Comments of the Natural Resources Defense Council (NRDC) on the Draft Staff Report "*Incremental Impacts of Energy Policy Initiatives Relative to the 2009 Integrated Energy Policy Report Adopted Demand Forecast*"

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Submitted by:
Lara Ettenson with substantial contribution from Energy Center of Wisconsin
Natural Resources Defense Council
lettenson@nrdc.org
415-875-6100

I. Introduction and Summary

The Natural Resources Defense Council (NRDC) appreciates the opportunity to offer these comments on the California Energy Commission's (CEC) draft staff report *Incremental Impacts of Energy Policy Initiatives Relative to the 2009 Integrated Energy Policy Report Adopted Demand Forecast* (draft Staff Report). NRDC is a non-profit 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 124,000 California members' interest in receiving affordable energy services and reducing the environmental impact of California's energy consumption.

NRDC appreciates the staff's hard work on this critical and complicated topic and offers the following recommendations for consideration and incorporation into the final Staff Report:

- NRDC recommends including a discussion of the interactive effect that codes and standards, utility programs, and naturally occurring savings have in spurring energy savings.
- NRDC recommends that the final Staff Report reassess applying a 100% decay rate for existing utility efficiency programs.
- NRDC recommends that the final Staff Report include a discussion of the elasticity and price effect methodologies and assumptions used in the draft Staff Report.
- NRDC strongly urges that the final Staff Report make explicit reference to the caveats included in Attachment A.

II. Discussion

1. **NRDC recommends including a discussion of the interactive effect that codes and standards, utility programs, and naturally occurring savings have in spurring energy savings.**

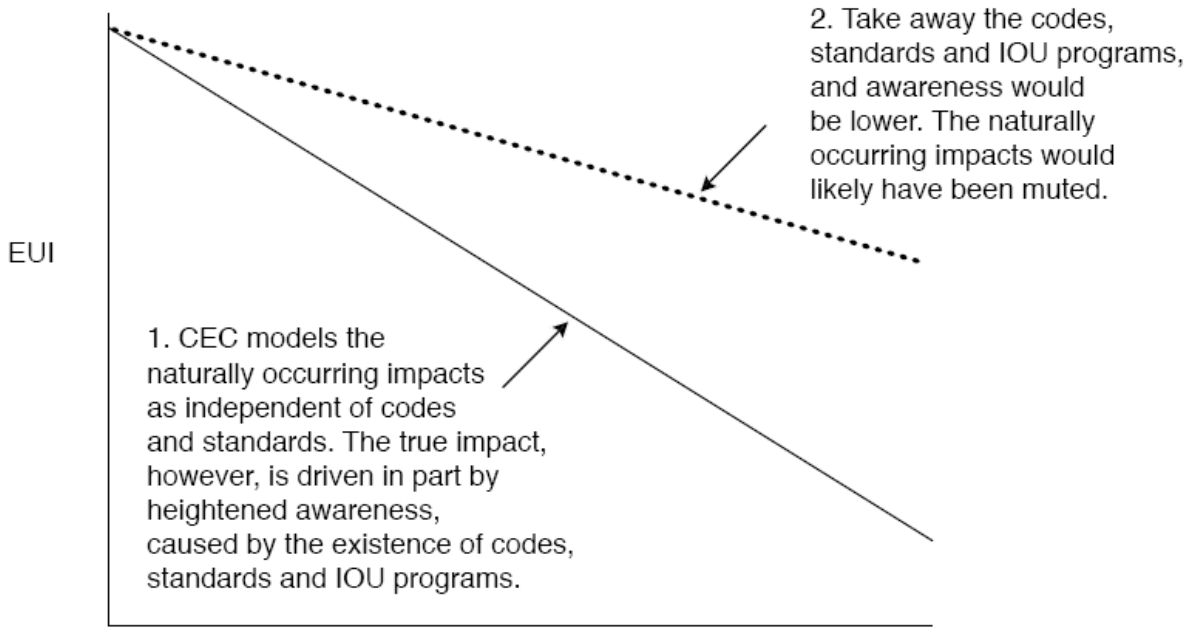
While we agree it is important to assess how the impacts of existing utility efficiency programs, uncommitted energy efficiency programs, codes and standards, and naturally occurring savings affect the load forecast, it should also be noted that these impacts do not operate independently of one other. Noting that it is difficult to quantify the interactive effect of these impacts, we recommend that the final Staff Report at a minimum identify this important concept as having an effect on the resulting demand forecast.

Specifically, we note that without the advent of utility efficiency programs it is unlikely that codes and standards would be as stringent as they are today since the markets would not be ready to provide higher levels of efficiency nor would there be sufficient technical basis to adopt many of the standards. As a result of these factors, the political process would be less likely to support higher levels of efficiency in codes and standards, which would result in a reduction of related savings. Furthermore, the identified "naturally occurring" savings in the draft Staff Report would also likely be lower due to lower consumer awareness, less information about efficient options, and the reduced availability of energy efficiency options from suppliers. Therefore, the total energy efficiency gains delivered are not only the result of these various independent influences, but also the *interaction* between utility efficiency programs and code improvements.

