
**Policy 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”**

Docket Number 09-IEP-1C
February 25, 2010

Submitted by:
Lara Ettenson
Natural Resources Defense Council
lettenson@nrdc.org
415-875-6100

DOCKET	
09-IEP-1C	
DATE	FEB 25 2010
RECD.	MAR 12 2010

I. Introduction and Summary

The Natural Resources Defense Council (NRDC) appreciates the opportunity to offer the following policy-related 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 thanks the staff for their continuing work on this matter. We support the adoption of the incremental uncommitted forecast with the inclusion of the following recommendations and clarifications as well as those included in our February 10, 2010 technical comments, included as Attachment 1:

- NRDC suggests addressing a few key uncertainties before the California Public Utilities Commission (CPUC) proceeds with the long term procurement process.
- NRDC recommends that the final report, as well as all subsequent reports of this nature, include at minimum a summary of the relevant methodologies and key assumptions, a section on the pertinent caveats and uncertainties, and next steps for addressing the remaining issues.

- NRDC recommends that Attachment A of the Draft Report modify language that assumes a particular utility program planning outcome in response to AB 1109 implementation.
- NRDC requests clarification of the assumption staff used to project the incremental uncommitted energy efficiency available for the public-utilities.

II. Discussion

Recommendations in Response to Staff Questions

1. **NRDC suggests addressing a few key uncertainties before the California Public Utilities Commission (CPUC) proceeds with the long term procurement process.**

Question #3 Does the staff report and its multiple appendices provide sufficiently detailed results such that the CPUC can understand the broad assumptions and use the results in the forthcoming 2010 LTPP proceeding?

Question #5: “The staff report and the Itron Attachment identify replacement savings from decay of committed programs as an analytical issue for the CPUC to address. Is the concept of savings lost through measure decay sufficiently described for the CPUC to understand the choices it must consider about savings decay with respect to cumulative goals?”

NRDC ultimately defers to the CPUC to determine whether there is sufficient detail and clarity for purposes of the 2010 LTPP proceeding and acknowledges that a number of the uncertainties listed in the caveat section of Attachment A (Section 4.5) can be addressed in future IEPR cycles. However, with respect to Question #3 noted above, the CPUC themselves highlight a few additional questions raised by the recent report that we interpret as needing further information before the CPUC can proceed with planning.

First we want to emphasize and agree with the CPUC that this process has addressed a number of inter-agency uncertainties such as errors that arise from using two different modeling approaches as well as using varying assumptions. (Attachment C, p. C-4) However, the CPUC also highlights additional uncertainties uncovered by this study that require further clarity and resolution. In particular:

“the study also identified new [uncertainties] which have yet to be resolved. These include the importance of a consistent calibration year when matching up peak-to-energy ratios in CPUC goals and Energy

Commission estimates of committed/uncommitted EE; and the need for consistent approaches to modeling measure decay.” (Attachment C, p.C-4)

“In sum, uncertainty still surrounds the level of EE that is reasonable to assume for procurement planning purposes: some have yet to be addressed; and others are newly identified.” (Attachment C, p.C-5)

With respect to Question #5 noted above, NRDC focused on the uncertainty surrounding modeling measure decay in previous demand forecast comments as well as in our February 10, 2010 comments, included in Attachment 1. We appreciate staff’s recent adjustment of the decay rate from 100% decay to 50%, and note that the report defers to the CPUC to determine the ultimate decay rate used for procurement purposes. However, we believe the issue of decay rate needs to be explored further (in both technical and policy terms) before determining the amount of incremental uncommitted energy efficiency that will be incorporated for procurement purposes.

We recognize that there will be a policy decision to determine which decay rate should be applied to the utility programs and that time and resources continues to limit what further analysis can be accomplished for this LTPP cycle. However, it is clear that before determining the most appropriate measure decay rate, additional technical analysis is needed. We therefore recommend that for both the CPUC’s determination of the appropriate level of decay for procurement purposes as well as for future demand forecasting processes, this be identified as a high priority issue for resolution and be addressed as soon as practicable.

