

LEG 2008-0309
August 1, 2008

Mr. Chuck Shulock
California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95814

Re: Complete Comments of the Sacramento Municipal Utility District (SMUD) on the AB 32 Draft Scoping Plan

Dear Mr. Shulock:

SMUD is encouraged by the approach taken in the Draft Scoping Plan ("Plan" or "DSP"), and views this, with exceptions noted below, as a good foundation for scoping necessary AB 32 regulations. We submit these comments in an effort to improve the Staff's plan, and to call to light some issues that we feel warrant greater discussion and inclusion. We summarize four principal comments as follows.

First, SMUD has expressed its wariness in the past of relying too heavily on a cap and trade system to achieve the reductions necessary to meet AB 32 targets. However, SMUD finds the DSP to be more appealing because of the balance of direct measures and in particular the regional approach for cap and trade. Second, we are supportive of the ARB's approach for inclusion of natural gas and transportation fuels under the cap. We also feel strongly that these sectors must be provided a price signal as early as the electricity and industrial sectors in order to accomplish the necessary statewide emissions reductions by 2020. Third, we have concerns about the statutory basis for permitting out-of-state allowances and offsets to be used to comply with the statewide GhG inventory, so we see a possible need for the ARB to revisit the statute to gain clarity on its authority to implement this reduction measure. Finally, while SMUD has long been a strong leader in energy efficiency, we are concerned that the Plan may be prematurely expanding the requirements of AB 2021, without first giving existing and ambitious laws a chance to prove their effectiveness.

We also provide some additional comments on a number of other aspects of the Plan, and anticipate filing further comments on the technical appendices and supplemental analysis to assist the ARB in its successful implementation of AB 32. Based upon SMUD's detailed review of the appendices, and supplemental and economic analyses, our preliminary recommendations contained herein may be modified or changed.

1. SMUD Supports a Regional Approach to Reducing California's Carbon Footprint but the Emissions Inventory for the Electricity Sector Should Be Adjusted for Imports from WCI Partner States.

The DSP recommends a cap and trade program that will operate within the framework of the Western Climate Initiative ("WCI"). Under this approach the California cap and trade program would be linked to similar programs in other WCI Partner states in order to create a western regional market for allowances that would encourage emission reductions throughout the West. Thus, the DSP indicates a strong preference for joint regional action and paves the way for a national regulatory program. SMUD strongly supports a regional rather than a California-only cap and trade market.

Currently, the ARB is considering whether to adopt the first deliverer approach to regulate the electricity sector in a California cap and trade program. This approach would not only subject in-state electricity generators to a cap, and the requirement to hold allowances, but would require importers of electricity into California to obtain allowances issued by CARB to sell electricity in California. Similarly, the Electricity Subcommittee of the WCI has considered and proposed a similar First Jurisdictional Deliverer approach for WCI Partner states. That proposal would require any GhG emitter in a WCI Partner state to hold allowances to cover emissions at the point of electricity generation but also to hold allowances for emissions associated with electricity imports from outside the WCI. We are concerned that this parallel requirement could create the potential for different regulated entities to hold two separate allowances for the same tonne of GhG emissions.

The DSP should acknowledge the potential for the overlap of regulation on sources located in WCI states that send electricity to California, and should reduce the amount of emissions that are regulated under California's cap by those that would also be regulated in other WCI states. While WCI is not inevitable, it is important that the DSP acknowledge how the California capped sector emissions and projected reductions would change under the proposed participation of California in the WCI.

2. Publicly Owned Utilities Are Pursuing Ambitious Energy Efficiency Goals. These Programs Should Be Given a Chance to Work Before ARB Orders New Regulation. The ARB Should Consider the Cost-Effectiveness of Existing POU Programs in their Analysis of Maximum Technologically Feasible and Cost Effective Measures.

SMUD embraces the ARB's core measure of "maximizing energy efficiency building and appliance standards and pursuing additional efficiency efforts." SMUD has demonstrated highly successful energy efficiency programs for more than three decades. We continue to adopt aggressive energy efficiency policies and targets. In 2006, the SMUD Board adopted a set of "key values" to guide its resource planning.

The *first and foremost* key value is to “First acquire cost-effective, reliable and feasible energy efficiency and demand reduction resources” for its customer-owners. (SMUD Board Policy, Strategic Direction (SD) – 9, May 17, 2006). SMUD adopted this Strategic Directive before the Legislature required the POUs to do so through passage of AB 2021. At a minimum, this demonstrates SMUD (and POU) leadership in adopting policies promoting energy efficiency programs that serve to reduce GhG emissions.

