 20 year EUL cap (resulting in 2000 kWh of lifetime savings instead of 4000 kWh) would appear to be less attractive than a measure that provides more annual savings but over a shorter timeframe (e.g. 210 kWh/year for 10 years, or 2100 kWh of lifetime savings).

discussed above, these types of projects are often costlier and have higher incremental costs that lower the TRC, because the TRC currently does not include the many non-energy benefits that customers derive from the measure.)

- *Higher up-front costs* – By using the PAC cost-effectiveness test instead of the TRC test, this mechanism would no longer disadvantage measures with higher up-front incremental costs. As noted above, this will help spur deeper, more comprehensive, and longer lasting savings as well.
- *Market transformation* – Since market transformation is a relatively complex topic that does not lend itself to quantitative analysis, NRDC believes that the most important way to advance market transformation is through the CPUC's guidance and policy rules. However, several aspects of this new mechanism would support the Commission's push for market transformation. In particular, a successful market transformation effort requires a continuous cycle to develop new or more efficient technologies, processes and behaviors, to help them gain market acceptance, and to ensure they become standard market practice and/or the minimum code or standard. This mechanism guides utilities to focus on maximizing energy savings, and encourages them to seek those savings through all three of the key parts of the market transformation cycle (new and emerging measures, programs, and codes and standards). In addition, this incentive mechanism eliminates the existing shared savings mechanism's disincentive for utilities to spend money on "non-resource" programs, which can be critical to market transformation efforts. Finally, the performance metrics proposed in this mechanism could potentially include clear indicators of market transformation.

b. Simple, transparent, and predictable

This mechanism is as simple as possible, without sacrificing any critical objectives. It is relatively easy to understand – earnings vary directly based on the energy savings the utilities provide and for meeting specific performance metrics, and the penalty ensures customers are never worse off from efficiency investments than they would have been otherwise. In addition, basing earnings directly on lifetime energy savings helps increase the transparency of the mechanism.

Finally, the mechanism's use of ex-ante values, a linear function and a simple threshold make it fairly predictable, and should help enable timely implementation.

c. Utility commitment

There are several factors that will determine how well the incentive mechanism influences the utilities' commitment to energy efficiency as the top priority energy resource. Clearly, the magnitude of the earnings opportunity in relation to alternative resources will be a significant factor, along with the relative risk of different resources, the predictability and timeliness of the mechanism, and the consistency of the CPUC's commitment to providing meaningful incentives over time. These factors can only be fully evaluated once a new mechanism is designed in full detail.

d. Prudent use of customer funds

NRDC's proposed mechanism would ensure that customers are always better off when utilities invest in efficiency instead of alternatives. This is because earnings can only accrue if the portfolio is cost-effective, and earnings are capped to ensure that the total cost of the portfolio (including the earnings) is never greater than alternative resources.

In addition, since the CPUC approves efficiency budgets for the IOUs up-front, once those budgets are fixed this mechanism would spur the utilities to maximize the lifetime energy and demand savings they can achieve. In other words, the utilities would have an incentive to invest their budgets productively. They would only have an incentive to invest money if it was achieving savings (or helping them meet the performance metrics), and they would have no incentive to cut costs on "non-resource" programs.

Several states have implemented incentive mechanisms similar in design to the one that NRDC is proposing here, however, most are based on "cost-plus" type models linked to performance. The biggest problem with "cost-plus" approaches (whether earnings are tied to a percent of budget or actual spending) is that they incentivize spending money rather than results. As such, NRDC has *not* proposed such a cost-plus approach, and instead structured this proposed mechanism to ensure that utilities manage customer investments in a prudent and productive manner.

e. Accurate and collaborative EM&V

The mechanism would rely on ex-ante metrics to determine energy and demand savings, subject to ex-post verification (for installations only). Of course, ex-post EM&V studies should continue in order to inform future ex-ante metrics. Although the use of ex-ante metrics alone will not create a collaborative approach to EM&V, it will help reduce some of the added controversy that arose from retrospective changes to deemed values.