2. NRDC recommends that the final report, as well as all subsequent reports of this nature, include at minimum a summary of the relevant methodologies and key assumptions, a section on the pertinent caveats and uncertainties, and next steps for addressing the remaining issues.

Question #7: “The staff demand forecast analyses and the energy efficiency studies of both potential savings and expected savings from hypothetical programs are highly complex topics. Transparency, constructive criticism, collaborative projects, etc. are means by which stakeholders can engage in the details and improve analytic products compared to efforts by staff alone. What might serve as a workable standard of transparency to satisfy the legitimate concerns of stakeholders and policy makers? What elements would be critical? How might it be created? Given the current absence of such a standard, does the published documentation satisfy such legitimate concerns?”

NRDC appreciates staff's availability to discuss questions surrounding clarity of methodologies as well as direction to review the various accompanying reports that outline the methodologies used to determine the demand forecast and the incremental uncommitted efficiency. However, while we realize it is not practical to include the entirety of all methodologies used in each demand forecast report, we strongly recommend at minimum that summaries be included for all applicable methodologies and key assumptions (e.g., calculation of effective useful lives, application of price effects and elasticity determinations, measure decay rate, etc.). Moreover, we recommend that links to the full methodology reports be included in all related reports to provide readers an easy reference to the proper documents if further information is needed.

In addition, NRDC strongly recommends that each report of this nature include a similar section to that of Itron's Report Section 4.5 "Caveats and Uncertainty." We recommend such a section (1) clearly highlight which questions remain, (2) identify what the difficulties are in addressing those uncertainties, and (3) recommend next steps and level of priority for addressing the remaining uncertainties.

Additional Recommendations

3. NRDC recommends that Attachment A of the Draft Report modify language that assumes a particular utility program planning outcome in response to AB 1109 implementation.

NRDC agrees that the lighting market will be modified as a result of the upcoming implementation of AB 1109. However, we urge staff to modify language that concludes a particular outcome for utility program planning in response to the presumed market conditions upon full implementation. While we expect the current utility programs to evolve, it is uncertain whether there will be a need for additional utility intervention for CFLs (or lighting of similar efficiency) until we have a better understanding of how effectively AB 1109 is implemented. We therefore recommend the following language for modification in Attachment A:

“Indeed, savings from IOU programs grow more slowly towards the end of the period reflecting market saturation effects for some key measures, as well as interactions with the AB 1109 lighting standards that effectively eliminate the current general service CFL measures from utility program offerings by 2018.” (Attachment A, p.viii & p.63)

We modeled varying degrees of aggressiveness associated with the phase-out of current IOU general service CFL programs, i.e. frontloaded phase-out compared to more gradual phase-out. (Attachment A, p.27)

Furthermore, we note that utility programs could be needed to address hard to reach and non compliant areas of the market and to pull the more efficient and advanced lighting options to market in the years prior to full implementation. We therefore believe that until the bill is fully implemented (and likely afterwards as well), utility offerings will continue to evolve and play a key role in the effective implementation of the upcoming lighting standards.

4. NRDC requests clarification of the assumption staff used to project the incremental uncommitted energy efficiency available for the public-utilities.

In advance of receiving the transcript from the February 17, 2010 workshop, NRDC requests clarification of the statement by staff that they assumed the publicly-owned utilities (POU) would capture energy savings at the same level as the investor-owned utilities when measured by percent of sales. Since NRDC was participating remotely, we first request that staff confirm we accurately characterized the comment above. If this is in fact the assumption that staff used to estimate the POU contribution to incremental uncommitted energy efficiency, we strongly urge staff to reconsider this approach.

While we recognize and applaud the upward trend of POU energy savings since the implementation of SB 1037 (Kehoe, 2005) which requires reporting of energy efficiency savings each year, staff's own report shows that the POUs have yet to reach the level of savings as a percent of sale of the investor owned utilities.¹ Until we have consistent data that supports such a sustained high level of efficiency from the POUs, we recommend staff reevaluate this approach and modify the forecast accordingly.

