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SMUD Comments on IEPR Commissioner Workshop on Achieving Zero Emission Buildings

Additional submitted attachment is included below.

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

In the matter of:)	Docket No. 18-IEPR-09
)	
2018 Integrated Energy Policy Report Update (2018 IEPR Update))	SMUD Comments on IEPR Commissioner Workshop on Achieving Zero Emission Buildings
)	
)	
)	June 28, 2018

**Comments of the Sacramento Municipal Utility District
on IEPR Commissioner Workshop on
Achieving Zero Emission Buildings**

Thank you for the opportunity to provide comments on the 2018 Integrated Energy Policy Report (“IEPR”) Commissioner Workshop on Achieving Zero Emission Buildings (“workshop”).

SMUD believes that decarbonizing California’s buildings is incredibly important in order to achieve California’s climate targets to reduce greenhouse gases 40 percent below 1990 levels by 2030, and as the E3 Pathways Model demonstrates, electrification represents a least-cost pathway to a lower carbon outcome. With this in mind, SMUD believes state agencies, through both the Senate Bill No. 350 (“SB 350”) framework and the Title 24 process, should encourage utility electrification programs and avoid continued gas infrastructure build-out that is not cost-effective. SMUD has electrification programs, such as incentives for all-electric new homes and electrification upgrades to existing homes, but even these programs will not be adequate without more aggressive support from the agencies guiding the energy transition to a low carbon future. SMUD looks forward to the opportunity to develop and expand upon our electrification programs and to work with other utilities on joint decarbonization efforts.

SMUD’s comments address the fundamental question posed by California Energy Commission (“CEC”) staff regarding the critical areas where state government can help.

SMUD believes the following specific policy actions would be beneficial in achieving zero emission buildings by assisting utilities in developing and implementing successful electrification programs.

Include Cost of Gas Infrastructure in Title 24. At present, gas measures in Title 24 do not include the additional cost of the required installation of gas infrastructure to a building. Providing electricity to a building is a given – people need electrical power for their plug loads and providing additional electrical capacity for heating, water heating, etc. comes at a minimal cost. However, the gas service line from the street to the house, the gas meter, and the gas piping inside the house are all discretionary costs

that should be justified if gas devices are to be installed in the house. In practice, the cost of gas service line from the street and the gas meter does not fall on the homeowner or even (usually) on the developer. Instead, it is normally spread across all gas ratepayers. However, this cost is a real societal cost that should be assessed for all gas measures in the next Title 24 code cycle.

Initiate a “Pruning the Tree” Pilot. The cost of replacing aging gas distribution pipes is extremely high – typically higher than the cost of electrifying the neighborhood affected. Various groups have proposed an approach known as “pruning the tree” (<https://heetma.org/energy-shift>). This approach, with the support of the affected community, decommissions selected gas pipes in place while electric infrastructure is upgraded, and homeowners receive upgraded all-electric home appliances, which result in lower utility bills. Leftover funds (i.e., avoided costs) could be spent in disadvantaged communities to reduce their utility costs. The CEC and/or the California Public Utilities Commission (“CPUC”) could coordinate to plan an initial group of pilots, with a focus on the social/political process of obtaining community consent for the work. To initiate this program, SMUD requests that the CEC work with the CPUC and other stakeholders to create a list of planned gas maintenance activities across the state, including the schedule of such repairs/ improvement and cost of such repairs.

Calculate SB 350 Electrification Savings Credits. Electrification existing as a savings measure in SB 350 is an extremely valuable step, and we appreciate the efforts of the CEC staff to verbally approve SMUD’s method of claiming savings on its electrification programs. We feel confident in that methodology and recognize that electrification can go a long way toward filling the SB 350 doubling gap if the work between the CEC and the California Air Resources Board (“CARB”) on a method for calculating the equivalence between “single-fuel” energy efficiency measures and fuel switching measures can be formalized so that other parties feel confident in the magnitude of the savings claims. We encourage the CEC to develop a draft method for public comment as soon as possible. This will give confidence to utilities across the state as they develop their electrification programs.

Exclude TDV Retail Adder from Cost-Effectiveness Calculations. In those cases where Time Dependent Valuation (“TDV”) is used to assess the cost-effectiveness of electrification measures and programs, the TDV “retail adder” should be excluded from the calculation. The retail adder is an element of TDV intended to reflect the overhead cost of utilities providing customer service (metering, billing, phone response, websites, etc.). These overhead costs are fixed per customer – they do not change if the customer’s electrical (or gas) bill increases or decreases. However, because the retail adder for electricity is significantly higher than the retail adder for gas, per unit of energy, the TDV calculation shows an increase in societal cost where no such increase actually exists. This hampers the ability of utilities to fairly assess the cost-effectiveness of electrification measures and programs.

Amortize Electrification Costs Over Multiple Device Life-Cycles. When assessing the cost-effectiveness of a code or program measure, calculations are currently done over the effective useful life (“EUL”) of each end-use device. If the upfront costs of electrification are amortized over only one EUL cycle, the cost-effectiveness of the

measure suffers. Some or all of these upfront costs should instead be amortized over the life of the *electrification*, rather than over the life of the device itself. The electrification of the home, once achieved with certain upfront costs, is effectively indefinite (as opposed to the capital cost of replacement equipment). It would make more sense to consider cost-effectiveness over several device EULs (say, five), not one. At present, there is no agreed structure for this calculation.

Examine Gas Distribution Resource Planning. The CEC, in concert with the CPUC, should begin development of a gas distribution resource planning structure, similar to that being developed for electricity distribution at the CPUC. As new homes and businesses are built, there is a significant risk of stranded assets, i.e., the gas distribution infrastructure needed for these new structures may end up being abandoned prior to their end of useful life. Replacement of existing but aging infrastructure faces the same issue. The changes that the State needs to meet its carbon goals require careful planning on the gas side as well as the electricity side.

Thank you again for the opportunity to comment on the IEPR workshop on achieving zero emission buildings. All-electric homes will help catapult the State toward its low carbon goals while also assisting in home price affordability. All-electric construction is the less expensive option for new home construction. A cost-effectiveness study conducted by EPRI for SMUD showed no net impact on the cost to build a new home and significant reductions in operating cost for the homeowner. Homes may also benefit from faster build times without gas infrastructure, fewer gas-related inspections (including CAZ testing) and rework, and less liability on builders due to potential gas leaks. Acting swiftly to enable more utilities and more options for electrification as described above will speed the eventual arrival of a highly electrified and more affordable housing stock.

We look forward to discussing these topics further.

/s/

LOURDES JIMENEZ-PRICE
Senior Attorney
Sacramento Municipal Utility District
P.O. Box 15830, MS A311
Sacramento, CA 95852-0830

/s/

DANIELLE ROBERTS
Government Affairs Representative
Sacramento Municipal Utility District
P.O. Box 15830, MS A313
Sacramento, CA 95852-0830

cc: Corporate Files (LEG 2018-0352)