We urge the Commission to make a real commitment to fixing ex-ante values going forward. As noted in the recent decision on program guidance for 2013-2014, the Commission generally agrees that "ex ante values should be adopted and held constant throughout the portfolio cycle," (D.12-05-015, p.329) The decision further outlined additional procedural clarifications to improve freezing ex-ante parameters for 2013-2014 and noted "We expect that the clarifications herein will eliminate ambiguity" on the matter. (D.12-05-015, p.26) The Commission must commit to ensuring that the ex-ante values are truly fixed and not leave open the door for ex-post changes as the Commission did in the 2010-12 cycle (when the CPUC stated its policy to freeze ex-ante planning estimates to provide more consistency, but then changed many estimates halfway through the cycle and applied the new estimates retroactively).[11]

However, this need not mean that ex-ante values are fixed for entire program cycles going forward. The important thing is to simply allow enough time between when the CPUC updates ex-ante values and when they are applied *prospectively* for purposes of the incentive mechanism, in order to enable the utility administrators and all program implementers to adjust their portfolios and programs accordingly.

f. Codes and standards

Minimum efficiency standards for new buildings, appliances and other products are a critical part of the market transformation cycle. Codes and standards (C&S) are an extremely cost-effective way to capture energy savings, and also help avoid lost opportunities (since many efficiency opportunities are lost once a new inefficient building or product has been built or purchased). NRDC's proposed incentive mechanism would ensure that the utilities have

[11] D.09-09-047 and D.11-07-030

incentives to save energy through both programs and C&S, to put them on an even footing, while at the same time ensuring that potential earnings from C&S stay within expectations.

The utilities' role in C&S upgrades and the importance of C&S as part of the market transformation cycle have both been under-appreciated. The utilities' efficiency programs help advance C&S both directly and by laying the necessary foundation; the utility programs' contribution to C&S include: helping measures gain acceptance in the marketplace and improve cost-effectiveness (so that they are ripe for C&S), directly proposing upgrades to C&S (including the necessary technical analyses), and helping improve enforcement of C&S. The tremendous C&S improvements in California and nationally simply would not have been possible without the California IOUs' efficiency programs. Efficiency experts around the nation widely acknowledge the California IOUs' tremendous leadership on both state and national standards, and no other state's utilities can claim even a fraction of the contribution California's utilities have made.[12]

In the past, the CPUC's policies acted to discourage utilities from pursuing codes and standards upgrades, since they could not count the C&S savings, and new standards would increase the baseline against which program savings are estimated thereby lowering program savings. This created a perverse incentive for the utilities to keep measures in programs, even if it would be more cost-effective and effective to capture savings through C&S.

Beginning with the 2006-08 program cycle, the CPUC began to put programs and C&S on a more even footing by allowing the utilities to count savings from C&S upgrades according to their "contribution" to those C&S. While this has been a significant step in the right direction, it has necessitated "attribution" studies to attempt to parse out the utilities' contributions to C&S upgrades. These studies are inherently subjective and serve no other purpose than to inform the incentive mechanism. As a result, NRDC recommends a new approach to including C&S savings in the incentive mechanism.

Rather than limiting potential earnings from C&S based on "attribution" studies, we recommend counting all savings from C&S and limiting the potential earnings by (i) including a time limit on the number of years new installations from C&S upgrades can be counted, and (ii) including a sub-cap on earnings from C&S savings. This approach will keep programs and C&S on an even footing, but use a more straightforward and less costly approach to ensure that earnings from C&S upgrades do not accumulate to be excessive over time.

[12] In fact, one of the reasons many states with leading efficiency programs have high levels of savings is because their states have done little on C&S, so they are counting program savings relative to lower baseline standards, which yields higher program savings.

g. Innovation

Innovation is generally a difficult concept to define comprehensively or to quantify, and is therefore ill-suited to direct inclusion in an incentive mechanism. However, this mechanism would help foster innovation indirectly in several ways. First, by tying earnings directly to lifetime energy and demand savings, the mechanism can help foster innovation in new approaches and technologies that can achieve more savings. In addition, if the Commission makes a commitment to an efficiency incentives approach over the long-term, it can help motivate the utilities to hire, retain and reward efficiency staff that are innovative. Finally, by eliminating any incentive for utilities to cut costs on "non-resource" programs, the mechanism can help support expansion of the utilities' and program implementers' pilots, emerging technology programs, and other efforts to spur innovation.

