

August 14, 2008

Ms. Mary Nichols, Chair
Mr. James Goldstene, Executive Officer
Mr. Chuck Shulock, Chief
California Air Resources Board
1001 I Street
Sacramento, CA 95814

***Re: Southern California Edison Company's Comments on
the Climate Change Draft Scoping Plan and Appendices***

Dear Chair Nichols and Messrs. Goldstene and Shulock:

Southern California Edison Company ("SCE") appreciates the opportunity to provide comments on the California Air Resources Board's ("CARB") Climate Change Draft Scoping Plan Appendices ("Appendices"). The attached comments are in addition to SCE's August 1 comments on the Draft Scoping Plan. Both the Draft Scoping Plan and its Appendices demonstrate the considerable commitment that CARB has made toward implementing AB 32. SCE thanks the CARB staff for the substantial progress that has been made and looks forward to working with CARB, other agencies, and other stakeholders to help achieve the State's GHG reduction goals.

SCE provides the following recommendations to help ensure that CARB's strategy fulfills the statutory mandate to achieve 1990 GHG emissions by 2020 equitably and at the lowest possible cost.

A. AB 32 Must Be Implemented In An Equitable Manner

AB 32 directs CARB to design GHG reduction regulations "in a manner that is equitable."¹ Equitable implementation of AB 32 requires that all significant emitting sectors be held responsible either to reduce the GHG emissions they emit to meet AB 32's targets or to pay for such emissions reductions if they can be done more cost-effectively by others. Achieving this principle will likely require compensation between sectors since different sectors of the economy have different options for cost-effective GHG abatement. The Draft Scoping Plan requires the electric sector to bear a disproportionately large share of the needed GHG reductions. Although SCE recognizes the role that electricity can play in reducing emissions, CARB must ensure that electricity ratepayers are compensated for taking on this burden.

The same principle of equity should apply within sectors. In the electric sector, CARB must ensure that the burden of GHG regulation is distributed equitably across all load-serving entities ("LSEs") that deliver electricity to serve California's electric needs. All California LSEs must be

¹ AB 32, Cal. Health & Safety Code § 38562(b)(1).

subject to the same performance standards and rules with respect to the Renewables Portfolio Standard (“RPS”), energy efficiency, and other regulatory requirements that CARB will use to attain AB 32 targets. Additionally, CARB should ensure that the energy efficiency savings targets in the scoping plan appropriately reflect the aggressive energy efficiency programs already implemented by the investor-owned utilities.

B. The Cap-and-Trade Program Should Be As Broad-Based As Possible

SCE supports a comprehensive multi-sector cap-and-trade program as the least cost approach for achieving AB 32’s GHG reduction objectives. A broader-based cap-and-trade program – both geographically and in the number of capped sectors – will offer more opportunities for greater cost-effective GHG reductions. SCE therefore recommends that CARB allow for the development of a Western Climate Initiative regional cap-and-trade program or a federal cap-and-trade system. If a broader regional or national program is implemented within the next few years, California should use such a program as part of its AB 32 GHG reduction strategy. If not, CARB should proceed with a California cap-and-trade program. Whatever the geographic scope of the cap-and-trade program, however, the program should be designed to include all the identified major emitting sectors from the outset.

C. CARB Should Provide More Detail Regarding The GHG Reductions Measures Proposed In The Draft Scoping Plan; In Particular, Regarding Cost-Effectiveness

SCE urges CARB to provide more detail regarding the GHG reduction measures it proposes. In particular, SCE calls upon CARB to conduct a cost-effectiveness analysis comparing the cost per metric ton of carbon dioxide equivalents reduced for all measures as required by AB 32. Furthermore, CARB should also provide additional information regarding the basis for the projected emissions reductions and costs for the recommended GHG reduction measures and more fully explain the data behind its business-as-usual cases.