Prior to passage of AB 2021, SMUD commissioned a study that considered the technical, economic and market potential for energy efficiency measures and identified all potentially achievable cost-effective electricity savings (“SMUD Energy Efficiency Potential Study”). The SMUD Energy Efficiency Potential Study was conducted by Itron using cost-effectiveness criteria similar to ones used by the California’s IOUs. The SMUD Energy Efficiency Potential Study identified the magnitude of energy efficiency opportunities remaining after 30 years of offering energy efficiency programs. Based upon this study and the requirements of AB 2021, the SMUD Board adopted the very aggressive goal of reducing forecasted customer energy consumption by 15% over 10 years. (SMUD Resolution No. 07-05-09) This goal exceeds the standards set forth in AB 2021 by 50%. According to 2007 estimates, achieving SMUD’s energy efficiency targets will reduce SMUD’s annual system load by 1,940 GWhs by 2017. SMUD considers this to be an extremely aggressive stretch goal, and the decision to pursue it was made by our publicly elected Board in recognition of our long history of successful energy efficiency programs, and by thoroughly examining our detailed Energy Efficiency Potential Study. We would expect that other POU boards will develop and implement their own targets based on similarly rigorous criteria..

Nevertheless, in Appendix C to the DSP, the ARB says that the POUs in particular have not done enough to promote energy efficiency, citing to a 2006 status report by the CMUA. In particular, ARB cites the 2006 CMUA report to conclude that though POUs supply 25% of the State’s electricity, they account for only 5% of total utility energy efficiency savings. ARB explains that part of the reason for this disparity is limited capacity and experience of smaller POUs to implement energy efficiency programs of the assumed sophistication of the large IOUs. ARB proposes to remedy these alleged inadequacies by subjecting POUs to further state oversight and by setting new, more aggressive targets under AB 32.

SMUD has several concerns. In the first place, the ARB is relying on data that is not from the latest CMUA status report. In the 2008 CMUA report, SMUD estimates that the POUs achieved over 9% of statewide savings. Thus, ARB is basing recommendations on outdated information.

Second, by citing to pre-2006 data the Plan fails to take into account POU implementation of AB 2021, which did not require POUs to set new effective energy efficiency targets until 2008. Therefore, ARB’s primary justification for additional POU regulation and more aggressive AB 32 targets ignores AB 2021 and the substantial

efforts POU's have made to create and implement the most cost effective, reliable and feasible energy efficiency measures available. ARB should give effect to existing law and give the POU's a fair opportunity to comply with it before recommending additional mandatory measures. In other words, ARB should give existing law time to work before layering on an additional (and expensive) regulatory burden on POU's, and smaller POU's in particular.

Third, further regulation of the POU's does not necessarily create the capacity that ARB believes is needed to build cost-effective energy efficiency programs. Certain POU's do need more time and funding to build the capacity to implement effective EE programs. Additional regulation by the CEC or another state agency is no panacea for overcoming these practical realities. The ARB should adopt recommendations that will encourage innovation and discourage unnecessary regulation.

A key, preliminary recommendation of the DSP would "pursue additional efficiency efforts" that that appear to go beyond the "all available energy efficiency and demand response resources that are cost-effective, reliable and feasible" required under AB 2021. This DSP core measure would set additional targets of statewide energy savings of 32,000 GWh's from utility energy efficiency programs and new building and appliance efficiency standards. As applied to both IOU's and POU's, ARB estimates that such savings in electricity generation would reduce GhG emissions by 15.2 million metric tonnes over BAU 2020 emissions. The DSP states that such additional reductions could be achieved through enhancements to existing utility programs, such as greater utility incentives among other measures.

However, setting higher energy efficiency targets does not mean that there are additional cost-effective measures available to electric utilities. SMUD had a full range of energy efficiency measures analyzed in depth and at considerable expense in 2005 and again in 2008. SMUD has analyzed the options and already has a policy of implementing all available energy efficiency and demand response resources that are cost-effective, reliable and feasible as part of SD 9 and AB 2021. While the ARB has surveyed a number of possibilities in Appendix C, we still need to see the economic modeling that justifies higher energy efficiency targets on top of the measures that SMUD (and other POU's) is already taking. Before adopting higher goals and more aggressive strategies ARB should compare its cost-effectiveness analysis with similar studies performed by the POU's. It may be that certain POU's are already implementing cost-effective reductions pursuant to their AB 2021 goals that are consistent with what ARB needs to achieve AB 32 goals.

Both SMUD's long term accomplishments in designing, promoting, and achieving customer acceptance of energy efficiency programs, and the recent experience with the State's reordered mandates as required in AB 2021 show that the existing governance and POU relationships with the State energy agencies produce

effective programs aligned with State mandates and suited to local opportunities and barriers.

3. Point of Sale Energy Efficiency Mandates Should Be Adopted.

SMUD intends to address the detailed energy efficiency measures listed in Appendix C in detail in additional comments later in August concerning how to green existing homes and commercial buildings. Among these is requiring that when a home is sold, the seller is responsible for an energy efficiency audit and upgrade to the home. Such measures could result in huge increases in energy efficiency, given that an estimated 45% of the existing home stock is expected to turn over in the Sacramento area between today and 2020.