In the OIR, the Commission expressed concern that reliance on ex-ante measures "may reduce the motivation for the utilities to be innovative and continuously improve their programs towards achieving higher energy efficiency savings." (p. 9) However, this assumes that the Commission will not implement a dynamic approach to EM&V. As we discussed above, we recommend that the Commission conduct ex-post EM&V on a continuous basis, and update ex-ante values once they have been thoroughly vetted and approved. Ex-ante values need not be fixed for an entire program cycle; what is most important is that updates be applied *prospectively* rather than retrospectively, in order to enable the utility administrators and all program implementers to adjust their portfolios and programs accordingly. A more collaborative approach to EM&V and more dynamic updating of ex-ante values prospectively should allay any concerns over the impact of using ex-ante values on innovation.

F. NRDC's proposal meets the principles and criteria more effectively than the existing shared savings approach.

Most parties are in general agreement about the problems with the design of the incentive mechanism adopted in D.07-09-043 (which was discussed at length in R.09-01-019). NRDC's proposed new incentive mechanism offers solutions to those problems and improvements relative to the existing shared savings mechanism.

- The shared savings mechanism incentivizes maximizing net economic benefits, however, the CPUC's new objective is to maximize cost-effective energy savings (and GHG reductions). NRDC's proposal would focus on maximizing cost-effective energy and demand savings as the primary metric. In addition, it would directly reward comprehensive and long-lived efficiency upgrades.
- The ALJ Ruling cites D.12-05-015's statement that one of the "unintended consequences" of the shared savings mechanism was that "utilities were encouraged to place greater emphasis on measures with high annual savings levels even if their design lives were relatively short" and notes some parties' concern with the high levels of savings from compact fluorescent lamps (CFL). (ALJ Ruling, p. 2) The fact that compact fluorescent lamps provide *enormous net benefits* is what spurred the focus on that measure, not its design life (in other words, the RRIM functioned as intended in this regard – driving investment in highly cost-effective energy efficiency); however, the way the CPUC calculated net benefits emphasized measures with higher near-term savings. The Commission's net benefits calculation used a relatively high discount rate and capped EULs, which together served to significantly devalue any long-term savings.

  NRDC's proposed incentive mechanism would better value measures that provide long-lived savings by varying earnings directly based on total lifetime savings, and lifting the cap on EULs. (Of course, to the extent that efficient lighting options provide significant cost-effective savings, this mechanism would still encourage the utilities to capture those savings. And as the CPUC recognized in D.12-05-015, there is still potential for cost-effective savings from lighting measures, including CFLs, that the utilities should capture.)
- The shared savings mechanism disadvantaged "non-resource" programs, since they counted as a cost and lowered the net benefits, but no associated savings or benefits were included. This provided a disincentive for the utilities to invest in these "non-resource" programs, which runs counter to the CPUC's increased emphasis on "non-resource" and "market transformation" programs. NRDC's proposed incentive mechanism would eliminate any incentive to cut these "non-resource" program costs.
- The shared savings mechanism had various "steps," which added pressure on the precision of the EM&V and heightened contention around those points. NRDC's

proposed new mechanism would use a linear function to determine earnings, which maintains the principle that higher performance provides higher earnings, while eliminating the pressure points associated with steps.

- The shared savings mechanism in D.07-09-043 was regarded by many as overly complex. NRDC's proposed new mechanism is simpler and more transparent than the existing shared savings mechanism. It reduces the number of variables needed to calculate potential earnings and penalties, and reduces the number of components to the mechanism itself.
- The original shared savings mechanism adopted in D.07-09-043 suffered from numerous problems related to its use of retroactively applied ex-post EM&V values (including timeliness of the EM&V results and incentive assessments, program implementers' inability to adjust programs in response to final EM&V results, and the significant uncertainty created by the ex-post adjustments). NRDC's proposed new mechanism would use ex-ante estimates to avoid these problems.

