SMUD®

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Sacramento Municipal Utility District's Comments Re: The 2030 Target Scoping Plan Workshop (November 7, 2016)

SMUD appreciates the opportunity to comment on the scenarios and other information presented for the 2030 Target Scoping Plan at the November 7th workshop. SMUD has long supported ARB's efforts to address Climate Change by reducing GHG emissions in California. SMUD provided comments on the initial Scoping Plan and the First Scoping Plan Update released and adopted in 2013-2014. Governor Brown's Executive Order B-30-2015 established the 2030 goal of reducing GHG emissions 40% below 1990 levels and required the ARB to update the Scoping Plan to focus on that new goal. SMUD supports the Draft Scoping Plan Scenario presented at the workshop for the principal reason that it employs the most cost effective and technologically feasible reductions to meet the new GHG emission limit in the law.

I. Local Government and Project Actions

SMUD supports ambitious local action to reduce GHG emissions, while also recognizing the need to accommodate sustainable population growth. SMUD agrees with Staff's analysis that an "all hands on deck" approach is necessary to meet the State's goals and to spread the burden of carbon reductions equitably on all sectors of society. For nearly a decade, SMUD has sponsored communication forums and targeted research designed to assist our local government partners in achieving cost-effective emissions reductions, originally with the Sacramento Area Climate Partnership and now as a founding member of the Capital Region Climate Readiness Collaborative. The land use, industrial permitting, zoning and building code activities that lie within local government jurisdiction can be critical complements to SMUD's own emissions reduction efforts. For example, coordinated local support for cool surfaces and urban greening can help reverse urban heat islands and reduce SMUD's critical peak load requirements, which are often met by sources of electricity with higher than average emissions. Compact housing density can also improve building energy efficiency significantly. Local governments are now and will remain important partners in the cross-sector work required to achieve the state's targets.

SMUD also recommends that ARB provide guidance to local governments on the development of consumption-based GHG emissions inventories. While still somewhat novel, consumption-based inventories can provide a more complete picture of community-driven emissions, provide a common yardstick with which to measure emissions at the local level, and also offer more opportunities for direct citizen engagement in emissions reductions. When citizens are called to action, they acquire a stake in the outcome, and can serve as a powerful tool for expanding the impact of local government programs.

II. Scoping Plan Scenarios and Economic Analysis

Draft Scoping Plan Scenario: Under current Cap-and-Trade regulations, SMUD's experience has been positive due to the fair and reasonable structure of the market, resulting in stable allowance prices, consumer protection, and the desired carbon reductions. As such, SMUD supports the Draft Scoping Plan Scenario, including a robust and well-designed Cap and Trade structure, that provides a smooth transition from 2020 to the 2030 carbon reduction goals and that maintains the core characteristics of the current Cap-and-Trade regulations that have led to the success of the program so far. SMUD has been a champion of flexibility as a key principle to help achieve carbon reduction at the lowest cost. Flexibility allows for stakeholders and the marketplace to find and implement the lowest cost, most effective GHG reduction strategies. SMUD believes that a robust Cap-and-Trade component strategy, as included in the Draft Scoping Plan Scenario, is an essential element of a flexible Scoping Plan.

The Cap-and-Trade structure has been a successful adjunct to complementary policies like the Renewables Portfolio Standard, the Low Carbon Fuel Standard and energy efficiency programs. The advantage of the Cap-and-Trade alternative is the economic efficiency resulting from giving covered entities flexibility to select least-cost solutions, rather than be prescribed regulatory actions. At the same time, most of the emission reductions expected to meet the 2030 target come from the complementary measures or "known commitments". These measures, such as the 50% RPS, doubling of energy efficiency targets, and extended and enhanced Low Carbon Fuel Standard will result in significant emission reductions at covered sources in California, as will the Cap and Trade program itself.

Including a Cap-and-Trade structure in California's future climate policies will extend a market price for emission reduction actions, allowing those stakeholders with relatively inexpensive reduction actions to invest in those actions and be compensated for their investments. Proceeds from auctions channeled through the Greenhouse Gas Reduction Fund also benefit disadvantaged communities, an important goal of the Legislature expressed through SB 535 (DeLeon, 2012), SB 862 (2014), AB 1550 (Gomez, 2016), and AB 2722 (Burke, 2016). The auctions in the Cap-and-Trade program establish a price on carbon emissions in California. This

carbon price is included in operational decisions, such as power plant dispatch decisions, resulting in reduced generation from the highest emitting power plants.