SMUD supports the measure put forward in Appendix C of a benchmarked environmental performance rating system for existing buildings, imposed at the time of sale, provided that audits and improvements can be implemented together in a cost-effective way. Energy audits alone have not been shown to motivate homeowners even though energy savings can be predicted to pay back in a relatively short time. Neither have low interest loans, though energy and water efficient mortgages at the point of sale may hold greater promise. A fundamental issue before the ARB is how to induce building owners to invest in energy improvements that save more money over the long haul. ARB should consider all options from legislative and regulatory to financial incentives, including potentially revenue return from allowance auctions in a cap and trade system, to make efficiency improvements more affordable. In addition, ARB should prioritize financing options that would reduce operating costs for low income home owners and tenants.

4. ARB Should Include All Sectors in the Cap and Trade Program Early and Not Delay Inclusion of the Transportation and Natural Gas Sectors.

The DSP calls for reductions of 35 MMTCO₂e to result from a multi-sector cap and trade which includes the electricity, natural gas, industrial, and transportation sectors. The DSP describes the cap as initially applying to the electric and industrial sectors to which the transportation and natural gas sectors would be added at a later date, which is left open in the DSP. In order to get reductions out of the transportation and natural gas sectors beyond the specific measures identified, it is important to provide time, a price signal, and regulatory certainty so that public and private enterprise will have the time and incentives to create reductions.

Waiting much beyond 2012 to include the transportation and natural gas sectors, which together represent more than half of the emissions that fall under the cap, may not result in anything but a steep increase in allowance costs. Sectors that are not given price signals and are suddenly expected to come up with nearly 20 million tonnes

of reductions in a short amount of time cannot be expected to meet their share of needed reductions. Moreover, significant reductions from the transportation sector will not come easily. Any substantial shortfall in meeting their reductions will put tremendous pressure on sectors that have been participating for several years to try to come up with additional reductions beyond the cost-effective reductions that have already occurred. The result will be a shortage of allowances and an increased likelihood that the State will not meet its emissions targets.

Instead, the ARB should plan to include the natural gas sectors at the beginning of the cap and trade program, at a minimum, and the transportation sector soon afterwards. Alternatively, the ARB could assess those sectors a fee that is equivalent to the cost of participation in a cap and trade. In either case, those entities responsible for turning over allowances or paying carbon fees would build into their business plans a mechanism for reducing their emissions beyond the programmatic reductions required of them in the Scoping Plan. These sectors have both infrastructure and programs that take time to ramp up, and only through a multi-year sustained signal from policy makers can expected reductions occur.

5. ARB Should Seek Legal Modification of AB 32 to Implement its Proposal to Permit Reductions made in Other States to Satisfy the Statewide Greenhouse Gas Emissions Limit.

The DSP says that as part of the plan to link California's cap and trade program with programs in other WCI Partner states,

Allowances could be traded across state and provincial boundaries, so actual emissions could vary from a state's initial allowance budget. (DSP, p. 18)

The implication of this idea is clear: if out-of-state allowances are accepted for compliance then actual California statewide GhG emissions could exceed the cap. This consequence raises the issue of whether ARB's preliminary recommendation to allow out-of-state allowances (and offsets) would comply with AB 32's statewide GhG emissions limit.

Unfortunately, the text of AB 32 is silent on whether the Legislature intended that out-of-state allowances could be used offset actual emission reductions required to achieve California's 2020 limit. Section 38550 of the Health & Safety Code requires that by January 1, 2008, ARB shall determine what the statewide GhG emissions level was in 1990, and

... approve in a public hearing, a statewide greenhouse gas emissions limit that is equivalent to that level, to be achieved by 2020.

Further, in the definitional section of the statute (Health & Safety Code § 38505), the Legislature made the following relevant definitions:

(m) 'Statewide greenhouse gas emissions' means the total annual emissions of greenhouse gases in the state, including all emissions of greenhouse gases from the generation of electricity delivered to and consumed in California, accounting for transmission and distribution line losses, whether the electricity is generated in state or imported.

(n) 'Statewide greenhouse gas emissions limit' or 'statewide emissions limit' means the maximum allowable level of statewide greenhouse gas emission in 2020, as determined by the state board pursuant to Part 3 (commencing with Section 38850).

Neither these explicit definitions, nor the text of section 38550, evidence any flexibility that statewide GhG emission reductions can be offset, and thus not achieved, through allowances from other states. As contemplated by the DSP such allowances would amount to permits to emit GhG in excess of the statewide emissions limit. The only language from the statute on topic of extraterritorial transactions is found in Health & Safety Code § 38564, which speaks only to consultation. It provides in pertinent part:

The state board shall consult with other states, the federal government, and other nations...to facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs.

But consultation with other governments to facilitate even "integrated" GHG reduction programs is not permission to ARB to exceed the statewide emission limit or redefine the limit as higher than the 1990 level of GhG emissions.