D. CARB Should Adopt A Robust Offset Policy And Other Cost Containment Measures

AB 32 directs CARB to design emissions reduction measures to meet the statewide emissions limits in a manner that “minimizes costs and maximizes benefits for California’s economy.”² One key cost containment measure is the use of verifiable and sustainable offsets. SCE strongly supports a robust and geographically expansive offset policy to help meet regulatory and market program requirements at the lowest overall cost to the State economy. SCE also supports rules that assure that offsets are real, permanent, verifiable, quantifiable, enforceable, and additional. Additionally, given the very real possibility that the costs of the AB 32 GHG reduction program may be significantly higher than current estimates, CARB should include other cost containment measures in its scoping plan including banking and limited borrowing, multi-year compliance periods, and a safety valve.

² *Id.* § 38501(h).

E. CARB Must Consider The Challenges To Achieving A 33% RPS

CARB should fully assess the significant challenges to achieving a 33% RPS such as transmission constraints, grid reliability and integration issues, and the uncertainty surrounding the federal production and investment tax credits, before recommending such a standard. The California Public Utilities Commission has recently identified considerable challenges to meeting even the current 20% RPS. In light of these concerns, CARB should provide a robust analysis of why it believes a 33% RPS is achievable.

F. CARB Should Ensure That Its Recommendations Regarding Increased Combined Heat and Power Actually Result In Cost-Effective GHG Reductions

SCE is concerned that the Draft Scoping Plan's proposal to increase combined heat and power ("CHP") capacity by 4,000 MW is not adequately supported. CARB has not provided any quantitative assessment of how its policy recommendations will provide incentives for efficient and cost-effective CHP systems to grow without also subjecting California to increased emissions from inefficient fossil-fuel fired plants. SCE's experience has been that only a minority of existing CHP projects reduce fuel use and emissions. Without clear design and operating performance standards and efficiency requirements for CHP, the proposed measure could have the unintended effect of saddling electricity customers with higher prices for little or no GHG reductions.

G. CARB Should Address Electrification Of Transportation In More Detail

Finally, CARB should address electrification of transportation in more detail. Transportation electrification has great potential for cost-effective GHG reductions. CARB should more fully consider the potential for electrification to contribute to AB 32's goals and the policy and cost implications of GHG emissions moving from the transportation sector to the electric sector.

These issues are addressed in more detail in SCE's comments on the Draft Scoping Plan submitted on August 1, 2008 and the attached comments on the Appendices. Thank you for the opportunity to submit these comments. SCE looks forward to working with CARB, other agencies, and other stakeholders on the implementation of AB 32. If you have any questions regarding this letter or SCE's comments please contact me at (626) 302-9456.

Very truly yours,

/s/ Michael M. Hertel

Michael M. Hertel
Director, Corporate Environmental Policy

cc: Kevin Kennedy

Attachment

COMMENTS OF SOUTHERN CALIFORNIA EDISON COMPANY ON THE
CALIFORNIA AIR RESOURCES BOARD'S CLIMATE CHANGE
DRAFT SCOPING PLAN APPENDICES

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Dated: August 14, 2008

**COMMENTS OF SOUTHERN CALIFORNIA EDISON COMPANY ON THE
CALIFORNIA AIR RESOURCES BOARD’S CLIMATE CHANGE DRAFT SCOPING PLAN
APPENDICES**

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I.

EXECUTIVE SUMMARY

Southern California Edison Company (“SCE”) appreciates the opportunity to provide comments on the California Air Resources Board’s (“CARB”) Climate Change Draft Scoping Plan Appendices, June 2008 discussion draft (“Appendices”). SCE previously submitted comments on August 1, 2008 (“SCE Draft Scoping Plan Comments”) regarding CARB’s Climate Change Draft Scoping Plan, June 2008 discussion draft (“Draft Scoping Plan”). As explained in the SCE Draft Scoping Plan Comments and below, SCE offers several suggestions to help ensure that CARB’s strategy for meeting Assembly Bill (“AB”) 32’s goals fulfills the statutory mandate to achieve 1990 greenhouse gas (“GHG”) emissions by 2020 equitably and at the lowest possible cost.

