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Comments of the Sacramento Municipal Utility District On Integrated Energy Policy Report (IEPR) Volume II

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Additional submitted attachment is included below.

**STATE OF CALIFORNIA
BEFORE THE CALIFORNIA ENERGY COMMISSION**

In the matter of:)	Docket No. 18-IEPR-02
)	
2018 Integrated Energy Policy Report Volume II)	Integrated Energy Policy Report Volume II
)	
)	
)	November 9, 2018

**Comments of the Sacramento Municipal Utility District
On Integrated Energy Policy Report (IEPR) Volume II**

SMUD commends the Energy Commission on the publication of the draft IEPR volume II. This represents a significant accomplishment and the document is full of valuable information on further decarbonizing energy use in California, as well as adapting to Climate Change. SMUD’s interest in the IEPR is broad, but our comments here focus on the following chapters: Chapter 1, Building De-carbonization, Chapter 2: Doubling of Energy Efficiency, Chapter 3: Increasing Flexibility, and Chapter 5: Climate Adaptation and Resiliency.

Comments on Chapter 1: Decarbonizing Buildings

Building de-carbonization is a major strategic priority for SMUD and therefore we appreciate the opportunity to present our perspectives on building de-carbonization, GHG savings from fuel-switching, and information about our new home electrification incentives. We also are pleased that a great deal of the information we presented in public workshops about the GHG benefits from switching homes from gas-fired HVAC and gas water heating to electric heat-pump models are reflected in the IEPR.

Additionally, there are a few points to make regarding the topics and structure of this chapter to increase the focus on de-carbonization.

SMUD recommends the following correction to material on page 38 about our new all-electric home incentive:

“SMUD has electrification incentive programs for both new and existing homes. The All-Electric Smart Homes Program provides incentives of up to \$5,000 per new home. ~~including \$500 for pre-wiring, \$1,500 for heat pump space heating, \$1,500 for heat pump water heating, and \$1,500 for an induction cooktop.~~”

We also can provide additional information regarding our water-heater program:

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SMUD is developing a midstream heat pump water heater program that will provide incentives to the distributor, rather than directly to the customer, **and a direct install HPWH program for emergency water heat replacement of gas equipment.**⁵⁶

Further, we suggest this clarifying change regarding the importance of local ordinances:

SMUD indicates that local energy ordinances are ~~required~~ **necessary** to **spur market transformation in time to meet statewide goals** ~~make these measures mandatory~~, as there are still **regulatory** barriers to overcome.

SMUD strongly supports the recommendations made at the end of Chapter 1, and specifically the recommendation to emphasize de-carbonization in future Existing Buildings. We also note that we do not think the Energy Commission has gone far enough in recommending actions that its own programs or CPUC programs can take to change existing evaluation structures that tend to create a preference for gas in HVAC and water heating and therefore discourage de-carbonization.

There are issues that cross over between Chapter 1 and Chapter 2. First, SMUD would support an update of the building efficiency standards to fully reflect the GHG emissions of both gas and electricity in all aspects of the standards and in all of the underlying assumptions. An update should include numbers for leakage rates from gas infrastructure and a global warming potential estimate based on a shorter (20 year) window of impacts for methane. Also, evidence has mounted that the time has come for the elimination of the “3 prong test.” This test seems to be an hold over from an era when the true GHG footprint of natural gas wasn’t well understood and it was believed that the societal impacts of gas and electricity were more equal. At this point, the 3-prong test operates primarily as a significant barrier to providing valuable energy efficiency and building de-carbonization programs to customers.

We support the recommendation in Chapter 1 that building de-carbonization should be a focus in the Energy Efficiency Action Plan and the Doubling Energy Efficiency Savings by 2030 Report.

Chapter 2: Doubling of Energy Efficiency

The introduction to this chapter emphasizes that progress on energy efficiency is a main way to help the State achieve climate goals, but the focus on the *electric sector* seems errant. Energy efficiency should be focused on achieving GHG savings holistically, and not on separate measures for gas vs. electric.¹ SMUD fully supports this statement: “It will be necessary to better track efficiency savings and further define the metrics for measuring progress in achieving efficiency savings to include GHG metrics.”

¹ Achieving these efficiency targets is one of the primary ways the electric sector can help achieve the State’s climate goal of reducing greenhouse gas (GHG) emissions to 40 percent below 1990 levels by 2030. This calls for a shift in focus from solely achieving energy savings, to maximizing GHG reductions from energy efficiency efforts, as discussed further in Chapter 1.

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SMUD strongly encourages the CEC to consider a different approach to the conversation around GHG savings from electric vs. gas efficiency programs and to connect this back to the goals of SB 350. For example, *Figure 5* shows cumulative avoided GHG savings projected into the future for electricity as a separate data source from GHG savings associated with gas energy efficiency. Since Chapter 1 of the IEPR is on building electrification as a means to de-carbonize, and Chapter 2 is focused on the breakdown of where the savings come from and focuses on goal-setting and evaluating based on fuel type, it leaves the question: Where will the GHG savings from switching from gas to renewable electricity fit into *Figure 5*? The electric sector clearly has a role to play in decarbonizing our society because of the transition to higher penetrations of GHG-free electricity, but, the largest potential source of GHG savings for buildings will come from substituting electricity for natural gas.