G. Responses to issues raised in the ALJ Ruling, including comparisons of NRDC's proposal to other parties' recommendations.

a. Supply-side comparability

The ALJ Ruling states that "further analysis is warranted to determine whether supply-side equivalent earnings continues to be an appropriate proxy for incentive earnings." (p. 8) The ALJ Ruling raises this question based on several incorrect or incomplete assumptions about the value energy efficiency provides to customers and its ability to reduce the need for supply-side resources. This Commission has long held that energy efficiency is in fact a resource that can and should be relied upon in lieu of conventional resources, and that continues to be true today.

First, it is important to highlight that supply-side equivalent earnings is <u>not</u> simply a "proxy" for efficiency incentive earnings. It is one of five different factors that the CPUC considered in setting the earnings cap in D.07-09-043. In fact, the expected efficiency earnings were set to be considerably *lower* than the comparable supply-side earnings, once these other factors were included. D.07-09-043 set a cap based on the low end of the range of comparable supply-side earnings (which were already adjusted downward to assume that the utilities would

not earn any profits on half of their supply-side procurement), and that cap could only be reached at truly exceptional performance at saving customers money.

Second, the ALJ Ruling raises the question about supply-side comparability in the context of a discussion about what efficiency is actually avoiding. The ALJ Ruling appears to claim that the efficiency earnings mechanism ignores the difference in supply-side earnings between utility owned generation and power purchase agreements, which is incorrect: the supply-side comparability analysis in D.07-09-043 explicitly accounts for this difference. (ALJ Ruling, p. 7) In addition, the ALJ Ruling appears to suggest that efficiency is only avoiding the cost of operating existing power plants but not avoiding new plants. However, efficiency is avoiding the need for new power plants in both the short-term and the long-term. In the 2010-2011 Long-term Procurement Proceeding, the CPUC found that energy efficiency avoided the need for conventional generation starting in 2011 and growing out to 2020, where it ultimately avoided over 5,500 MW of system need.[13] Efficiency continues to be considered as a potential replacement for additional conventional resources in both the long-term procurement proceeding, R.12-03-014, and SDG&E's application for procurement in A.11-05-023. The value of efficiency is all the more apparent given the SONGS nuclear plant outage this summer,[14] and as the state contemplates the possibility that its power may need to be replaced going forward as well. Furthermore, the ALJ Ruling appears to ignore the value that efficiency provides in offsetting the need for transmission and distribution infrastructure.[15]

Longer-term, energy efficiency is absolutely critical to meet the state's 2050 GHG emission reduction target while avoiding the need for excess infrastructure investment. A major analysis of California's energy future to 2050 by the California Council on Science and Technology found that even with very aggressive energy efficiency deployment, demand for electricity is expected to double by 2050 (in large part because of the need to electrify the transportation sector to reduce GHG emissions).[16] Without aggressive energy efficiency, demand

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[13] CPUC, Assigned Commissioner and Administrative Law Judge's Joint Scoping Memo and Ruling, R.10-05-006, Attachment 1, Standardized Planning Assumptions for System Resource Plans, Load and Resource Tables (December 3, 2010). Available at: http://www.cpuc.ca.gov/PUC/energy/Procurement/LTPP/LTPP2010/2010+LTPP+Tools+and+Spreadsheets.htm.

[14] California's statewide Planning Reserve Margin is expected to be just 15.1% this summer. NERC, 2012 Summer Reliability Assessment, Table: NERC Assessment Area Reserve Margins for the 2012 Summer Peak Month, p. 21, May 2012, http://www.nerc.com/files/2012SRA.pdf.

[15] For a discussion of the value of energy efficiency in deferring or avoiding transmission and distribution infrastructure, see Chris Neme and Rich Sedano, "U.S. Experience with Efficiency as a Transmission and Distribution System Resource," Regulatory Assistance Project, February 2012.