In addition, a Cap-and-Trade alternative provides a degree of certainty to the State and industry about the target to be reached and the cost to get there. The declining cap provides for measured, clear reductions to be achieved each year to get to the 2030 goal. Complementary measures alone do not provide as clear a benchmark for the market. Second, the floor and soft ceiling price design of the Cap-and-Trade structure gives a clear signal to the market about the cost of GHG emissions and future benefit of specific investments to reduce GHG emissions. At the same time, ARB's policies for providing allowances administratively to industries like electric distribution utilities mitigate the costs to ratepayers and consumers of achieving the targets. A path without Cap-and-Trade would almost certainly mean higher overall costs to consumers.

SMUD has been participating in the development of the post-2020 Cap-and-Trade regulations and supporting a smooth transition from current regulations that align with and support the State's 2030 carbon reduction goals. A transition that would restrict allowance supply, increase market volatility, or lead to significantly higher allowance prices will affect the value of the Cap and Trade market for all market participants. Allowance allocations to the electric sector should reflect reasonable emission reductions consistent with the overall reductions in emissions established in SB 32 and reflected in SB 350.

SMUD believes that that the ARB should consider potential additional complementary measures under the Draft Scoping Plan Scenario such as a mechanism addressing natural gas use in buildings. Unique amongst energy end-uses, natural gas use in buildings has fairly few technology forcing mechanisms or complementary policies, meaning that until carbon prices climb to a significant level, there is very little policy influence toward addressing this very significant carbon source. Potential policy mechanisms that foster building electrification, such as those included in Alternative 1, could also be included in the Draft Scoping Plan Scenario.

The Draft Scoping Plan Scenario should also reflect additional attention, if feasible, towards those GHG sources that are projected to grow rather than decline through 2030, such as high-GWP gases.

Alternative 2: SMUD does not support Alternative 2, the scenario with a carbon tax instead of the Cap and Trade structure and similar complementary measures to the Scoping Plan Scenario. While Alternative 2 includes a market-based mechanism and hence can provide some of the same market flexibility as the preferred Cap-and-Trade program, it represents a significant departure from the existing California climate structures in place. Such a change will lead to market disruption and market

uncertainty for some time, acting against the flexibility benefits that a known market-based structure brings.

Alternative 2 implies complications if not complete abrogation of California's linkage with other jurisdictions such as Quebec, Ontario (forthcoming), and hopefully others. This disruption of connected geographic carbon markets does not further the clear goal of achieving worldwide carbon reductions. Alternative 2 also comes with significant uncertainty about achieving the 2030 emissions target, since there is no quantitative limit enforced by the surrender of compliance instruments. And perhaps the greatest market disruption is uncertainty about how high the carbon tax would have to be to achieve the target and how often it would have to be adjusted to continue on the reduction path toward the target. If the carbon tax is determined to be too low to achieve needed reductions, the resulting volatility and/or increases in carbon tax levels are not likely to be politically feasible.

Alternative 1: SMUD strongly opposes Alternative 1, the scenario without a market-based Cap-and-Trade or carbon tax structure included. Achieving the 2030 goal without a market-based component would forsake the efficiencies that flexible compliance creates and will simply increase overall costs. Most of the "enhanced known commitments" posited by the ARB staff presentation at the workshop will clearly be costly if they are even feasible. The draft economic analysis indicates a preliminary additional cost for Alternative 1 over the Draft Scoping Plan Scenario of about $8 billion dollars. California, and particularly California's ratepayers in disadvantaged communities, can ill afford an alternative that increases costs in the billions of dollars.

For the utility sector, Alternative 1 includes a 60% by 2030 Renewable Portfolio Standard (RPS) proposal, significantly higher than the current 50% RPS requirement. California is already experiencing questions about integrating new renewable power plants at the 25%-30% level today, leading to expensive curtailment of resources at certain times. Integration issues are likely to increase as more and more solar and wind resources are added to reach the current 50% by 2030 RPS target. Cost-effective solutions to renewable integration must be developed, but will take time to implement, and it is unclear whether there is sufficient time by 2030 even to reach the 50% RPS target without excessive cost. Accelerating to 60% by 2030 almost certainly outstrips the State's ability to deploy sufficient integration solutions.

In addition, even in the Draft Scoping Plan Scenario, the electric sector is modeled to need dramatic emission reductions -- projected to be a 67% decrease (see slide 32) -- far more than any other sector, even with increased electric generation to serve new transportation loads assumed in the modeling. The electric sector is already contributing more than its share of reductions, and if Alternative 1 is selected, no increase in the RPS percentage is warranted. Current commitments in the electric sector are already dramatic. Additional reductions from mandated measures should come from other sectors.