Likewise, SMUD has found no legislative history that would shed light on an intent by the Legislature to allow emissions permits from other states to balance exceedences of the California statewide emissions limit. In the final Assembly bill report the committee refers to a "multi-sector market-based compliance options." (Final Assembly Bill Report, Sept. 5, 2006) However, it does not refer to any other state or regional options for meeting the statewide emissions limit. While the bill report does state that AB 32 "provides a clear path by authorizing ARB to design rules under which a cap and trade program could emerge to help meet the 2020 limit," this language seems intended to allow ARB to adjust GhG pollution between various industries, not between California and others. It seems to be a stretch to find that a grant to the ARB of authority to design the programs it finds necessary to accomplish the goals of AB 32 implies that it can devise any program that essentially redefines the limit itself.

The Senate's bill analysis is not much help either. It raises more questions than it answers. Of note is the following passage:

The use of flexible compliance mechanisms [aka market-based mechanisms] may set in motion a set of practices for which the state may have only limited legal authority and considerable uncertainty as to who is responsible for achieving what reductions. (Senate Committee on Environmental Quality Report on Hearing, June 26, 2006)

Actually, the strongest support for the idea that ARB has such discretion to allow out-of-state allowances comes from statements made in the press by Gov. Arnold Schwarzenegger and Assemblywoman Pavley after AB 32 was passed. In an October 2006 press release, Gov. Schwarzenegger said:

I recently signed legislation giving California the most ambitious greenhouse gas reduction goal in the country. But no one state can do it alone. It is truly a global problem, where state, regions and nations must work together to find a solution. ... I am happy to announce today that as we implement our new law we will form a greenhouse gas trading partnership with RGGI, the multi-state greenhouse gas cooperative spearheaded by Governor Pataki.

And in an interview from October 2006, Assemblywoman Pavley said:

The business community wanted to see more market-based mechanisms. That would be the emissions-credit trading and things of that sort, which will be examined by the Air Resources Board very closely. California first has to have reporting to establish a baseline, however; you can't trade if you can't quantify it. Well, no other states have mandatory reporting, so the obvious question is, 'Who are you trading with?' California might be big enough to trade within itself, but we don't know yet if that's going to be workable. (Q&A: Assemblywoman Fran Pavley, Policy Today (Oct. 5, 2006), available at www.policytoday.com)

Both statements indicate that the idea of multi-state trading of allowances was contemplated at the time that the legislation was passed, but neither official said that such trading should be allowed to change the actual level of "statewide" GhG emissions determined by ARB and capped by law.

Nevertheless, SMUD is very supportive of a regional cap and trade market of the kind that ARB generally describes in the DSP. Regional, national and optimally international approaches are our best hope for meeting the grave environmental threat that confronts California and the world. However, SMUD believes that ARB runs a significant legal risk by adopting the preliminary recommendation of the DSP to permit

compliance entities in California to use allowances created from emissions reductions out of state. Because the overall strategy has merit, the prudent course would be to return to the Legislature for clear authority to construct such an interstate trading market. If it does, ARB can count on SMUD's full support.

6. The Plan Should Address Allowance Allocation.

The DSP should talk in greater detail about the framework that will be used to evaluate allowance allocation in any cap and trade system. The costs to certain California entities and citizens of a cap and trade allowance market will be heavily impacted by decisions regarding emission allowance allocations. As was seen in the CPUC/CEC joint proceeding, the choice of allowance allocation rules can transfer hundreds of millions of dollars from one participant's customers to another. Such transfers, particularly at the outset of the program, could be viewed as unfair and would likely foment political opposition to implementation of the program by entities on the losing end. Nevertheless, AB 32 delegates the responsibility to the ARB to make these decisions and it should do so as part of the scoping plan process. (See Health & Safety Code § 38561(b)) SMUD requests that ARB lay out principles and a framework for making determinations on allowance allocation soon so there will be adequate time for stakeholders to deliberate over the consequences of the Staff's choices. SMUD submits that these principles should reflect a desire for fairness, and reflect an understanding of the substantial contributions that certain participating sectors are being asked to make through direct regulation.

The huge capital outlays required to successfully implement a 33% RPS and to expand consumer efficiency programs should not have to compete directly with implementation of a cap and trade process. The Scoping Plan should include discussion of intent to limit diversion of revenue generated through retail electricity charges for programs not directly beneficial to utility customers.

In addition, a cap and trade cannot be fully evaluated against a carbon fee in the absence of settling upon certain design elements of the cap and trade such as allowance allocation. A cap and trade system that transitions rapidly to full auction will result in large cost uncertainty for participating entities, given the wide range of uncertainty in carbon prices and the inevitable volatility in a new market. Such uncertainty will increase costs of the program and would slow the achievement of the statewide emissions goal. Such concepts should be addressed more fully in the Plan in order to help stakeholders understand the cap and trade strategy that the ARB is proposing. Discussion of cap and trade without such details makes it very difficult to assess the cost implications and uncertainty relative to either command and control or carbon fee strategies.

7. The Draft Scoping Plan Should Specify that Any Auction Revenue Will Be Returned to Electric Load Serving Entities to be Used to Decrease GhG Emissions and Moderate the Rate Impacts on Low Income Ratepayers.

