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Additional submitted attachment is included below.

BEFORE THE CALIFORNIA ENERGY COMMISSION

In the Matter of: ***2017 Integrated Energy Policy Report***	**Docket No. 17-IEPR-06** **RE: Methodology on 2030 Energy Efficiency Targets**

JOINT PUBLICLY OWNED UTILITIES' COMMENTS ON METHODOLOGIES FOR 2030 ENERGY EFFICIENCY TARGET SETTING

The California Municipal Utilities Association ("CMUA"), Southern California Public Power Authority ("SCPPA"), and Northern California Power Agency ("NCPA") (collectively, "Joint POUs") appreciate the opportunity to provide these comments to the California Energy Commission ("Commission") on the proposed methodologies to establish energy efficiency saving targets per Senate Bill 350 ("SB 350") (De León, 2015), as presented during the staff workshop on June 19, 2017.

I. ENERGY EFFICIENCY SAVINGS TARGETS FRAMEWORK

SB 350 directs the Commission to establish annual targets for statewide energy efficiency ("EE") savings and demand reduction that will achieve a cumulative doubling of statewide EE savings in electricity and natural gas final end uses of retail customers by January 1, 2030. The annual targets shall be based on a doubling of the 2014 additional achievable energy efficiency savings ("2014 AAEE") adopted by the Commission and the 2013 targets adopted by POUs ("2013 POU targets")[1], extended to 2030, to the extent doing so is cost-effective, feasible, and will not adversely impact public health and safety.[2]

[1] 2014-2023 Annual Energy Efficiency Savings Targets, as reported by POUs in 2014: http://www.ncpa.com/wp-content/uploads/2015/02/FINAL_SB1037_Report1.pdf.
[2] Cal. Pub. Res. Code §25310(c)(1).

(a) 2030 Goal and Annual EE Savings Targets

The Joint POUs support the Commission staff's proposed bifurcation framework to (1) establish a 2030 EE savings goal based on a literal doubling of the 2014 AAEE and 2013 POU targets and (2) to establish annual EE targets that are cost-effective, feasible, and will not adversely impact public health and safety. The Joint POUs concur with Commission staff that this approach facilitates comparison of annual EE targets to the 2030 goal to identify potential gaps, tracking progress of ratepayer and non-ratepayer EE programs towards annual targets and the 2030 goal, and providing recommendations for EE program improvement and policy modifications.

(b) "Ratepayer Sources" and "Non-Ratepayer Sources"

SB 350 states that the annual targets may be achieved through energy efficiency savings and demand reduction resulting from a variety of programs.[3] The Joint POUs support differentiating between programs and calculating the cost-effective, feasible, and reliable EE savings from different program areas using appropriate methodologies. However, the Joint POUs recommend including Title 20 Appliance Efficiency Regulations, Title 24 Building Energy Efficiency Standards, and California Green Building Standards Code as "Ratepayer Sources" instead of as "Non-Ratepayer Sources," as presented at the staff workshop.

The investor-owned utilities ("IOUs") and an increasing number of POUs – including the two largest, Los Angeles Department of Water and Power and Sacramento Municipal Utility District – provide essential funding and research for state building code and appliance standards ("C&S") updates. Both IOU and POU ratepayers fund the promulgation of the state's C&S enhancements – as well as support enforcement and public compliance with these updates. As

[3] Cal. Pub. Res. Code §25310(d)

such, the Joint POUs recommend adjusting the framework for the annual EE targets and 2030 goal to reflect the investment by IOU and POU ratepayers into state C&S by including them as Ratepayer Sources.

II. METHODOLOGIES FOR RATEPAYER SOURCES

The Joint POUs support the proposed adjustments to the 2018-2027 energy efficiency targets, as presented at the staff workshop, for the purpose of establishing statewide annual EE savings targets. As noted previously, the Joint POUs support the use of the 2013 POU targets for the purposes of establishing a 2030 literal doubling

(a) Codes & Standards Adjustment

As noted in the previous section, the Joint POUs support differentiating between energy savings accrued from customer rebate and incentive programs versus savings from state appliance standards and building codes ("C&S"). To this end, the Joint POUs support adjusting the reported 2018-2027 annual EE targets to exclude EE savings from C&S, but reiterate our position that state C&S should still be characterized as a Ratepayer Source of EE savings.

