

**Comments of the Natural Resources Defense Council (NRDC) on the 2012-2022
Preliminary Staff Electricity and Natural Gas Demand Forecast**

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I. Introduction and Summary

The Natural Resources Defense Council (NRDC) appreciates the opportunity to comment on the California Energy Commission's (CEC) treatment of energy efficiency in the *2012-2022 Preliminary Staff Electricity and Natural Gas Demand Forecast* ("Preliminary Forecast"). 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 nearly 100,000 California members' interest in receiving affordable energy services and reducing the environmental impact of California's energy consumption. Our comments provide recommendations based on the Preliminary Forecast presented at the August 30th, 2011 Committee Workshop ("Committee Workshop").¹

Our recommendations are summarized as follows:

1. NRDC commends the CEC for the improved graphical representation of energy savings, which more accurately represents California's long history of successfully integrating cost-effective energy efficiency investments and standards.
2. NRDC supports the CEC in fully accounting for the significant savings from the TV standards that are currently in effect.
3. NRDC recommends that the CEC apply a range of estimates for the 2006-2009 efficiency savings from IOU programs which better reflects the continued uncertainty of those impacts.
4. NRDC recommends that the CEC fully incorporate the incremental uncommitted energy efficiency into the statewide electricity consumption forecast, as doing so improves the accuracy of forecasted energy growth by 48%.

II. Discussion

NRDC greatly appreciates the CEC Staff presentations at the August 30, 2011 demand forecast Committee Workshop. The Committee Workshop provided valuable information and insight into the methodologies and assumptions used in the 2011

¹ Kavalec, Chris, et al., *Preliminary California Energy Demand Forecast 2012-2022*, Draft Staff Report, CEC-200-2011-011- SD, (August 26, 2011). [Hereinafter "Preliminary Forecast."] Available at: <http://www.energy.ca.gov/2011publications/CEC-200-2011-011/CEC-200-2011-011-SD.pdf>.

Preliminary Forecast. We offer the following recommendations to further improve the forecast.

1. NRDC commends the CEC for the improved graphical representation of energy savings, which more accurately represents California's long history of successfully integrating cost-effective energy efficiency investments and standards.

The graphical representation of energy savings in the Preliminary Forecast is a vast improvement from the 2009 IEPR graph.² The current graph better represents the magnitude of historical energy savings in California, showing nearly 60,000 GWh of savings in 2010 coming from efficiency and conservation impacts.³ This improved depiction of efficiency and conservation impacts provides valuable information to the audience of this report, and allows the reader to move beyond the much entangled debate over attribution. This graph more accurately represents California's success with energy efficiency policies and should be used in the revised and final forecasts. NRDC strongly commends and supports the CEC for this improvement.

2. NRDC supports the CEC in fully accounting for the significant savings from the TV standards that are currently in effect.

NRDC was encouraged to hear at the Committee Workshop that the CEC staff is working to incorporate the effects of the recent TV standards. Given that the present preliminary forecast currently omits these savings,⁴ the preliminary forecast underestimates efficiency savings. Because the savings from the TV standards will have a significant impact on the forecast, it is critical to the accuracy of the forecast that the CEC fully incorporate these savings in the revised demand forecast.

The CEC adopted the TV standards in 2009 and the standards took effect on January 1, 2011.⁵ The CEC's TV standards have already resulted in significant savings, shifting the television market to more efficient technologies that meet the minimum

² *Preliminary Forecast*, Figure ES-3: Total Statewide Committed Consumption Efficiency and Conservation Impacts, p. 6.

³ Showing 58,951 GWh of savings in 2010. CEC, Preliminary Demand Forecast Forms, 10 Mid Electricity Efficiency Conservation Savings by Planning Area and Sector, (August 26, 2011). Available at: http://www.energy.ca.gov/2011_energypolicy/documents/2011-08-30_workshop/mid-case/10_Mid_Electricity_Efficiency_Conservation_Savings_by_Planning_Area_and_Sector.xls.

⁴ "The 2010 television standards were not incorporated in CED 2011 Preliminary: the Energy Commission's Efficiency and Renewables Division has not yet supplied a breakout of expected impacts by sector." *Preliminary Forecast*, p. 181.

⁵ CEC, 2009 Appliance Efficiency Rulemaking, Phase I, Part C Docket Number 09-AAER-1C, CEC-400-2009-023-CMF, (July 14, 2010). Available at: http://www.energy.ca.gov/appliances/2009_tvregs/index.html.

performance standards. These standards required that TVs sold in California since January 1, 2011 reduce their energy consumption by one third – and by 2013, by one half.⁶ These savings are significant, amounting to over 6,500 GWh annually in energy savings after stock turnover,⁷ which the CEC estimates is enough to power 864,000 single-family homes.⁸ Further, the CEC estimates the standards will provide over 600 MW in peak demand savings.⁹ These savings are not inconsequential and will have a material impact on the forecast. In order to provide an accurate forecast of energy consumption, NRDC supports the CEC in fully accounting for the savings coming from the TV standards in the revised demand forecast.