In addition, attempting to isolate the impact of codes and standards or existing utility efficiency programs on the utility load forecast is to adopt the traditional *ceteris paribus* notion (i.e., holding the impact of all other factors constant). That is to say, for example, that the analysis attempts to answer the question as to what the impact of codes and standards will be on the load forecast, *holding all other factors constant*. While it is necessary to distinguish between these factors for a variety of purposes, it is equally as important to account for how these interacting factors affect the overall level of energy savings. For example, utility programs alone might reduce load growth by 1.0 percent per year, codes alone by 0.5 percent per year, and private market actions alone by 0.3

percent. However, the likely effect on the load forecast is not merely the sum of these impacts (1.8 percent). The true joint effect might be 3.0 percent, for example, because the utility programs lay the foundation for political support for more-efficient code provisions, and both actions raise the efficiency awareness of consumers and producers in the market place.

The current modeling approach noted in the 2005 companion report to the 2006-2016 demand forecast[1] similarly identifies savings from utility programs and codes and standards as being simply additive. However, we illustrate below that without the code changes that interact with utility programs, the resulting naturally occurring savings would be noticeably smaller than that suggested by the CEC's additive approach. This is shown by the dotted line in the figure below.



This point also illustrates that markets and price effects alone are not sufficient drivers to achieve significant energy savings. Moving the market depends both on utility programs designed explicitly to address key market barriers as well as the interactive effects these impacts have on pushing the market towards the adoption of more efficient

[1] California Energy Commission "Energy Demand Forecast Methods Report: Companion Report to the California Energy Demand 2006-2016 Staff Energy Demand Forecast Report" CEC-400-2005-036 accessed at: http://www.energy.ca.gov/2005publications/CEC-400-2005-036/CEC-400-2005-036.PDF

practices and technologies.[2] Furthermore, the impact of program spillover is important to acknowledge in the discussion of naturally occurring savings. While spillover can be difficult to quantify, the spillover associated with various programs similarly impacts the extent to which natural occurring savings occur and should be acknowledged.

While understanding that time and resources are limited, NRDC strongly urges the final Staff Report to include, at a minimum in the caveats section in Chapter Six, a discussion of how the interactive effects of programs (including spillover) and codes and standards impact the amount of naturally occurring savings indentified in the Staff Report.

2. NRDC recommends that the final Staff Report reassess applying a 100% decay rate for existing utility efficiency programs.

NRDC understands that without clear direction on the matter, the draft Staff Report assumes a 100% default level of utility program decay indicating that all efficiency gains from existing utility programs will disappear by the end of the forecast period (2020). (Figure 5, p.49) This notion of decay, *i.e.*, that all customers who have adopted energy efficient measures today would seek out less-efficient options in the future, fails to recognize the empirical evidence, which suggests that once consumer and producer awareness of energy efficiency is enhanced by utility programs, there are permanent shifts in the behavior of market actors.

Absent evidence to the contrary, a more tenable position at this stage of analysis would be to assume no decay as the goal of utility programs is to move towards market transformation. If this is not feasible, the assumption should be at most equal to the 50% to align with the current CPUC direction, pending further investigation of this issue.[3]

3. NRDC recommends that the final Staff Report include a discussion of the elasticity and price effect methodologies and assumptions used in the draft Staff Report.

We acknowledge and appreciate staff direction to look at the relevant supplemental documents that explain a portion of the elasticity and price effects assumptions used to in this report. However, to ensure transparency and clarity regarding how past

[2] Market barriers include (but are not limited to) split incentives, lack of sufficient upfront capital, lack of education, product supply decisions made my manufacturers, etc.
[3] California Public Utilities Commission. A.08-07-021 et al. D.09-09-047, p.28.

methodologies are used in the most recent report, we recommend that the final Staff Report include a clear discussion of the staff methodologies with any appropriate links or references to additional supporting information.

4. **NRDC strongly urges that the final Staff Report make explicit reference to the caveats included in Attachment A.**

NRDC appreciates the extensive discussion of the various caveats included in Attachment A. However, to ensure that readers are fully aware of all the caveats related to the report as well as to ensure maximum transparency and clarity, we urge staff to include short descriptions of the following caveats in the same manner that two of the identified caveats were highlighted. (See Chapter Six, p.52)

- Differences in committed energy savings estimates
- Annual savings trends
- Savings decay from IOU programs
- Uncertainty associated with achieving the BBEES targets
- Interactive effects of utility programs, codes and standards, and naturally occurring savings.

We also offer suggested modified language on p.52 so as to not presuppose the impact or outcome of alternative future electricity cost scenarios:

- The Energy Commission's *2009 IEPR* demand forecast assumes a 15 percent increase in retail prices by 2020, and some impact via price elasticity is included in the base demand forecast. However, it is easily conceivable that retail prices could rise at a different rate, which could result in modifications to presumed programmatic activity. ~~by 30 percent or more in the next 10 years, which would mean more naturally occurring savings and raises the possibility that, given the CPUC's total market gross approach, presumed programmatic activity could be scaled back.~~

III. Conclusion

NRDC thanks the CEC for the opportunity to comment on the draft Staff Report and acknowledges the significant work carried out by staff to create this report. We continue to encourage further transparency and clarity to identify assumptions and caveats that are crucial to understanding the results in the report. We look forward to continuing to work with staff to address the issues identified above and thank you for considering our recommendations.