The costs of reducing the carbon content of electricity consumed in California will be born by electric ratepayers. These ratepayers whether served by investor owned utilities (IOU) or publicly owned utilities (POU) will see an increase in their electric rates due to the command and control measures proposed in the DSP. The command and control measures include maximizing energy efficiency and increasing the level of renewable generation. (DSP, pp. 21, 22 & 24) The E3 Modeling showed a combined load serving entity and customer cost for achieving 33% renewable energy and the high goals energy efficiency of \$2.6 Billion per year. (Electricity and Natural Gas GHG Modeling – Revised Results and Sensitivities, Updated Presentation given by Snuller Price on May 6th, 2008 at the CPUC, updated May 13th, slide 14.)

In addition to these costs for the command and control measures, electric ratepayers will also be paying the cost of the electric industry's participation in the cap and trade program. The cost impacts of the cap and trade program on electric ratepayers will be driven by the cost of allowances and how any auction revenue will be distributed. The previous section outlines SMUD's concerns regarding the allocation of allowances. This section focuses on an auction of allowances and the associated revenue stream.

The auction will apply to all electricity consumed in California. The DSP calculates the amount of carbon associated with all of the electricity consumed in California after implementation of the command and control measures on the electric industry to be 94 million tonnes. (DSP, p. 17, Table 4) The purchase of allowances for this sector alone, assuming 100% auction at a carbon price of \$30/tonne CO₂, is \$2.8 Billion dollars a year. Obviously, a higher carbon price would result in higher cost implications to ratepayers and an even greater need to return auction revenues. Nonetheless, \$2.8 Billion is a large sum of money to add to electric rates. This cost is on top of the costs faced by ratepayers to procure additional renewable resources to meet the command and control measures proposed in the DSP, which were estimated by E3 to cost \$2.6 Billion per year. (Electricity and Natural Gas GHG Modeling – Revised Results and Sensitivities, Revised Presentation given by Snuller Price on May 6th, 2008 at the CPUC, updated May 13th, slide 14) SMUD is concerned about how these potential increases in costs will impact California's electric ratepayers.

In order to understand the potential impacts to electric ratepayers the DSP needs to clearly describe how auction revenues will be used and distributed. SMUD believes the revenues generated by the electric industry should be used by the electric industry to offset the increased cost of procuring, building and otherwise obtaining low carbon resources, reduce the increase in electric rates to low income customers and

increase incentives and financing for energy efficiency measures. These auction revenues should be returned to the governing body of each load serving entity, whether IOU or POU, for these programs.

Furthermore, the auction revenues should be returned to the IOUs and POUs with as few restrictions as possible to allow the governing boards to determine the most cost-effective use for those funds. Each IOU and POU is different. Each has undertaken different programs to increase renewable generation and increase energy efficiency within its service territory. Some POUs are small and serve unique climate zones. For example, a POU like Alameda with summer fog would not get as much output from rooftop solar as SMUD where summer skies are most often clear. A one size fits all solution requiring each entity to obtain a certain penetration of roof top solar would not be a good use of auction revenues. Therefore, and consistent with AB 32's goals to minimize the cost and maximize the benefits of GhG reductions, ARB should provide auction revenues to load serving entities to use for GhG reductions in the most cost-effective manner given the specific circumstances of each entity.

SMUD also notes that distributing auction revenues to load serving entities for reducing the rate impact on low income customers, supporting the purchase or development of renewable generation, and providing incentives for increased energy efficiency is permitted under the Draft Design of the Regional Cap and Trade Program dated July 23, 2008 from the WCI. (See pp. 6 & 7)

8. More Detail is Needed on the Carbon Fee Used to Pay for Program Funding to Determine Whether the Funding Mechanism is Consistent with California Law.

The DSP states that approximately \$55 million per year will be needed on an ongoing basis to fund implementation of the AB 32 program by ARB and other agencies. (DSP, p. 71) Although the DSP attempts to have the administrative, implementation and enforcement costs appear small by applying those costs to all GhG emissions in California such as a charge on every kilowatt-hour of electricity, every gallon of gasoline and every therm of natural gas, \$55 million per year is still a great deal of money. (DSP, p. 71) Any administrative cost of this magnitude should include a detailed accounting of the planned use for the money including each agency planned to receive the funds and the functions that agency is expected to perform. Furthermore, the DSP should clearly indicate to what extent existing program costs are expected to be paid for by new fees and the legal basis for such action. Also, the plan should make sure the carbon fees are proportional to the services provided as required for fees for services. As such, those sectors with low administrative costs should be charged lower carbon fees.

9. Carbon Fees as Market-Based Reduction Incentives Require Significant Further Analysis and Public Discussion Before Meaningful Comments can be Made.