[16] California Council on Science and Technology, *California's Energy Future – The View to 2050, Summary Report*,

(and the corresponding infrastructure needs) would be even higher. Maximizing energy efficiency will be essential to avoid and defer the cost of supply-side infrastructure investments.

Finally, the ALJ Ruling makes the alarmingly false claim that efficiency programs cannot displace the need for resources to integrate renewables or resources in local, transmission-constrained areas. (ALJ Ruling, p. 7) Efficiency is displacing the need for some of these resources (the question of how much is, again, being litigated in R.12-03-014 and A.11-05-023). The fact that some resource need may remain does not in any way imply that efficiency is not displacing resources. For example, while we might have some resource need presently, we would need significantly more resources were it not for the 15,000 MW of peak demand that we currently avoid due to efficiency, according to the CEC.[17]

Efficiency directly reduces the need for renewable resources to comply with the RPS, as well as resources to integrate variable renewables. In fact, CAISO's recent renewable integration study showed that reducing load, through efficiency, lessens renewable integration needs.[18] Efficiency also directly reduces the need for resources in local transmission-constrained areas. Both CAISO and CEC studies show that efficiency results in large reductions of local capacity needs.[19] Can and should the state do better at targeting efficiency programs to areas with the most potential to reduce local capacity, transmission and distribution costs? Absolutely. Can and should the state do better at including energy efficiency savings in its modeling of these resource needs? Of course. But these opportunities for improvements do not render the current programs ineffective.

May 2011, www.ccst.us/publications/2011/2011energy.pdf.

[17] In addition, we currently avoid the need for more than 60,000 GWh due to efficiency. CEC, California Energy Demand 2012-2022 Final Forecast, Staff Final Report, CEC-200-2012-011-SF-VI, Figure 3-2: Historical and Projected Statewide Committed Electricity Efficiency Peak Impacts, p. 63 (May 2012). Available at: http://www.energy.ca.gov/2012publications/CEC-200-2012-001/CEC-200-2012-001-SF-V1.pdf.

[18] "What we have learned: 'Deep-dive' analysis showed us that PLEXOS results were being influenced by factors not strictly related to renewable integration needs: Load levels, Import availability, Hydro production, ..." CAISO, *Renewables Integration Study Update*, p.5 (February 10, 2012). Available at: http://www.caiso.com/Documents/RenewablesIntegration_StudiesUpdate_Feb10_2012.pdf. "[Showing 2,000+ MW of need in High Load Case] Conclusion: Need to consider the effect of alternative load growth assumptions and weather uncertainty." CAISO/E3, *Contextualizing Need in Step 2 of the CAISO's LTPP Analysis*, p. 24 (February 10, 2012). Available at: http://www.caiso.com/Documents/Presentation_E3_CAISO_Step2NeedAnalysis_Feb10_2012.pdf.

[19] Energy efficency, in part, was able to reduce local capacity requirements in the LA Basin by at least 1,000 MW, and possibly up to 1,600 MW. "Conclusions: Incremental energy efficiency policy initiatives can have a large impact on local capacity area requirements." CEC, *Evaluating Demand-side Policy Initiatives for Impacts on Local Capacity Requirements,* CPUC Load Forecasting Workshop, p.14 (June 26, 2012). Available at: http://www.cpuc.ca.gov/NR/rdonlyres/DF0F45A3-18CC-406A-BC02-A6A53F62E722/0/2012LTPPStrawProposalPresentation.ppt.

The false assumption that efficiency only avoids the *operation* of power plants – an assertion made by many of the lagging states and utilities nationwide on efficiency to justify their poor performance - would send the state down a dangerous slope of undervaluing efficiency and preventing utilities from capturing the state mandated "all cost-effective energy efficiency." California has made energy efficiency its top priority resource, and the CPUC is aiming to achieve more, deeper and longer-lasting energy savings. The state is aiming to cut its greenhouse gas emissions substantially by 2020 and dramatically by 2050, and energy efficiency is one of the cheapest and largest opportunities. A narrow and short-term perspective on what efficiency is actually avoiding would undermine these overarching objectives the state has laid out for efficiency.