SMUD also believes that the proposed Low Carbon Fuel Standard 2030 target in the Draft Scoping Plan Scenario of an 18% reduction in fuel carbon content (compared to the current 10% reduction by 2020) is fairly aggressive. The proposal in Alternative 1 to increase that target to a 25% reduction is almost certainly infeasible. Increasing the LCFS to such a high level will lead to significantly higher LCFS credit prices, and these prices will apply to a significantly greater percentage of the content of fuels, causing gas prices that may be politically infeasible.

SMUD suggests that the "heat pumps in buildings" measure should be explored as an additional measure within the Draft Scoping Plan Scenario. The State needs to accelerate decarbonization of natural gas use in buildings, an area with inadequate complementary policies at present to drive needed technological change.

Accounting for Assembly Bill 197: Assembly Bill 197 requires ARB to prioritize measures resulting in direct emission reductions at covered sources, including transportation. SMUD believes that the Draft Scoping Plan Scenario including an extended Cap and Trade structure will provide direct emission reductions at levels that clearly meet the required "prioritization".

The GHG modeling presented at the November 7th workshop predicts that the Draft Scoping Plan Scenario will achieve the 2030 target of annual GHG emissions 40% below 1990 levels, with about 67% of the reductions coming from known commitments such as the 50% RPS, doubling of energy efficiency, the LCFS, etc.. These are all direct emission reductions at covered sources including transportation. The approximately 33% of reductions that are derived from the Cap-and-Trade structure will come from measures that in most cases will also involve direct emission reductions at covered sources, including transportation. As the cap decreases, emissions must be at or below that amount, and there is no possibility of that happening without substantial direct emission reductions at covered sources.

Although the target established by SB 32 is an annual GHG target -- 40% below 1990 levels in 2030 – the prioritization concept in AB 197 is perhaps better interpreted as a cumulative emissions prioritization. Cumulatively, the GHG emissions modeling from the workshop attributes an even higher percentage of emission reductions from known commitments, more than 85%, leaving less than 15% of cumulative reductions attributable to the Cap-and-Trade component. And, it still holds that even the Cap-and-Trade component will definitely result in direct emission reductions at covered sources.

At the November 7th workshop, slide 35 suggested optional Cap and Trade design changes within the Draft Scoping Plan Scenario post 2020 that may support greater GHG emissions reductions at covered entities, presumably in further response to AB 197. SMUD believes that, given the clear prioritization above, these are

unnecessary, and could be counterproductive. The three suggestions presented all have problems, as described below.

The first suggestion was to evaluate limiting offsets more than in the current structure for a post-2020 Cap and Trade program. This suggestion will just increase costs. Offsets are an important cost containment mechanism that should remain in full force in the program, and they are very well monitored by ARB to ensure that actual emission reductions occur where the offset projects are located (some of which provide co-benefits within California). The post-2020 Cap and Trade program comes with much steeper reductions under the new targets, which makes flexibility mechanisms like offsets that much more critical to ensuring stable, politically acceptable prices while maintaining a steady carbon reduction trajectory.

The current 8% offset limit should be maintained. As the known commitments are implemented and the cap decreases forcing direct emission reductions at covered sources, including transportation sources, the quantitative use of offsets compared to direct emission reductions will be sharply decreased. Even with an offset limit retained at 8% of compliance, a 40% reduction in GHG emissions from 2020 to 2030 as required by SB 32 implies that, even if used up to the limit, offsets will represent a significantly less important contribution to compliance than in the current program, a significantly greater contribution will come from direct emission reductions.

The second suggestion was to change the allocation methodology for industrial sources to reflect the expected decline in their GHG compliance obligation, not just minimizing emissions leakage. Allocating fewer allowances to covered sources in favor of increased auction, as the proposal implies, does not lead to a clear reduction of emissions at covered sources. The decision at each covered source to use an allowance is unchanged whether that allowance is provided administratively or procured at market. Differences in allowance allocation do not change the basic question as to whether it is less expensive to reduce emissions and hence not use (and potentially sell) the allowance, or to use the allowance to cover emissions. Auctioning greater amounts of allowances has other implications, but does not materially alter the amount of direct emission reductions.

The third suggestion, decreasing a covered facility's GHG allowance allocation if the covered facility reports an increase in onsite criteria and toxics emissions, also has problems, particularly for sources in the electric sector. Due to the significant fluctuations in hydroelectric generation in the state and the fact that each covered power plant is part of the interconnected electric grid, increases in generation and hence emissions from any one source are likely to occur in some years. This is a necessary aspect of the electric sector, and does not imply any lack of commitment to long-term reductions in emissions for the sector. Power plants should not be penalized in allocation for operating to maintain the reliability of the grid during a drought or an unforeseen outage elsewhere on the grid.

Thank you for the opportunity to comment.

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cc: Corporate Files (LEG 2016-0979)