

**Comments of the Natural Resources Defense Council (NRDC) on the  
*Draft Flexible Capacity Needs Assessment for 2017***

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**I. Introduction and Summary**

The Natural Resources Defense Council (NRDC) appreciates the opportunity to offer these comments on the *Draft Flexible Capacity Needs Assessment for 2017*, presented at the April 18, 2016 workshop. NRDC is a non-profit membership organization with more than 80,000 California members who have an interest in receiving affordable energy services while reducing the environmental impact of California’s energy consumption.

**II. Discussion**

NRDC greatly appreciates California ISO staff’s study and presentation of flexible capacity needs in this ISO technical study process. NRDC commends the California ISO and the California Energy Commission for leading the state toward better flexible capacity assessments by including –for the first time ever– time-varying impacts of the state’s vast energy efficiency efforts. We respectfully offer these comments:

**A. NRDC applauds California ISO’s accounting of hourly and seasonal impacts of energy efficiency to improve the flexible capacity assessment.**

NRDC strongly supports and commends California ISO, including its work with the California Energy Commission, and other agencies, for proposing to account for energy efficiency savings on a more granular time basis. “[A] significant enhancement made to 2017 study methodology is the use of a shaped profile for additional achievable energy efficiency that was provided by the CEC.”<sup>1</sup> “[T]he ISO used the mid-additional achievable energy efficiency forecast. . . . This profile is shaped to reflect both hourly and seasonal additional achievable energy efficiency.”<sup>2</sup> Indeed, this marks an advance in electricity forecasting that brings California ISO and the CEC to the cutting edge of resource and grid planners nationally. By now accounting for the time-varying impacts of energy efficiency, California will be relying on a more accurate electricity forecast, receive better-informed results for flexible capacity needs, and ultimately increase reliability of the electric system. We thoroughly support this game-changing advance in electricity forecasting.

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<sup>1</sup> California ISO, “Draft Flexible Capacity Needs Assessment for 2017” p. 3 (April 2016).

<sup>2</sup> *Id* at 8.

NRDC supports this plan to use hourly and seasonal impacts of energy efficiency in this flexible capacity analysis, not only because it marks a significant step forward in load forecasting, but because it also enables the state to better meet its long term energy and climate goals, particularly those cemented in SB 350. SB 350 calls on state agencies to account for hourly and seasonal impacts of energy efficiency in expanding our clean energy resources to meet 2030 targets: The PUC, CEC, and POU's are directed to account for these time-varying impacts when planning for long term doubling of energy efficiency savings,<sup>3</sup> and the CEC in conducting the state's biennial assessment on energy policy and forecasts.<sup>4</sup> This early action, accomplished by quick agency coordination, helpfully sets the stage for implementing SB 350's overall goals for long term resource planning. We applaud the agencies leadership in moving the state forward to meet our long term energy and climate goals.

**B. NRDC strongly recommends removing the attribution statement about energy efficiency in relation to this year's flexible capacity needs, given that it is not supported by the record.**

NRDC recommends that the agencies continue to refine the forecasting of energy efficiency's time-varying impacts through public processes moving forward. But before that refinement has occurred, it would be premature to include a statement about the results.<sup>5</sup> In that future refinement process, we anticipate being able to identify the specific impacts that energy efficiency has on the net load curve at defined time intervals. However, those data are not present in the record. The overall load forecast is presented in this public process, but the embedded energy efficiency data are not. Therefore, it is premature to state whether energy efficiency is increasing or decreasing the flexible capacity needs. Given that the analysis has not yet been conducted, nor is supported by facts in the record, we recommend simply removing the one statement about any likelihood about impacts.