The use of Carbon Fees, or taxes as they are called in the DSP in reference to the British Columbia approach (DSP, pp. 41-43), has received scant public consideration in AB 32 Scoping Plan documents and workshops. As described in the DSP they could be used as a market-based "stick type" incentive program to incent GhG reductions or to raise "billions of dollars per year" for "various purposes". There has been very little discussion of how Carbon Fees are compatible with creation of a cap and trade market. Therefore, SMUD and others have little to comment upon. With such a limited discussion in the California public record on how Carbon Fees would function as an AB 32 program, SMUD and others cannot compare its relative merits to the much discussed cap and trade programs. Nevertheless, SMUD can see that however well intentioned a multi-billion dollar annual fee system, it is duplicative at its base of a cap and trade program, and is very likely to develop a life of its own. SMUD therefore firmly requests that the Proposed Scoping Plan ("PSP") clearly define intent to use only one major (multi-billion dollar per year) market-based reduction program at a time. For instance, the PSP could state that after introduction of a California jurisdictional or national cap and trade program, Carbon Fee programs in California would only be used as a minor program within capped sectors. However, without public discussion of regulatory intent of even fringe details of a Carbon Fee as a major program for AB 32, SMUD cannot comment fully on the merits or suitability of Carbon Fees for inclusion in this DSP, nor can ARB.

10. ARB Should Work with Local Governments to Set Real Reduction Targets Soon.

The DSP simply encourages local governments to set quantifiable emission reduction targets. (DSP, p. 31) We are concerned that simple encouragement is insufficient. The DSP identifies five areas where local governments can reduce the greenhouse gas profile of their communities in areas where local decisions and actions can have a large impact. (DSP, p. 32) For example, the transportation sector is the single largest source of greenhouse gas emissions in California. Land use planning is a major contributor to vehicle miles traveled. Therefore, by taking greenhouse gas emissions into account in land use planning decisions local governments can plan communities that reduce as opposed to increase the number of vehicle miles traveled by those living in the community. The ARB should work with local governments to set real and achievable GhG reduction targets sooner rather than later to effect the reductions needed to meet to meet statewide 2020 goals.

11. The Cost-Effectiveness Analysis Needs Further Clarity in the Scoping Plan and the ARB Should Not Defer Key Analyses to Regulatory Development.

The ARB recognizes quite correctly that the “primary purpose of the Scoping Plan is to develop a set of measures that will provide the maximum cost-effective and technologically feasible GHG emission reductions.” (DSP, p. 49) It states that its analyses in the DSP are “preliminary” and “broad” and in some cases are unfinished. It says that more specific evaluations will come during regulatory development.

SMUD appreciates the massive task before the ARB and certainly understands its desire to proceed deliberately. ARB staff is to be commended for pulling together a vast quantity of information in a short amount of time, and SMUD further understands that more analyses are forthcoming soon. Nevertheless, SMUD is concerned over the prospect that ARB may intend to put off some specific evaluations until later in the process. There are certain criteria and analyses that must occur in the Scoping Plan phase of AB 32 implementation that cannot be delayed until regulatory development. The most prominent of these are the related requirements to “approve a scoping plan ... for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions ...” (H&S Code 38561(a)); to “ensur[e] the greenhouse gas reduction activities to be adopted and implemented by the state board are complementary, nonduplicative, and can be implemented in an efficient and cost-effective manner” (H&S Code 38561(a)); to “make recommendations on direct emission reduction measures, alternative compliance mechanisms, market-based compliance mechanisms, and potential monetary and nonmonetary incentives for sources and categories of sources that the state board finds are necessary or desirable to facilitate the achievement of the maximum feasible and cost-effective reductions of greenhouse gas emissions by 2020” (H&S Code 38561(b)); and to “evaluate the total potential costs and total potential economic and noneconomic benefits of the plan ... using the best available economic models.” (H&S Code 38561(d)). Thus, it is clear from the statute that both maximum technological feasibility and cost-effectiveness are essential touchstones of any recommendations made by the ARB for meeting 2020 targets. The statute requires that ARB conduct these detailed analyses now, not during regulatory development.

ARB pays scant attention in the DSP to the essential criteria of maximum technological feasibility. It is mentioned only twice and the ARB does not explain what it plans to do to evaluate maximum technological feasibility of various reduction measures or develop methods for doing so. More needs to be done to satisfy the statute. ARB has set forth 17 recommended measures and discussed a number of others but without mention of the technological feasibility of any. Some of the recommended measures are obviously feasible, such as the Million Solar Roofs Program, but the feasibility of others is unclear (e.g., high speed rail and low carbon fuel standard). Regardless of

what seems obvious, the statute requires a determination of technological feasibility and the decision-making process would benefit from a full survey of possible technologies for reducing GhG emissions and a consistent analysis of each. Thus, SMUD recommends that ARB develop and apply a transparent analysis as a first step for assessing the maximum technological feasibility for each emission reduction measure under consideration.