3. NRDC recommends that the CEC apply a range of estimates for the 2006-2009 efficiency savings from IOU programs which better reflects the continued uncertainty of those impacts.

The savings estimates from efficiency programs during 2006-2009 adopted by the California Public Utilities Commission (CPUC) were based on ex ante values and the CPUC explicitly rejected the results of Energy Division's estimates because of the controversy and uncertainty. Therefore, the CEC should apply a range of savings estimates to better reflect the unresolved values for those years. The Preliminary Forecast uses the most discounted estimates for savings during those years, based on the results of Energy Division's EM&V studies.¹⁰ However, the CPUC did not use these values to calculate the final amount of savings, citing the "substantial controversy surrounding their accuracy, and their magnitude."¹¹ Instead the Commission adopted the ex ante values for the final amount of savings.¹² The CEC's estimate of savings should reflect the fact that the discrepancy between reported estimates and evaluated estimates was never resolved at the CPUC. Using a range between the Commission-adopted ex ante values and Energy

⁶ CEC, "California Approves New Energy Efficient TV Regulations - First in the Nation Standard Will Save Consumers \$8.1 Billion Over 10 Years," (November 18, 2009). Available at: http://www.energy.ca.gov/releases/2009_releases/2009-11-18_tv_regulations.html.

⁷ CEC, "Overview of Proposed Television Regulations and Draft Negative Declaration Report for Television Efficiency Standards," Staff Presentation, Slide 62. (October 13, 2009). Available at: http://www.energy.ca.gov/appliances/2009_tvregs/documents/2009-10-13_hearing/2009-10-13_STAFF_PRESENTATION.PDF.

⁸ "After ten years, the commission estimates the regulations will save \$8.1 billion in energy costs and save enough energy to power 864,000 single-family homes." *Supra* note 6.

⁹ *Supra* note 7, Slide 63.

¹⁰ "2006-2009 IOU program savings were adjusted to incorporate the CPUC's 2006-2008 and 2009 EM&V studies." *Preliminary Forecast*, p. 179.

¹¹ CPUC, Decision Regarding The Risk/Reward Incentive Mechanism Earnings True-Up For 2006-2008, R.09-01-019, D.10-12-049, (December 16, 2010).

¹² *Id.*

Division's numbers would be more accurate. In fact, the Preliminary Forecast already uses this same range of estimates for the 2011-2012 years, using the CPUC-adopted planning estimates as the high range and using the 2006-2008 EM&V assumptions applied to the CPUC-adopted planning estimates as the low range.¹³ NRDC recommends that the CEC use same range of estimates for the 2006-2009 period as well.

4. NRDC recommends that the CEC incorporate the incremental uncommitted energy efficiency into the statewide electricity consumption forecast, as doing so improves the accuracy of forecasted energy growth by 48%.

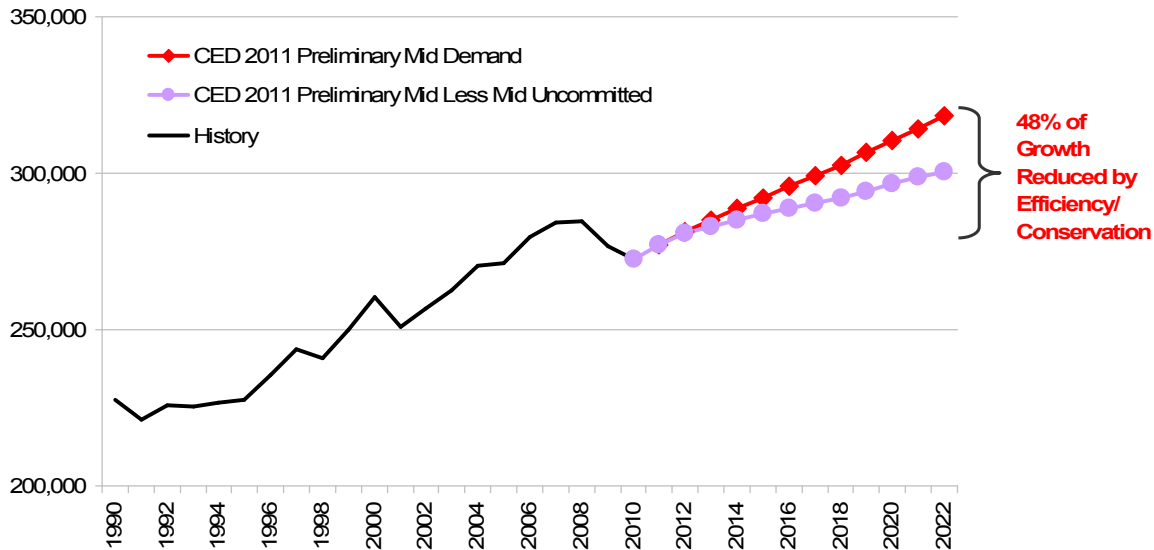
The Preliminary Forecast should include efficiency savings beyond 2012 in order to be accurate. However, the Preliminary Forecast (and all graphs besides those on pages 189-191) currently exclude all savings from efficiency programs coming online in 2013-2022—nearly the entirety of the forecast period.¹⁴ Energy efficiency will continue to provide savings and will continue to be California's top priority resource. Excluding the savings from future efficiency programs and policies not only goes counter to state policy, but it creates an inaccurate forecast because the savings from efficiency are reasonably likely to occur, which is the criterion for determining what should be included in the forecast. Excluding future efficiency savings causes the forecasted growth to be off by 48%. That is, energy growth from 2012-2022 is expected to be **about half** of what is presented in the statewide electricity consumption forecast, after accounting for future energy efficiency.¹⁵

