DOCKETED

Docket Number:	17-IEPR-06
Project Title:	Doubling Energy Efficiency Savings
TN #:	215718
Document Title:	CMUA, NCPA, and SCPPA Comments: on Energy Demand Forecast and Energy Efficiency Workshop
Description:	*** This document is also filed in Docket No. 16-IEPR-05, TN 212464 ***
Filer:	System
Organization:	CMUA, NCPA, and SCPPA
Submitter Role:	Public
Submission Date:	2/1/2017 11:07:36 AM
Docketed Date:	2/1/2017

Comment Received From: CMUA, NCPA, and SCPPA
Submitted On: 2/1/2017
Docket Number: 17-IEPR-06

on Energy Demand Forecast and Energy Efficiency Workshop

*** This document is also filed in Docket No. 16-IEPR-05, TN 212464 ***

Additional submitted attachment is included below.

DOCKETED

Docket Number:	16-IEPR-05
Project Title:	Electricity Demand Forecast
TN #:	212464
Document Title:	Comments of CMUA, NCPA, and SCPPA on Energy Demand Forecast and Energy Efficiency Workshop
Description:	N/A
Filer:	System
Organization:	CMUA, NCPA, and SCPPA
Submitter Role:	Public
Submission Date:	7/25/2016 4:56:03 PM
Docketed Date:	7/25/2016

Comment Received From: CMUA, NCPA, and SCPPA
Submitted On: 7/25/2016
Docket Number: 16-IEPR-05

Comments of CMUA, NCPA, and SCPPA on Energy Demand Forecast and Energy Efficiency Workshop

Additional submitted attachment is included below.

BEFORE THE CALIFORNIA ENERGY COMMISSION

In the Matter of: ***2016 Integrated Energy Policy Report Update (2016 IEPR Update)***	**Docket No. 16-IEPR-05** **JOINT AGENCY WORKSHOP** **RE: Energy Demand Forecast and Energy Efficiency**

CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION, SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY, AND NORTHERN CALIFORNIA POWER AGENCY JOINT COMMENTS ON ENERGY DEMAND FORECAST AND ENERGY EFFICIENCY JOINT AGENCY WORKSHOP

The California Municipal Utilities Association ("CMUA"), Southern California Public Power Authority ("SCPPA"), and Northern California Power Agency ("NCPA") ("Joint POUs") appreciate the opportunity to provide these comments to the California Energy Commission ("Commission") on the *Joint Agency Workshop on Energy Demand Forecast and Doubling of Energy Efficiency* ("Workshop") held on July 11, 2016. The Workshop included presentations from state agencies, utilities, researchers, and other stakeholders on forecasting energy demand and efficiency measures. A component of Workshop discussion related to how state agencies will track and account for the energy efficiency goals set by SB 350. SB 350 directs the Commission to "establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030."[1]

At the Workshop, Dr. Michael Jaske from the Commission's Energy Assessments Division provided a list of questions and presented threshold issues that should be considered in energy efficiency target design. Such questions include how the target should apply and account for cost-effectiveness, feasibility, and fuel substitution issues. The Joint POUs support SB 350's

[1] Cal. Pub. Res. Code § 25310(c)(1).

goal to increase energy efficiency, and respectfully provide suggestions in response to Dr. Jaske's presentation and other components of Workshop discussions, as provided below.

I. DISCUSSION

A. SB 350 Envisions Statewide Targets

The language in SB 350 clearly and expressly establishes a statewide target. SB 350 does not authorize the Commission to develop utility-specific energy efficiency goals. SB 350 clearly states that the Commission "shall establish annual targets for *statewide* energy efficiency savings and demand reduction that will achieve a cumulative doubling of *statewide* energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030."[2] The California Legislature considered two competing bills – SB 350 and AB 1330 – in the process leading up to SB 350's passage. AB 1330 would have set utility-specific targets; SB 350 does not. Thus, the Legislature had two distinct options related to energy efficiency targets and ultimately enacted into law SB 350's statewide approach.

A statewide target is also more consistent with the direction and goals of many programs and actions taken by the State to increase energy efficiency in all sectors, including the AB 758 Existing Buildings Energy Efficiency Action Plan ("Action Plan"). The Action Plan looks well beyond utility programs and seeks to "activate market forces and transform California's existing residential, commercial, and public building stock into high-performing and energy-efficient buildings."[3] The Action Plan highlights twenty-four strategies, such as zero net energy retrofits and plug-load efficiency, and calls for statewide market transformation.[4] Utility incentive programs are only one of the twenty four strategies listed to achieve the Action Plan's broader

[2] Cal. Pub. Res. Code § 25310(c)(1) (emphasis added).
[3] Action Plan at i.
[4] *Id.* at 41-93, 87.

statewide goals.[5]

The Commission must account for the savings from many different present or forthcoming programs rather than simply rely on utility-sponsored programs for the cumulative doubling to get a better understanding of how the state is meeting the statewide energy efficiency goals in SB 350. The Title 20 Appliance and Title 24 Building Standards, Proposition 39 Grant Program for Local Educational Agencies, AB-32 funded programs, Zero Net Energy buildings initiative, and Property-Assessed Clean Energy programs all contribute to statewide energy efficiency progress. Commission efforts to improve program hurdles and incorporate these program savings into targets will better enable energy efficiency investments in all market sectors and improve the ability to double statewide energy savings.