In contrast to technological feasibility, the criteria of cost-effectiveness is treated extensively, though quite generally, in the DSP. Among other things, ARB explains that it is using three economic models, reviewing a number of recent modeling studies, and has initiated a peer review process to evaluate its economic modeling. While ARB has been able to publish several important economic conclusions (e.g., "any costs associated with the introduction of GHG reduction policies will have relatively little impact on continued economic growth"), the DSP does not explain what methods ARB has developed for evaluating cost effectiveness of recommended reduction measures. (DSP, p. 51) Presumably, this will be explained in detail with the release of Appendix G and the Supplemental Evaluation. Since ARB is developing such methods and since AB 32 requires that cost-effectiveness to be measured quantitatively (e.g., in dollars per tonne), ARB should be in a position to assign a metric to each recommended measure and compare them on a scale of relative cost effectiveness. A logical next step would be to rank the recommendations from the most to the least cost-effective and then explain why ARB considers each recommended measure "cost-effective" within the meaning of AB 32. Presumably some maximum technologically feasible measures would be eliminated from consideration because they would not meet quantitative cost-effectiveness criteria. The analysis that applies these methods and criteria should be transparent and the conclusions as to what is recommended and what is not should be clearly explained in supplementary information to be published (and subject to comment) before adoption of the Scoping Plan.

The DSP follows a slightly different approach of adopting a set of measures that would establish a range of acceptable cost-effectiveness. Presumably, every recommended measure will fall above the line of what ARB considers to be cost-effective, and even measures that are left out (if, for example, those are not technologically feasible at the adoption of the Scoping Plan) could be included later if they are found to fit within the range initially established.

SMUD will reserve most of its comments on the range approach until supporting methods and criteria are published. However, a few initial observations may be useful to staff as it completes its analysis. First, measures should not be included in the recommended package because they are necessary to begin now for the state to hit its 2050 target. High speed rail is a possible example. Such measures should be evaluated independently based on their overall necessity in meeting the 2050 target. The purpose of the Scoping Plan is to select measures for meeting the 2020 target.

Accordingly, measures deemed necessary for meeting the 2020 target should be the basis for pending regulatory action to take effect in 2012.

Second, if the ARB decides to define cost-effectiveness as a range of measures, then it should use caution when adopting new regulations (beyond the 2012 time frame) to make sure it is not creating unrealistic ratcheting down of emissions in certain sectors on the basis of the initial package assessment in the Scoping Plan. The DSP acknowledges that there will be a range of costs of measures, and suggests that future regulatory measures will be evaluated against this range to determine their cost effectiveness. If the cost-effectiveness assessment was on the package of measures needed to meet the 2020 targets, it should not be extended to implement policies that would go beyond the 1990 level of emissions merely because measures are technologically feasible and cost-effective as defined by the original assessment. If the ARB determines that another measure is more cost-effective than one included in the package, replacement of an equivalent measure in the package would be the appropriate response, not simply inclusion because a new measure was less expensive than the most expensive previously identified measure.

Third, there is a tension between the selection of measures based cost-effectiveness and on considerations of equity, public health, California's economy, the environment and other considerations. (H&S Code 38561(d)) The statute requires ARB to approve a Scoping Plan that contains measures that are all maximum technologically feasible and cost-effective, yet evaluate the plan using these other considerations as well. The ARB must be careful not to confuse quantitative cost-effectiveness analysis with other factors required under the statute. Perhaps this should lead it to recommend a larger suite of cost-effective measures than it will ultimately adopt, which could then be winnowed down by taking these other statutory considerations into account.

Finally, despite the statutory imperative to analyze potential measures for cost-effectiveness, some measures are simply hard to quantify. For example, the DSP states that "[e]nergy efficiency is a classic example where cost-effective action is often not taken due to lack of complete information, relatively high initial costs, and mismatches between who pays and who benefits from efficiency investments." But not all energy efficiency measures are cost-effective, of course. The cost-effectiveness of each energy efficiency measure is heavily dependent on the specific circumstances of building design, location, orientation, size, contractor skills, institutional capacity, and so on. Different emission reduction measures may be too dissimilar to conclude that a given measure is cost-effective for all entities that must implement them. A reasonable response to this complexity would be to avoid the temptation of adopting a fixed set of measures as cost-effective. Instead, SMUD recommends that ARB to set emission reduction goals for certain entities by sector and permit those parties to use their ingenuity to meet those goals as they judge best. This holds particular promise for the electricity sector. Load serving entities are in a better position to know their own costs than is the ARB. They are the best judges of cost-effectiveness.

12. The DSP Should Address How the ARB Intends to Deal with Policies that Rely on Fuel Switching to Electricity.

As the DSP points out, the ARB has already adopted a rule requiring Port Electrification as a Discrete Early Action measure. This rule will lead to an increase in electricity loads for the applicable load serving entity. Though this rule will have a relatively minor impact on statewide emissions, it could have a substantial impact on emission inventories of the load serving entity.

In addition, the ARB has other programs that will impact electricity demand profoundly. Both the Pavley I and II performance standards and ARB's zero emission vehicle ("ZEV") programs are intended to create a massive new market for electricity-powered vehicles that, if successful, will revolutionize transportation in California. ARB should explicitly address how these programs will decrease emissions in one sector (transportation) and increase emissions in another sector (electricity). Accurate measurement of reductions in transportation leading to increases in emissions from electricity generation are essential in order to properly gauge the quantity of allowances to issue in a cap and trade scheme to ensure plug-in hybrid growth is not discouraged by penalizing the electric sector for load growth.