California set out in SB 350 to emphasize GHG reduction, and our lawmakers stated that energy efficiency is one way to do this. This would seem to require that the CEC develop a metric that converts electricity and gas savings to a new GHG-based Energy Efficiency metric. SMUD is currently developing such a metric to better track and measure our own progress towards SB 350 goals and our Board-adopted direction on GHG reductions. If such a statewide metric were adopted, it should indicate the real goal of doubling our GHG savings not doubling our *Electrical Efficiency*—as that is the true goal of SB 350. The IEPR repeatedly emphasizes the SB 350 goal but doesn't draw this critical connection and therefore the current shortcoming of the CEC's metrics is that these do not expressly allow an electric utility to demonstrate that they truly are doubling energy efficiency through building *de-carbonization* efforts. We ask the CEC to consider this and include it in the recommendations for Chapter 2 as well.

Chapter 3: Update on Flexible Loads: Time-of-Day Pricing

SMUD appreciates the IEPR discussion about Time-of-Use pricing programs (which SMUD calls Time-of-Day pricing) in the energy chapter on system flexibility. However, the end result of Time-of-Day pricing may not be to reduce kWh consumed, but rather to shift consumption to times of day with lower average GHGs, and the discussion of GHG and energy cost savings both to consumers and the grid seems to be missing this point. In the CPUC's 2025 CA Demand Response Potential Study Results Report (LBNL, 2017)² programs that shift customer rates based on the time are referred to as a type of "shift" demand response. They may not decrease consumption overall but they should decrease peak load, grid stress, market prices, and GHGs if done correctly by allowing for better use of renewable energy and reducing reliance on fossil peaker plants. The IEPR discussion on flexible loads should refer to this extremely valuable study regarding the future of shifting loads in California through Time-of-Day pricing and other new program designs.

² Lawrence Berkeley National Lab, CPUC, E3, Nexant, Final Report on Phase 2 Results 2025 California Demand Response Potential Study, March 2017. See *chapter 5.3 on TOU rates and load shifting*.

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SMUD also requests some clarifying language regarding our Time-of-Day program rollout. We suggest the references to our program on pages 102 be modified to say:

Benefits from time-sensitive rates can be greatly expanded by making them the default rate for residential customers, which will be implemented by the IOUs and SMUD. SDG&E will begin this transition in March 2019, and SCE and PG&E in October 2020. SMUD **began transitioning customers in October 2018 and will continue implementation** in 2019.

And on page 103:

SMUD will be moving **all** residential customers to **default** TOU rates with a year-round 5:00 p.m. to 8:00 p.m. peak period, **with the option to opt-out and choose an alternative fixed rate.** We would like to note that our peak rates vary between winter and summer, but the time periods do not vary.

Comments on Chapter 5: Climate Adaptation and Resiliency

SMUD participated in multiple workshops on wildfires, adaptation, and research convened by the CEC and appreciates the agency's focus on this important topic. Regarding the following recommendation for Chapter 5, beginning on page 177: "Prioritize actions that build climate preparedness and reduce greenhouse gas emissions ...", the following example seems misplaced: "Consider energy infrastructure upgrades (such as replacing wooden poles) in the context of California's broader energy environment, taking into account trends such as the growing prevalence of distributed generation or zero-emission vehicles."

This recommendation seems to be mixing a few distinct topics that would be better separated and distinguished. We think the intended meaning is that the State should consider whether new infrastructure investments should be made, and/or whether the costs should be compared with alternatives. Wooden pole replacement does not seem like a particularly good example, especially when compared to ZEV trends or DG. Wooden pole replacement is clearly a resiliency measure without many known alternatives (other than undergrounding, which is more costly). In contrast, a new fossil plant, or a new replacement plant should be compared to alternatives such as DG, especially given that DG resources also bring resiliency benefits.

Regarding the recommendation to "Continue wildfire and climate adaptation research" We suggest adding: "Develop collaborative efforts with California tribes to utilize and incorporate Traditional Ecological Knowledges into institutional approaches to watershed and forest management, including use of fire for forest thinning." The importance of utilizing traditional knowledge regarding ecosystem management was raised at a few wildfire workshops held throughout 2018 and should be reflected in the IEPR.

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Also, we recommend the following addition to this recommendation:

- **Prioritize actions that build climate preparedness and reduce greenhouse gas emissions.** Leverage the multiple, cross-sector regional climate collaboratives that exist throughout the state to provide input on regional research and policy priorities, increase awareness of research findings, and assist in identifying local partners for demonstration and implementation projects.

SMUD spoke at length regarding the great value provided by the Regional Climate Collaboratives when we participated in the Climate Adaptation Research Needs Workshop, and also referenced the collaboratives in our written comments on that workshop. It would be an oversight to leave them out of the IEPR when they are doing real on-the-ground work to help California adapt to Climate Change.

Thank you for the opportunity to comment on the 2018 IEPR.

/s/

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