

**Comments of the Natural Resources Defense Council (NRDC) on the
Staff Paper, “Proposed Near-Term Method for Estimating
Generation Fuel Displaced by Avoided Use of Grid Electricity”**

Docket Number 14-CHP-1

June 19, 2015

Submitted by: Christa Heavey and Sierra Martinez

California Energy Commission

DOCKETED

14-CHP-1

TN # 75995

JUN 19 2015

I. Introduction and Summary

The Natural Resources Defense Council (NRDC) appreciates the opportunity to offer these comments on the Staff Paper, “Proposed Near-Term Method for Estimating Generation Fuel Displaced by Avoided Use of Grid Electricity.” NRDC is a non-profit membership organization with nearly 70,000 California members who have an interest in receiving affordable energy services while reducing the environmental impact of California’s energy consumption.

II. Discussion

NRDC applauds the California Energy Commission for embarking on an important aspect of planning California’s energy future – the relative avoided greenhouse gas emissions from preferred resources. We find it essential to holistically assess the value of all resources in a carbon-constrained future. We offer the following comments on two of the questions listed in the report:

Is a uniform statewide method appropriate for evaluating emissions displacement factors over a long-term (10-15 year) planning horizon? If not, please explain.

NRDC agrees with the CEC staff paper that using the same method to evaluate emission displacement factors for a longer term is difficult due to the rapidly changing grid. NRDC urges the CEC staff to account for the growth of renewable energy resources and the accompanying need for operational flexibility on the electric system, in analyzing the avoided emissions on a long-term basis. The proposed methodology, using regression analyses based on past heat rates, assumes that the future over the next 15 years will conform to the past. But, we are presently at a pivotal point in the development of low-carbon energy resources, which will make the next 15 years much different than the past 15 years of development. Therefore, we do not endorse using the proposed methodology, which does not account for the impending retirement of many conventional resources or the additions of new preferred resources.¹ Therefore, we recommend

¹ “It does not make any specific assumptions about the retirement of existing resources, the addition of new resources (preferred or otherwise), the impact today’s preferred resource procurement will have on future

that in estimating heat rates over the next 5 or 15 year time horizon, the CEC should rely on the best available estimates of future resource growth and retirements. Using the most updated information from the state energy agencies' processes, such as the CEC's IEPR Demand Forecast, the CPUC's Long Term Procurement Plan, and the California ISO's long-term studies, will provide the best information about actual carbon displacement.

Are the assumptions used to calculate the avoided generation for energy efficiency, demand response, renewables, and combined heat and power (and other distributed generation) correct? If not, what changes need to be made?

NRDC appreciates the examples given in the Staff Paper to demonstrate the method for calculating the avoided emissions from the use of each preferred resource. NRDC recognizes that the numbers used in the Staff Paper are illustrative; however, we urge the Commission to change these illustrative examples of energy efficiency in the final calculation. In the calculation of avoided emissions for energy efficiency, the example considered an energy reduction for an end-use that operates uniformly throughout the year, and therefore has the same capacity factor during both peak and off-peak times. However, this is not an illustrative example of the average energy efficiency measure, a typical energy efficiency measure, or the whole portfolio of energy efficiency measures. Lighting is the largest source of energy efficiency savings presently, in recent history, and in the predictions of future savings. Because energy efficiency measures save energy relative to the demand curve of the specific end-use, the average efficiency measure saves more energy at different times of the day—and particularly in the late afternoon/early evening. The average efficiency improvement has its peak demand close to the same time of day as the statewide peak, which allows efficiency to save more energy and avoid more carbon from peaker plants that have high heat rates than the example, which shows efficiency operating uniformly, or primarily during off-peak hours. NRDC urges the Commission to change these illustrative results to that of a more typical, or average, efficiency measure – such as a lighting end use – which saves energy predominantly at the peak time of day.

procurement . . .” CEC, *Proposed Near-Term Method for Estimating Generation Fuel Displaced by Avoided Use of Grid Electricity*, p. 4 (June 2015).

III. Conclusion

Thank you for the opportunity to comment on the Staff Paper, “Proposed Near-Term Method for Estimating Generation Fuel Displaced by Avoided Use of Grid Electricity.” We look forward to working with the CEC and stakeholders on this important issue to help California plan its energy resources for the future to meet the state’s climate goals.