b. Comparison of NRDC's proposal to Energy Division's 2009 White Paper

The ALJ Ruling references the Energy Division's 2009 White Paper's recommendations for an incentive mechanism that would include "base incentive earnings" based on "simplified and more broadly defined performance standards" and "bonus incentive earnings" for meeting selected performance standards. (ALJ Ruling, p. 11) The White Paper suggests that the base earnings could be set based on supply-side comparability, management fees, and/or an amount "deemed just and reasonable by the Commission."[20] And the bonus earnings would be based on "performance metrics for non-resource, market transformation, and strategic initiative activities."[21] Although the White Paper does not provide any more details about the design of the potential incentive mechanism, conceptually, our proposed incentive mechanism is similar to Energy Division's approach. NRDC's proposal includes two components similar to the Energy Division's "base" and "bonus" approach, and aims to simplify the mechanism and make it more predictable as Energy Division suggests.

c. Comparison of NRDC's proposal to other parties' proposals

Several parties recommended alternatives to the shared savings approach in this proceeding and R.09-01-019, as the ALJ Ruling notes. (pp. 11, 15) Since these proceedings have

[20] CPUC Energy Division, *White Paper: Proposed Energy Efficiency Risk-Reward Incentive Mechanism and Evaluation Measurement & Verification (EM&V) Activities*, April 1, 2009, p. 13.
[21] Ibid, p. 17.

spanned more than three years and we expect that other parties' perspectives may have changed over time, we only briefly address those prior proposals.

TURN proposed a mechanism that would tie earnings to the percent of savings goals the utilities' achieved and the percent of budget they actually spent.[22] NRDC's proposal would also tie earnings directly to savings, in part. However, TURN's proposal would have the significant downside of incentivizing spending as well. NRDC recommends that the Commission avoid mechanisms that could incentivize wasteful spending.

SCE raised the ideas of using efficiency to "satisfy some Renewable Portfolio Standard requirements" or using "greenhouse gas allowance credits as an incentive." (ALJ Ruling, p. 15) Neither of these approaches have merit. The RPS is designed to spur development of renewable resources, and compliance is based on the percent of retail sales utilities supply from renewables. Energy efficiency already helps reduce the cost of compliance with the RPS by reducing load and therefore the RPS compliance obligation. Energy efficiency and renewables are the state's top two priority resources and it would be counterproductive to "water down" the RPS by allowing efficiency to be used directly for RPS compliance. Greenhouse gas allowances under CARB's AB 32 cap and trade program are valuable permits to emit that already belong to customers. Using greenhouse gas allowances for an efficiency incentive would simply add complexity without changing anything meaningfully (whether efficiency earnings come from customers directly or in the form of GHG allowances, either way customers are providing the funds).

SDG&E provided an example of an alternative incentive structure in its February 2, 2012 comments. As an example, SDG&E suggested basing earnings on energy savings, customer satisfaction, cost reductions, innovation, and other key measurable items. This bears some resemblance to NRDC's proposal, including basing earnings on energy savings. However, we urge the Commission to ensure that the other metrics upon which earnings are based meet the criteria we outlined above. For example, we are concerned that metrics like customer satisfaction would be hard to quantify, subject to interpretation and therefore likely sources of controversy.

[22] TURN's Post Workshop Comments on Energy Efficiency Incentive Mechanisms, R.09-01-019, August 7, 2009.

H. Recommendations for next steps.

To enable the Commission to make a timely decision on a new incentive mechanism for 2013-14, NRDC recommends that the Commission hold workshops covering the following topics:

- Principles and objectives for the incentive mechanism
- Structure of the part of the incentive mechanism aimed at maximizing cost-effective savings (note that this discussion should be limited to the question of how to structure the mechanism, and whether various parts of the mechanism will spur the outcomes the Commission is looking for, but should not address the magnitude of potential earnings/penalties), for example:
    - Should earnings be tied to lifetime energy and demand savings, economic benefits, and/or annual savings?
    - Should codes and standards savings be fully included?
    - Should the cap on EULs be lifted?
    - What estimates should be fixed ex-ante versus updated ex-post?
    - What threshold(s) should be required?
    - What should the earnings curve(s) look like?
- Magnitude of potential earnings/penalties, including:
    - Factors the Commission should consider to set earnings/penalty caps
    - Specific proposals for earnings/penalty caps
    - Level of performance expected to achieve caps
    - Apportionment of potential earnings among various components of the mechanism (e.g. energy savings vs performance metrics, sub-cap on codes and standards savings, etc.)
- Performance metrics, including:
    - Criteria for prioritizing and selecting performance metrics
    - CPUC objectives that warrant performance metrics
    - Specific proposals for performance metrics

The Commission should request reply comments from all parties following the workshop.