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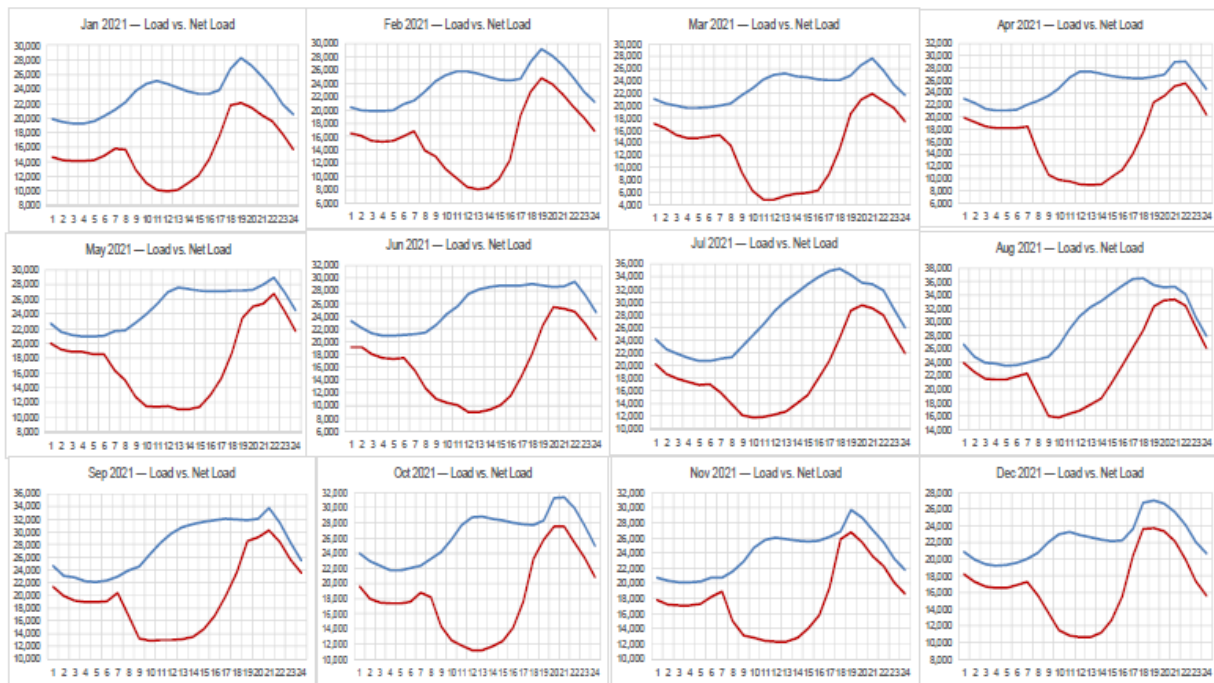
<sup>3</sup> "On or before November 1, 2017, the commission, in collaboration with the Public Utilities Commission and local publicly owned electric utilities, . . . , shall establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings. . . . In establishing the targets . . . the commission shall assess the hourly and seasonal impact on statewide and local electricity demand." Cal. Public Resources Code § 25310(c)(1)-(3).

<sup>4</sup> "Beginning with the 2019 edition of the integrated energy policy report and every two years thereafter, the commission shall . . . also include with the recommendations [on doubling energy efficiency savings] . . . An assessment of the effect of energy efficiency savings on electricity demand statewide, in local service territories, and on an hourly and seasonal basis." Cal. Public Resources Code § 25310(e).

<sup>5</sup> "The impact of this change likely contributes to some portion of the increased flexible capacity needs identified in this year's study, though no specific assessment of the two additional achievable energy efficiency approaches has been done." *Supra* note 1 at 8.

Furthermore, the future analysis may very well show beneficial impacts to flexible capacity needs. The key measurement is efficiency’s impact on the three-hour net load ramps that drive the need for flexible capacity. Under the old assumption of uniform load drop, shifting the net load curve downward did not change the magnitude of any three-hour ramp. Under the new operations, the impact on the net load curve depends on whether EE savings are *relatively* greater or lesser at the beginning of the ramp period compared to the end of the period. Given these two facts: i) that EE generally correlates to gross load and ii) that gross load is generally increasing during the evening (max) three-hour net load ramp (see Figure 1); it is likely that energy efficiency savings *relatively* increase over the max three-hour net load ramp in the evening. And therefore, likely reduces the need for flexible capacity. For this additional reason, we recommend removing any unsupported statements about efficiency’s impact on flexible capacity needs.

Figure 1: California ISO, 2021 Monthly Load vs. Net Load profiles, weekends<sup>6</sup>



<sup>6</sup> [http://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Public\\_Website/Content/Meetings\\_and\\_Events/CAISO.pdf](http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/Meetings_and_Events/CAISO.pdf)

### **III. Conclusion**

Thank you for the opportunity to comment on the *Draft Flexible Capacity Needs Assessment for 2017*. NRDC applauds California ISO and the California energy agencies for their commitment to rely on energy efficiency and for taking a leadership role in advancing energy efficiency forecasting. We look forward to working with the California ISO staff and stakeholders on future developments in the process.