SCE urges CARB to provide more detail regarding the GHG reduction measures proposed in the Draft Scoping Plan. In particular, SCE calls upon CARB to conduct a cost-effectiveness analysis comparing the cost per metric ton of carbon dioxide equivalents reduced for all measures, and to rank the proposed measures in terms of this metric and focus on the lowest cost measures as required by AB 32. CARB should also provide additional information regarding the basis for the projected emissions reductions and costs for the recommended GHG reduction measures, including the 33% Renewables Portfolio Standard (“RPS”), increased energy efficiency, and increased use of combined heat and power (“CHP”). Moreover, CARB should fully explain the data behind its business-as-usual (“BAU”) cases for these and other proposed measures and consistently apply the definition of BAU to program costs and potential emissions reductions across all GHG reduction measures. This additional information is necessary so that stakeholders can fully understand the proposals offered by CARB and accurately evaluate whether CARB is pursuing the most cost-effective methods for reducing GHG emissions, whether CARB has accurately projected the costs of such measures, and whether CARB’s anticipated GHG reductions from the measures are realistic.

Additionally, CARB should fully assess the significant challenges to achieving a 33% RPS such as transmission constraints, grid reliability and integration issues, and the uncertainty surrounding the federal production and investment tax credits, before recommending such a standard. CARB should provide a robust analysis of why it believes a 33% RPS is achievable given these challenges or the scoping plan may not provide a realistic assessment of how California's AB 32 goals can actually be achieved.

CARB must also ensure that the burden of GHG reduction is distributed equitably across all load-serving entities ("LSEs") that deliver electricity to serve California's electric needs, including investor-owned utilities ("IOUs"), publicly-owned utilities ("POUs"), electric service providers ("ESPs"), community choice aggregators ("CCAs"), and the California Department of Water Resources. All California LSEs must be subject to the same performance standards and rules with respect to the RPS, energy efficiency, and other regulatory requirements that CARB will use to attain AB 32 targets.

SCE is concerned that the Draft Scoping Plan's proposals to increase CHP capacity by 4,000 MW and consider special measures for CHP are not adequately supported. CARB has not provided any quantitative assessment of how such policy recommendations will provide incentives for the most efficient and cost-effective CHP systems to grow, without subjecting California to increased emissions from inefficient fossil-fuel based systems. CARB also has not discussed why it concludes that current market opportunities are insufficient for CHP resources. The Draft Scoping Plan appears to make the assumption that all CHP makes efficient use of fuel. SCE's experience has been that only a minority of CHP applications reduce fuel use, and in many instances, CHP systems' fuel use has been extraordinarily wasteful. Without clear performance standards, efficiency requirements, and minimum GHG emissions standards for CHP to ensure that increased CHP actually reduces GHG emissions and does so in a cost-effective manner, the proposed measure could have the unintended effect of saddling electricity customers with very high prices for very little or no GHG reductions, and perhaps increased GHG emissions.

Finally, SCE strongly supports a robust offset policy to help meet regulatory and market program requirements at the lowest overall cost to the State economy. Offsets should be allowed in connection with all regulatory measures, and should not be limited to the context of the cap-and-trade program. Moreover, CARB should not place geographic or quantity limits on offsets. Such limitations could undermine the benefits of offsets in providing low cost emissions reductions that will help achieve the spread of clean, efficient technology and a reduction in the risk of global warming.

II.

GENERAL COMMENTS ON THE APPENDICES

A. CARB Must Provide The Level Of Detail Necessary For Stakeholders To Fully Evaluate The GHG Reduction Measures Proposed By CARB

The Appendices do not provide the level of detail necessary for stakeholders to fully evaluate and comment on the various GHG reduction measures recommended in CARB’s Draft Scoping Plan. In particular, the Appendices do not adequately address the cost-effectiveness of the individual measures. CARB acknowledges that “[a]n important requirement of AB 32 is that cost-effectiveness must be considered.”¹ As noted in the SCE Draft Scoping Plan Comments and the Draft Scoping Plan itself, cost-effectiveness is defined in AB 32 to mean “the cost per unit of reduced emissions of greenhouse gases adjusted for its global warming potential” (i.e., dollars per unit of carbon dioxide equivalents reduced).² CARB should perform the required cost-effectiveness calculations on all proposed measures as required by AB 32 and rank each measure in terms of this metric to focus on the lowest cost measures. The Appendices do not include these cost-effectiveness calculations and rankings for the proposed measures included in the Draft Scoping Plan. Without this analysis, stakeholders cannot determine if the GHG reduction measures proposed by CARB meet the requirements of AB 32. Nor can they

¹ Draft Scoping Plan at 56.