(b) 2015-2029 Adjustment

The Joint POUs support the Commission staff interpretation to set the EE goal for January 1, 2030, and to establish annual EE targets through the end of 2029. The most recent POU EE potential studies and goals establish annual EE savings targets for 2018-2027. The Joint POUs support the staff proposal to use a linear trend extrapolation of POU 2018-2027 targets to generate POU EE savings for 2028-2029, as compared to assuming a 3% average growth rate that does not accurately reflect recent and forecasted POU EE trends. In addition, the Joint POUs support using previously reported EE savings for 2015[4] and 2016.[5] It is

[4] http://www.ncpa.com/wp-content/uploads/2016/03/SB1037-Report-Final-0316.pdf
[5] http://www.ncpa.com/wp-content/uploads/2015/02/2017_POU_EE_Reportv2.pdf

important to note that most POUs report EE savings from their programs on a fiscal year basis, not a calendar year basis.[6] In addition, the 2018-2027 targets are also on a FY basis for most POUs.

(c) Net Savings Adjustment

There is an open debate regarding the appropriate uses of net or gross EE savings, and arguments for the use of either for the purposes of establishing SB 350 annual EE targets. The Joint POUs support the Commission adopting a consistent approach with regard to EE savings from POU and IOU programs. It is reasonable to rely upon net energy savings from utility rebate and incentive programs.

III. CVR/VVO, FUEL SUBSTITUTION, AND REPORTING REQUIREMENTS

(a) Conservation Voltage Reduction/Voltage Var Optimization

Conservation voltage reduction/voltage var optimization ("CVR/VVO") has not been a component of most POU EE portfolios, which have predominantly focused on providing direct financial incentives to customers for their investment in energy efficiency improvements, retrofits, and appliances. There is potential for some POUs to achieve cost-effective EE savings from CVR/VVO projects, but the economics vary significantly from utility to utility. The Joint POUs support additional research and demonstration of CVR/VVO and, if warranted based on the research results, including CVR/VVO as a measure in future 10-year EE potential studies.

(b) Fuel Substitution

The Commission staff presentation notes that there are not currently any utility programs encouraging "fuel substitution," or end-use device shifts from natural gas to electricity.

[6] Imperial Irrigation District, Merced Irrigation District, Modesto Irrigation District, Plumas-Sierra Rural Electric Cooperative, Sacramento Municipal Utility District, Truckee Donner Public Utility District, and Turlock Irrigation District are the only POUs to report EE savings on a calendar year basis.

However, multiple POUs would have programs today were it not for regulatory barriers created by current Title 24 Building Energy Efficiency Standards (BEES); in particular, the time-dependent valuation ("TDV") methodology. POUs have previously raised concerns, as have a number of stakeholders, about the adverse impact TDV methodology has on efforts to reduce/remove natural gas end-uses from buildings.[7] As explained herein, the TDV methodology deters efforts to implement fuel substitution programs.

Title 24 BEES are developed based on the cost effectiveness of building efficiency measures (for space heating, space cooling, indoor air quality & ventilation, and water heating), using a Time Dependent Valuation (TDV) metric. For electricity, a TDV factor is assigned to each hour of the year in each of the 16 climate zones, based on hourly marginal electricity costs, including energy, losses, T&D, capacity, ancillary services, and a Renewables Portfolio Standard ("RPS") adder, then scaled up to match average retail rate. For natural gas and propane, monthly TDV factors are used. The Commission updated TDV factors for each Title 24 cycle, and are based on the costs and revenue requirements of IOUs in each climate zone. To comply with Title 24 BEES, a proposed building design must not exceed a given energy budget for energy use related to space heating, space cooling, indoor air ventilation, and water heating.