¹³ Nick Fugate, IEPR Committee Workshop Presentation, "Efficiency/Conservation," Slide 5 (August 30, 2011). Available at: http://www.energy.ca.gov/2011_energypolicy/documents/2011-08-30_workshop/presentations/02_Nick_Fugate_Efficiency_Conservation_Self-Generation.pdf.

¹⁴ "[T]he Energy Commission does not yet consider this set of delivery mechanisms to be committed, so their estimated impacts are not included in the forecasts presented in previous chapters." *Preliminary Forecast*, p. 182.

¹⁵ Energy growth from 2012-2022 in the Mid Case is 37,260 GWh. *Preliminary Forecast*, Form 1.1, Mid Statewide Demand Preliminary Forecast. Available at: http://www.energy.ca.gov/2011_energypolicy/documents/2011-08-30_workshop/mid-case/01_Mid_Statewide_Demand_Preliminary_Forecast_Forms.xls. Incremental uncommitted efficiency is expected to reduce that by 17,828 GWh in the Mid Case. *Preliminary Forecast*, Table A-8, Energy Efficiency/Conservation Consumption Savings (GWh), Residential and Non-residential Mid Demand Scenario. Available at: http://www.energy.ca.gov/2011_energypolicy/documents/2011-08-30_workshop/mid-case/10_Mid_Electricity_Efficiency_Conservation_Savings_by_Planning_Area_and_Sector.xls. Energy growth would be 48% lower (17,828/37,260) if incremental uncommitted efficiency were included.

Figure 1: Uncommitted Efficiency Reduction in Energy Growth¹⁶



The rationale behind excluding uncommitted incremental energy efficiency is that the CEC had a distinction between “committed” and “uncommitted” programs. “Committed” programs are those with plans and funding; whereas “uncommitted” programs are those with goals but without funding.¹⁷ This distinction is based on the principle that the demand forecast should only incorporate those impacts that are “reasonably expected to occur.” However, this principle is applied asymmetrically to reductions in energy demand (e.g., efficiency) as it is to the creation of energy demand (e.g., population growth, economic predictions, etc.). Those factors that cause demand growth are not required to have “final authorization and firm funding” in order to be incorporated. Instead, given historical trends and future predictions, those estimates are considered “reasonably expected to occur.” Factors that reduce demand growth (e.g., efficiency) should be held to the same standard. Efficiency savings have historical trends and future predictions, just like the rest of the forecast, and so should be represented in all forecast graphs. There is uncertainty in all aspects of a forecast reaching out to 2022—but to treat efficiency savings as inherently less likely to occur than the factors that drive energy demand is not only asymmetrical, but makes the forecast less accurate, and is inconsistent with state policy. In order to maximize the accuracy of the demand forecast and incorporate efficiency as a resource, the CEC should incorporate uncommitted

¹⁶ *Id.*; See Fugate, *supra* note 13, Slide 13.

¹⁷ “Committed initiatives include utility and public agency programs, codes and standards, legislation and ordinances that have final authorization, firm funding, and a design that can be readily translated into characteristics which can be evaluated and used to estimate future impacts (for example, a package of IOU incentive programs that has been funded by CPUC order).” *Preliminary Forecast*, p. 5.

incremental efficiency into all forecasts, especially the statewide electricity consumption forecast.

IV. Conclusion

NRDC appreciates the opportunity to comment on the 2011 Preliminary Demand Forecast. The CEC has made vast improvements on its representation of efficiency and conservation savings. NRDC commends the staff for this accomplishment and greatly values the extensive work undertaken by the staff and working groups. Thank you for considering our recommendations.