² AB 32, Cal. Health & Safety Code § 38505(d).

fully evaluate whether CARB is pursuing the most cost-effective methods for reducing statewide GHG emissions.

B. CARB Should Consistently Apply The Definition Of BAU To The Program Costs And Potential Reductions Of The Various GHG Reduction Measures

Throughout the Appendices, CARB sets forth the “net annualized costs” and “potential 2020 reductions” with respect to various proposed GHG reduction measures. However, it is unclear in the Appendices how these costs and reductions are calculated relative to BAU scenarios.

For example, reduction measure E-4 (the Million Solar Roofs Program), which sets a goal of installing 3,000 MW of new solar capacity by 2017, has a potential reduction of 2 million metric tons of carbon dioxide equivalents (“MMTCO₂E”) in 2020.³ The net annualized cost, however, is shown as zero because the costs of this measure are the result of other programs and are not attributed to the AB 32 GHG reduction program.⁴ If the Million Solar Roofs Program is not a result of the AB 32 GHG reduction program, then the 2 MMTCO₂E emission reductions expected from the program should be included in the BAU scenario. To illustrate, the BAU emissions for California should actually be 594 MMTCO₂E (596 - 2) and the emissions reduction target should be 167 MMTCO₂E (169 – 2) in 2020. This would result in a more accurate picture of the BAU scenario and would allow stakeholders to more effectively evaluate the additional GHG reduction measures proposed under AB 32.

³ Appendices at C-72.

⁴ *Id.*

III.

SPECIFIC GHG REDUCTION MEASURES

A. CARB Should Consider The Challenges To Achieving A 33% RPS And Provide Sufficient Information For Stakeholders To Be Able To Assess A 33% RPS

The Appendices reiterate CARB’s preliminary recommendation to use a 33% RPS to help achieve the State’s GHG reduction goals.⁵ Appropriately, CARB also recognizes that quick action must be taken to alleviate barriers to achieving a 33 % RPS.⁶ The Appendices, however, fail to demonstrate that CARB has sufficiently studied the full ramifications of its 33% RPS recommendation. As set out below, CARB neither provides sufficient information for stakeholders to assess its claim that a 33% RPS will reduce 21.2 MMTCO₂E of GHG at an net annualized cost of approximately \$1.6 billion, nor does it address widely-recognized issues that may affect the State’s ability to achieve such reductions.

First, although CARB notes that it expects potential 2020 reductions of 21.2 MMTCO₂E of GHG (at a cost of about \$1.6 billion) to result from the preliminary 33% RPS recommendation,⁷ the Appendices fail to offer necessary information regarding how CARB conducted its analysis to arrive at this conclusion. The Appendices leave unclear whether CARB’s 21.2 MMTCO₂E quantity is considered incremental to the State’s current RPS levels⁸ or to the 20% level currently written into statute.⁹ Additionally, the Appendices provide no information regarding the amount of energy CARB projects will be added by new renewables or the generation sources that it will be replacing. This information is needed to assess whether the

⁵ *Id.* at C-76.

⁶ *Id.* at C-77 (noting specifically permitting difficulties and transmission and distribution issues).

⁷ *Id.* at C-78.

⁸ *Id.* at C-76 (the California Energy Commission (“CEC”) estimates that about 12% of California’s retail electric load is currently met with renewable resources).

⁹ This is unclear because while the Draft Scoping Plan itself refers to calculating emissions reductions from the RPS as those “emissions avoided by increasing the percentage of renewables in California’s electricity mix from the current level of 12 percent to the 33 percent goal,” charts in the Appendices only track costs that “reflect the incremental costs to achieve 33% RPS above the existing 20% RPS.” Draft Scoping Plan at 24; Appendices at C-78.

emissions reductions projected by CARB are reasonable. In the absence of such information, parties are limited in their possible responses to the Appendices as there is virtually no explanation of how CARB arrived at the level of reductions it anticipates from a 33% RPS.