B. The Commission Should Increase Customer Outreach to Further California's Energy Efficiency Goals

SB 350's ambitious goal of doubling energy efficiency savings comes amidst record-setting energy savings and investments from publicly owned utilities' ("POUs") energy efficiency programs. Last year, POUs' total lifecycle energy savings reached record highs (8,211.6 GWh) and program expenditures continue to increase – with over $162 million spent on energy efficiency programs last year.[6] POUs also set new annual records for Gross Peak Savings (132.5 MW) and Gross Annual Energy Savings (681.9 GWh).[7]

These achievements did not occur without challenges. Energy efficiency programs have to compete for customer investments with other programs and resources, such as rooftop solar, energy storage, and electric vehicles.

Economic attractiveness of energy efficiency programs alone does not incentivize

[5] *See id.* at 92 (for utility incentive outline).
[6] Joint POUs, *Energy Efficiency in California's Public Power Sector: A 2016 Status Report* at 1-2, 17-20.
[7] *Id.*

customer investment. Since customers have the ultimate choice in whether to save energy, the Commission should pursue a significant marketing and outreach program to encourage energy efficiency investments and show customers the importance of energy savings. California state agencies embarked on a substantial customer outreach effort in response to the current California Drought with demonstrated success, and a similar approach would be of great benefit to the energy sector.

C. Cost Effectiveness

SB 350 requires the Commission to consider cost-effectiveness in developing statewide targets.[8] A threshold issue that the Commission and stakeholders must address is how to best define "cost-effective." Commission staff provided three options for consideration: the Utility Total Resource Cost Test, the Customer Pocket Book Test, and a Societal Test.[9] However, these tests are not without their respective disadvantages.[10] As such, rather than utilizing any of these potentially problematic options, the Commission should measure cost effectiveness from a levelized utility cost of a measure, project, program, or portfolio (expressed in cents per lifecycle kWh). A levelized utility cost is the most meaningful way to compare utility investments in energy efficiency to generation resources from a procurement standpoint, and will enable a utility (and the Commission) to see the cost comparison of each kWh (or kW) of savings from an energy efficiency (or peak demand reduction) measure.

The Commission should also incorporate an evaluation of the carbon content of each kWh saved during a cost-effectiveness analysis. Each kWh saved is not of equal monetary or carbon-reduction value, as some energy efficiency measures reduce energy consumption and demand that would have otherwise been met by higher emitting, natural gas-fired peak

[8] Cal. Pub. Res. Code §§ 25310(c)(1), (c)(5)
[9] Dr. Michael Jaske Slides at 4.
[10] *Id.*

generation. For example, measuring kW demand reduction in the late afternoon or early evening instead of late at night provides greater overall benefits to the electric grid and in GHG reductions. As such, the state agencies should not focus solely on overall demand reductions, when more targeted reductions can provide exponentially greater benefits and better meet the state's GHG reduction objectives. There is significant time and locational value to energy savings and more importantly, peak demand reductions that may be worth incorporation into a model or cost-effectiveness test.

The most important factor in the success of energy efficiency programs is the customer and, therefore, any conversation about cost-effectiveness must also consider the customer's perspective as well. The levelized utility cost is of interest to utility resource planners and the GHG content of energy and demand savings informs state agency policymakers; but neither is the most useful metric of cost/benefit to the customers when making a decision on energy efficiency improvements. As the Commission noted in the AB 758 Action Plan, residential tenure in a given property is typically 5-8 years in California and consumers may not recoup the value of a deep retrofit project while they own the home.[11] While many measures may be cost-effective over 10-20 year timeframes, many customers will need to realize a return on investment in a much shorter time frame to make them viable or cost-effective from the customer perspective. In order to recognize the significant role that customer choice and preference plays in this process, the Commission should consider customer return on investment for efficiency projects as one of the metrics of cost-effectiveness, in particular as it relates to defining feasibility and calculating the market potential of future energy savings, which is discussed in greater detail below.

[11] California Energy Commission, *California's Existing Buildings Energy Efficiency Action Plan* at 13 (2015).

D. Feasibility

SB 350 also requires the Commission to consider feasibility in target development.[12] "Feasibility" is a critical factor in the establishment of annual statewide energy efficiency targets and not a stylistic term. The Energy Efficiency Potential Forecasts undertaken by the POUs and IOUs review and evaluate three types of energy efficiency potential – technical, economic, and market. Any developed targets by the Commission should reflect the market potential, as market potential can be best equated with feasibility given that it reflects the energy efficiency savings that can be expected in response to specific levels of incentives and assumptions about policies, market influences (such as competition), and barriers. As explained above, there can be a considerable gap between technical or economical potential as well as the market potential because of customer choice and other policy factors. Market potential provides the most accurate forecast of what targets would be feasible for the state to achieve.

E. Fuel Substitution

The Joint POUs support incorporating fuel substitution from natural gas to electricity for utility customers as energy efficiency, which is consistent with the energy efficiency and natural gas reduction goals of SB 350. This is an inherently challenging policy to implement and has ramifications for programs implemented by the CARB. The Joint POUs support collaboration between the Commission, the California Public Utilities Commission, and CARB to work with stakeholders on the development of policies that encourage the reduction of GHG emissions through the substitution of electricity for natural gas in building applications, including but not limited to space heating and water heating.

II. CONCLUSION

The Joint POUs appreciate the opportunity to provide these comments to the

[12] Cal. Pub. Res. Code § 25310(c)(1).

Commission, and look forward to working with Commission staff and other stakeholders on energy demand forecasting and energy efficiency measures.

Respectfully submitted,

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