Also, the electricity sector should not be required to purchase extra allowances at auction that are needed to generate electricity for the transportation sector.

Further, ARB should bear in mind the cost that load serving entities will have to pay to fortify the transmission and distribution grids to accommodate transportation loads. These costs and related impacts should be evaluated by the ARB in reaching its recommendations in the Scoping Plan.

13. ARB Should Treat Substitute Energy that Meets CEC RPS Delivery Rules as having the Emissions Profile of the Renewable Resource.

In the most recent CEC RPS Eligibility Guidebook, the CEC adopted flexible delivery rules in response to SB 107. Specifically, the CEC authorized RPS obligated retail sellers to meet RPS delivery rules with time and location shifted resources. In practice, this means that a California retail seller can buy eligible renewable energy from a certified (or pre-certified) RPS eligible facility, sell the "null power" to a third party, count the Renewable Energy Credits (RECs) against its RPS obligations, and schedule an equivalent amount of "system power" at a different time and from a different location to meet its load. The CPUC has proposed a new definition of RECs that includes the GhG reduction credit and prevents that credit from being disaggregated into an offset that could be used to offset GhG emissions independent from the REC. If adopted, this rule would restrict the reporting rights to the renewable

energy, and the associated GhG emissions profile of the renewable resource, including any avoided GhG emissions, to the purchaser of the REC. In order for the ARB to effectively count all reductions from the RPS towards its AB 32 targets, it must recognize the delivery requirements set forth by the CEC, and the REC definition as put forth by the CPUC. Otherwise, no one could claim the reduced or zero GhG emissions from the renewable generation. In practical terms, this would require the use of WREGIS certificates with accompanying NERC tags meeting the CEC delivery guidelines to be treated by the ARB as having the emissions profile of the renewable resource, even, in some cases, where the underlying energy may not have come directly from the renewable resource. This has been recognized by the Commissions as a practical means of increasing the state's renewable percentage while recognizing the interconnected but congested nature of the Western Interconnect. We recommend that the Scoping Plan describe the ARB's intent to implement the First Jurisdictional Deliverer in a means that is consistent with the RPS delivery and REC definitions set forth by the CEC and PUC, in order to preserve the effectiveness of the RPS as an emissions reduction measure.

14. More Public Outreach and Education is Essential if ARB is to Succeed in Obtaining Public Support for Measures Required to Meet AB 32 Goals.

The ARB recognizes in the DSP that the "backbone" of an effective GhG reduction plan is public outreach and education. (DSP, p. 66) All reduction measures ultimately proposed by the ARB must be accepted and paid for (either directly or indirectly) by the public. While California has experienced some success in reducing VMT and energy demand through the Spare the Air and Flex Your Power programs a much greater effort is needed to change habits and accept the costs of meeting the challenge of Global Warming. For example, in May 2008, SMUD conducted a survey of its customers about the issue of Global Warming. A large majority (73%) of SMUD's customers feel that global warming is either a serious problem warranting immediate action or that there is enough evidence to at least warrant some action. However, only 52% are willing to actually pay more on their monthly utility bills to help solve Global Warming.

If SMUD's urban customers are representative of the State as a whole, Californians are acutely aware of the problem of Global Warming but a great many of them are still not ready to act. The ARB is considering very stringent regulations that will dramatically change lifestyles and demand sacrifices by all Californians. Much more public outreach and education are needed to prepare Californians for these changes and obtain their support on a personal level. Indeed, it is difficult to envision how ARB can successfully implement AB 32 without a dramatic shift in public opinion.

Changing public opinions will take hard work, creativity and financial commitment. ARB needs to address these challenges more thoroughly in the Scoping

Plan. At a minimum, ARB should be responsible for disseminating the following messages contained in the DSP to the public:

- (1) implementing AB 32 will have a financial cost to consumers;
- (2) the overall cost of these policies will have little impact on continued economic growth in California;
- (3) in the long run, and on a strictly financial basis, the costs will substantially outweigh the benefits;
- (4) the sooner these measures are implemented the less it will cost California in the long run.

SMUD offers these ideas as possible or suggested statements that ARB needs to communicate to Californians. They will require much more refinement as ARB moves to deployment of AB 32 regulations.

Summary

In summary, SMUD appreciates the approach that the ARB has taken, balancing strong direct reduction measures with flexibility at the margin via a broad regional cap and trade system. SMUD encourages the ARB to consider what implications this regional cap and trade may have on the statutory definition of California's greenhouse gas emissions, and seek legislative changes if necessary. We think it is important that all sectors in the cap and trade be sent an appropriate price signal from the outset, so as not to disproportionately burden early capped sectors, nor jeopardize meeting the cap itself. Finally, SMUD feels it is important that the ARB allow the aggressive energy efficiency targets that have been put in place a chance to operate, before layering on ever more ambitious targets.

Sincerely,



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