The Joint POUs identify the following issues with the current TDV methodology:

- TDV factors reflect the RPS adder for electricity cost and projected greenhouse gas ("GHG") emission cap-and trade compliance costs for natural gas. However, TDV factors do not reflect the carbon content of the energy source, which varies across the state depending on the load serving entity.
- TDV reflects only the retail rates of IOUs in each climate zone. The average electric retail rate for a POU is lower than that of their IOU counterpart. If a POU-specific set of TDV factors are used, it would be easier for an all-electric building to pass Title 24 standards. However, the Commission has been reluctant

[7] See Joint POU Comments to 17-BSTD-01, docketed June 5, 2017; Palo Alto Comments to 17-IEPR-06, docketed on February 15, 2017; NCPA Comments to 16-BSTD-06, docketed June 14, 2016.

to adopt different TDV values within the same climate zone as that could result in discrepancies in building efficiency standards for neighboring cities within the same climate zone.

- In June 2015, the Commission adopted a set of prescriptive standards for retrofitting a gas water heater to an efficient electric water heater. However, there is currently no prescriptive path for homeowners to replace their gas space heating system with a heat pump system; a homeowner needs to demonstrate using Title 24 energy compliance software that the proposed heat pump system has a lower TDV cost than the existing gas space heating system. This added energy modeling burden on the homeowner is another barrier to building electrification.

The Joint POUs support the Commission staff position that fuel substitution programs are required to provide both site energy savings and source GHG emission reductions. However, without changes to Title 24 and the TDV methodology, modeling fuel substitution for the purposes of establishing SB 350 statewide annual EE targets is essentially moot – TDV effectively prevents utilities from offering fuel substitution programs. The Joint POUs welcome the opportunity to work with the Commission, and other stakeholders in an open and public process, on modifications to the TDV methodology, or an alternative compliance mechanism for Title 24, that facilitates fuel substitution in both new and existing buildings. One potential option might be to develop a model ordinance for fuel substitution similar to the model local solar ordinance.

While not a direct issue for POUs, the California Public Utilities Commission's ("CPUC") three-prong fuel substitution test for eligibility of utility customer-funded EE incentives is also a key barrier preventing IOUs from pursuing fuel-substitution programs. The IOUs' funding support is critical to realizing the full energy savings and GHG emission reduction potential of fuel substitution programs. The POUs alone have much less influence on the upstream and midstream market actors. The Joint POUs encourage the Commission to work with the CPUC, and other stakeholders in an open and public process, to address regulatory

barriers inhibiting utility fuel substitution programs.

The staff proposal interprets SB 350 as limiting "fuel substitution" to mean only end-use device shifts from natural gas to electricity and, therefore, excludes programs to replace other fossil fuels, such as propane and diesel, with electricity. The basis for this limitation is a strict interpretation of SB 350 "energy efficiency savings" defined as "reduced electricity or natural gas usage produced either by the installation of an energy efficiency measure or the adoption of an energy efficiency practice that maintains at least the same level of end-use service or by conservation actions that reduce energy use by reducing the quantity of baseline energy services demanded."[8]

The Joint POUs contend that expanding "fuel substitution" to include end-use device shifts from propane and diesel to electricity is wholly consistent with the Governor's overarching vision for California to reduce GHG emissions 40 percent below 1990 levels by 2030, which was the intent of the Legislature in passing SB 350. Furthermore, the approach proposed by Commission staff to express energy efficiency savings in a common unit, quadrillion British thermal units, lends support for the inclusion of propane and diesel replacement in the definition of fuel substitution. Finally, there is little debate regarding the GHG emission reductions from replacing propane and diesel with electricity, especially with increasing RPS requirements. Excluding propane and diesel from the definition of fuel substitution sends the wrong message to the market and is inconsistent with the state's broader climate change and energy policies. The Joint POUs support expanding fuel substitution to include end-use device shifts from propane and diesel to electricity.

[8] Cal. Pub. Res. Code §25310(a)(2).