Alternatively, to increase the likelihood of a decision by the end of the year, the Commission may wish to focus on the first three bullets above, and keep discussion of performance metrics for the workshop and comment process on the "non-resource-acquisition incentive mechanism" outlined in the May 16, 2012 Scoping Memo.

III. MODIFYING THE SHARED SAVINGS MECHANISM

A. If the CPUC is unable to make a timely decision on a new incentive mechanism for 2013-14, then the CPUC should simply modify the existing shared savings mechanism as NRDC previously recommended.

In prior comments, NRDC recommended that the Commission extend the existing shared savings mechanism with some modifications to the 2013-14 efficiency portfolio cycle, in order to give the Commission and parties enough time to develop more significant changes for the post-2014 cycle.[23] In these comments, we propose an entirely new incentive mechanism for 2013-14, however, we continue to be concerned about the Commission's ability to adopt a completely new mechanism in a timely manner for the 2013-14 cycle.

The Commission's lack of clarity on its incentive policy over the last three years has been damaging to the state's efficiency efforts. As such, we urge the Commission to place a high premium on establishing an incentive mechanism for the 2013-14 portfolio cycle "to coincide with the start" of the cycle as the ALJ Ruling states. (ALJ Ruling, p. 1) If the Commission is unable to make a timely decision on an entirely new incentive mechanism for 2013-14, then NRDC recommends that the Commission simply modify the existing shared savings mechanism for 2013-14 and take the time it needs to develop the new mechanism for the post-2014 cycle.

NRDC provided detailed comments with recommendations for modifying the existing shared savings mechanism in this proceeding and its predecessor. Our recommendations were summarized most recently in NRDC's January 30th comments in this proceeding.[24] NRDC hereby incorporates by reference but does not repeat our recommendations for modifying the existing shared savings mechanism.

B. If the CPUC chooses to improve the existing shared savings mechanism, then the cap should be $188 million and the shared savings rate should be 10% to 12% to provide expected earnings of about $125 million at 100% of goals (for all four utilities over two years).

[23] *Opening Comments of the Natural Resources Defense Council (NRDC) on the Order Instituting Rulemaking and on the Assigned Commissioner's Ruling Soliciting Further Comments and Production of Data Regarding Energy Efficiency Incentive Reforms*, R. 12-01-005, January 30, 2012.
[24] *Id.*

In prior comments in this proceeding and R.09-01-019, NRDC outlined steps to update the calculations of the shared savings rate and cap. We update those calculations using information about the utilities' 2013-14 portfolio plans here. For further explanation of the rationale for each step, please refer to NRDC's prior comments noted above.

a. Updating the cap

- Estimate the cap by adjusting the $450 million cap for 2006-08 (approved in D.07-09-043) by two-thirds (to account for the 2 years instead of 3 year cycle), and by the ratio of relative forecasted energy savings between the 2006-08 cycle (adjusted by two-thirds) and the 2013-14 portfolio cycle = $235 million.[25]
- Lower the cap by 20% to account for reduced risk = $188 million.

b. Updating the shared savings rate

- Estimate the earnings opportunity at 100% of goal by adjusting the $323 million for 2006-08 (approved in D.07-09-043) by two-thirds (to account for the 2 years instead of 3 year cycle), and by the ratio of relative energy savings between two-thirds of the 2006-08 cycle and the 2013-14 portfolio cycle = $157 million.[26]
- Lower the earnings opportunity by 20% to account for reduced risk = $126 million.
- Calculate the shared savings rate that will provide that earning opportunity, by dividing the earnings opportunity by the PEB. NRDC has recommended excluding the cost of non-resource programs from the PEB, however we do not have a fully updated list of non-resource programs for the new portfolio. As such, we use a simple estimate to calculate the PEB excluding non-resource costs,[27] and provide estimates of the shared savings rates with and without the non-resource costs in the PEB.[28]
    - Including non-resource costs in the PEB: $126 million / $993 million = 12%.
    - Excluding non-resource costs from the PEB: We estimate a PEB of $1,193 million resulting in a shared savings rate of 10%.