¹ Lewis, Kae, Nicholas Fugate, Che McFarlin, and Irene Salazar. 2009. *Achieving Cost-Effective Energy Efficiency for California: 2008 Progress Report*. California Energy Commission, Electricity Supply Analysis Division, CEC-200-2009-008-SF. p.24: In 2007, the IOUs approach 2.5% while the POUs on average reach approximately 0.6%.

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 support the adoption of this incremental uncommitted forecast with inclusion of the modifications and clarifications recommended in these comments as well as our February 10, 2010 comments included in Attachment 1.

We also strongly support the continuation of a working group to address the remaining questions and caveats noted in the draft Staff Report as well as the remaining caveats noted in the December 2009 *California Energy Demand 2010-2020 Adopted Forecast*,² upon which this assessment is based. We look forward to our ongoing participation and thank you for considering our recommendations.

² Kavalec, Chris and Tom Gorin, 2009. California Energy Demand 2010-2020, Adopted Forecast. California Energy Commission. CEC-200-2009-012-CMF. p. 238-239.

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*”

Docket Number 09-IEP-1C

February 10, 2010

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

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

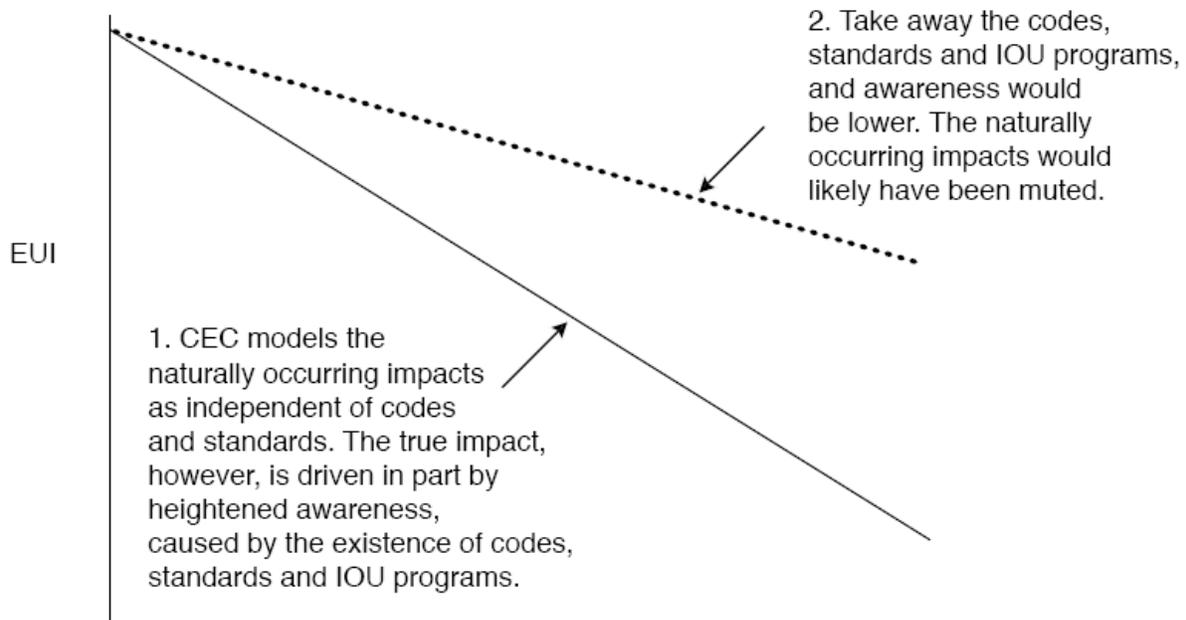
While we agree it is important to assess how the impacts of existing utility efficiency programs, uncommitted energy efficiency programs, codes and standards, and naturally occurring savings affect the load forecast, it should also be noted that these impacts do not operate independently of one other. 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 forecast³ 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

³ 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>

effects these impacts have on pushing the market towards the adoption of more efficient practices and technologies.⁴ 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.

6. 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.⁵

⁴ Market barriers include (but are not limited to) split incentives, lack of sufficient upfront capital, lack of education, product supply decisions made by manufacturers, etc.

⁵ California Public Utilities Commission. A.08-07-021 et al. D.09-09-047, p.28.

7. 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 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.

8. 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.