(c) Reporting Requirements

SB 350 directs the Commission to include in the biennial integrated energy policy report an assessment of the effect of energy efficiency savings on electricity demand statewide, in local service territories, and on an hourly and seasonal basis.[9] Commission staff noted during the workshop that POUs are not reporting seasonal or hourly impacts and that a new effort to develop seasonal and hourly assessments is needed.[10] Beyond POU programs, it is unclear what the framework is for incorporating seasonal and hourly impacts from other programs, including the Non-Ratepayer Sources identified by the Commission. The Joint POUs encourage the Commission to propose a more comprehensive approach for assessing EE savings on hourly and seasonal basis prior to making additional demands of POUs to undertake significant and costly reporting exercises that further diminish limited utility resources for actual energy saving programs and investments.

The Joint POUs share the Commission staff perspective that a collaborative approach is needed and are committed to working with Commission staff on developing a balanced solution that satisfies the Commission's obligations to the Legislature while not creating undue burden on POUs. One option may to be harness the expertise of the California Technical Forum for the development of updated load shapes to assist in assessing the seasonal and hourly impacts of different measures.

SB 350 also directs the Commission to include specific strategies for maximizing the contribution of EE savings in disadvantaged communities.[11] The staff presentation concludes

[9] Cal. Pub. Res. Code §25310(e)(1).
[10] Jaske, M. June 19, 2017. Additional Topics: CVR/VVO, Fuel Substitution, and Reporting Requirements. Presentation at *Staff Workshop on Methodologies for 2030 Energy Efficiency Target Setting*. Available: http://docketpublic.energy.ca.gov/PublicDocuments/17-IEPR-06/TN219131_20170616T104340_Additional_Topics_CVRVVO_Fuel_Substitution_and_Reporting_Requir.pdf.
[11] Cal. Pub. Res. Code §25310(e)(2).

that tracking participation by zip code appears to be necessary. Like assessing seasonal and hourly impacts, tracking EE savings by zip code is potentially complicated and represents an additional layer of administrative burden for POUs. Furthermore, many POUs do not serve "disadvantaged communities" identified pursuant to Section 39711 of the Health and Safety Code. For these POUs, tracking EE savings by zip code does not support the Commission's efforts to satisfy their reporting obligation.

Providing improved information on either EE savings (1) seasonal and hourly impacts or (2) in disadvantaged communities, in the 2018 POU annual EE report[12] is not feasible for many POUs. The 2018 report will include information on EE program participation for FY2016-2017 for most POUs and CY2017 for the others. Reporting systems need to have been developed and instituted prior to the programs being launched in order to make sure the requisite data was being collected from participating customers.

In general, for any major change to POU programs and reference tools, it takes two years to incorporate changes into program planning, delivery, and reporting. To this end, POUs already initiated an effort to update the reporting tool in response to the *SB 350 Low-Income Barriers Study, Part A.*[13] The Joint POUs recommend at least one meeting between Commission staff and POU representatives to discuss future data needs related to energy efficiency, in regards to the 2030 Doubling of EE Savings goal as well as other related policies.

IV. CONCLUSION

The Joint POUs appreciate the opportunity to provide these comments to the Commission, and look forward to continuing working with staff on refining the framework for

[12] As required by §9505(a) of the Public Utilities Code.
[13] California Energy Commission. December 2016. *Low-Income Barriers Study, Part A: Overcoming Barriers to Energy Efficiency and Renewables for Low-Income Customers and Small Business Contracting Opportunities in Disadvantaged Communities*. Document CEC-300-2016-009-CMF

establishing and achieving the energy efficiency targets required by SB 350.

Respectfully submitted,

/s/ Jonathan Changus

Jonathan Changus
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678
(916) 781-3636 (office)
jonathan.changus@ncpa.com

/s/ Justin Wynne

Justin Wynne
Braun Blaising Smith Wynne, P.C.
915 L Street, Suite 1480
Sacramento, CA 95814
(916) 326-5812 (office)
wynne@braunlegal.com
Attorneys for the
California Municipal Utilities Association

/s/ Bryan Cope

Bryan Cope
Southern California Public Power Authority
1160 Nicole Court
Glendora, CA 91740
(626) 793-9364 (office)
bcope@scppa.org