Overall, these updated earnings levels would be significantly lower than the Commission's

[25] $450 million [2006-08 cap] *2/3 [to adjust for 2 year cycle] * 3,857 GWh [net forecasted savings for 13-14] / (2/3* 7,371 GWh) [from D.05-09-043, Attachment Table 2] = $235 million. Net forecasted savings for 2013-14 are from IOU responses to NRDC's data request.

[26] $323 million [2006-08 expected earnings at goals] *2/3 [to adjust for 2 year cycle] * 3,208 GWh (net savings at 100% of goals for 13-14) / (2/3 * 6,599 GWh) [two-thirds of 2006-08 savings] = $157 million. The utilities' goal for 2013-14 is 4,119 GWh (gross), which we adjust to be 3,208 GWh (net) based on the portfolio average NTG ratio in the forecasted savings data provided by the IOUs in response to NRDC's data request.

[27] Non-resource programs represented approximately 15% of program costs for the 2010-12 portfolio cycle. Using that same ratio, we reduce the PAC and TRC costs for 2013-14 to estimate a PEB that excludes non-resource costs.

[28] The utilities provided net benefit information at forecasted performance levels (which are above the CPUC's goals). To estimate the PEB at 100% of net goals, we simply assume that PEB begins at zero at 50% of goal and increases linearly to the forecasted PEB at forecasted levels of savings.

original mechanism in D.07-09-043. As indicated in Table 1, the average annual cap would be 37% lower than the 2006-08 mechanism, and the expected earnings would be 42% lower than originally expected in D.07-09-043 and 11% lower than the utilities' actual earnings for 2006-08.

Table 1: Comparison of Proposed Cap and Expected Earnings Levels with D.07-09-043's Mechanism for 2006-08

Cap	2013-14 proposed average annual cap	$94 million
	2006-08 average annual cap (D.07-09-043)	$150 million
	Percent reduction	37%
Earnings	2013-14 proposed expected annual average earnings	$63 million
	2006-08 expected annual average earnings (D.07-09-043)	$108 million
	Percent reduction	42%
	2006-08 actual annual average earnings	$71 million
	Percent reduction	11%

It is important to note that we provide these potential earnings figures *solely* for the case that the Commission is unable to adopt a new incentive mechanism and instead falls back on extending the shared savings mechanism. These estimates are simply based on adjustments to the shared savings mechanism adopted in D.07-09-043, as NRDC previously recommended. NRDC has not yet developed a position on the appropriate potential earnings magnitude under the new incentive mechanism that we propose in these comments. As discussed above, we strongly urge the Commission and all parties to discuss the appropriate design of a new incentive mechanism to spur the right outcomes before turning to the question of the appropriate level of potential earnings. If the Commission proceeds to develop a new incentive mechanism for 2013-14 as we recommend, then NRDC reserves the right to offer different recommendations for the appropriate cap and expected earnings levels.

IV. CONCLUSION

California energy policy makes cost-effective energy efficiency the state's top priority energy resource. In order to truly be the state's top priority in practice, not just in name, the Commission must align the financial incentives it provides to the utilities with its energy

efficiency policies and adopt an incentive mechanism for the 2013-14 cycle in a timely manner. NRDC appreciates the opportunity to offer these comments and we urge the Commission to move forward expeditiously to adopt a new incentive mechanism. We look forward to working with the Commission, staff, and stakeholders to align the Commission's rules to enable efficiency to truly be the state's number one resource.

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Respectfully submitted,

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