Second, although CARB accepts a 33% RPS as an appropriate target for 2020, CARB fails to provide any comment on how that metric is achievable in light of various risk factors for RPS generation that have been recognized by leading state agencies. Although CARB notes some risks,¹⁰ it fails to mention other significant risks over which California has no control, e.g., the federal production and investment tax credits, and the fact that such risks are already undermining the ability of California's IOUs to meet the 20% by 2010 RPS requirement.

The California Public Utilities Commission ("CPUC"), in its Renewables Portfolio Standard Quarterly Report, issued April 2008, noted that over 70% of generation expected from RPS projects was at risk because of this factor.¹¹ In the same report, issued July 2008, the CPUC reiterated that "[p]ossible expiration of the federal Production and Investment Tax Credits is the number one source of risk to new RPS generation expected to come online by 2010. Unfortunately this is also the area of risk over which the state of California has the least control."¹² The importance of this issue has also been widely recognized by both industry leaders and legislators.¹³ CARB, however, neither acknowledges nor addresses how this critical factor should be incorporated into plans for achieving a 33% RPS goal.

Just as CARB fails to acknowledge the greatest risks to meeting current RPS goals, CARB also fails to acknowledge the very real possibility that California's IOUs will not meet the 20% by 2010 RPS. The CPUC recently acknowledged this fact in its Renewables Portfolio Standard Quarterly Report. There, the CPUC noted "IOUs are now projected not to meet the 20% by 2010 target, even if all of the 2010 generation that is now rated medium to high risk or

¹⁰ Appendices at C-77.

¹¹ CPUC, Renewables Portfolio Standard Quarterly Report at 5 (April 2008).

¹² CPUC, Renewables Portfolio Standard Quarterly Report at 7 (July 2008).

¹³ See, e.g., Deborah Berry, "Solar Power Projects, Especially in California, Depend on Tax Credits," Desert Sun, July 31, 2008 ("We don't survive without the tax credit.")

under negotiation, were to come online by that year.”¹⁴ Instead, the CPUC expects the 20% target to be reached in 2012 or 2013 and notes that in such a scenario the IOUs would only have seven years to achieve the 60% increase in generation needed to reach the 33% RPS level recommended by CARB.¹⁵ In light of the CPUC’s concern about the IOUs’ ability to achieve even current RPS goals, CARB’s recommendations should provide a robust analysis of why it believes such goals are achievable. If CARB does not, the scoping plan risks becoming a plan with lofty ideals, but no realistic chance of actually serving as a guide to how California will reduce GHG emissions.

Third, although CARB notes that renewables are important to the achievement of AB 32 goals, and that POUs have voluntary efforts underway to meet varying RPS goals, CARB in both its Draft Scoping Plan and accompanying Appendices declines to address the specific issues associated with such a requirement. Instead, CARB raises the idea that “POUs . . . achieve GHG reductions or an equivalent amount through other measures.”¹⁶ The Appendices provide no specifics about what such measures may be, how they might be quantified, or how CARB justifies placing the economic burden of reducing GHG emissions through the use of renewable energy solely upon some, but not all, electricity customers. As SCE has previously noted, any new RPS must apply exactly the same performance standards and requirements to all of California’s LSEs, including IOUs, POUs, ESPs, CCAs, and the California Department of Water Resources (i.e., the same definition of renewable resources, procurement requirements, reporting obligations, etc.).

Lastly, and perhaps most importantly, CARB fails to provide any independent assessment of how a 33% RPS would affect grid reliability and grid integration issues. Instead of independently attempting to assess its recommendation’s effect, CARB simply notes that the State must consider such issues. Although CARB notes that additional costs may be associated

¹⁴ CPUC, Renewables Portfolio Standard Quarterly Report at 6 (July 2008).

¹⁵ *Id.*

¹⁶ Appendices at C-77.

with integration of larger amounts of renewables,¹⁷ it fails to address whether it has incorporated such costs into its \$1.6 billion assessment or what provisions it is making for updating that estimate. Rather than provide critical and balanced information regarding the real issues associated with integrating a higher RPS standard into its recommendations, CARB has demonstrated an overall approach to the 33% RPS recommendation that provides very little back up evidence of how exactly its recommendation will result in actual GHG reductions, by avoiding any independent assessment of the widely recognized integration issues associated with raising the State's RPS to 33%. CARB and the State must recognize that the reliability of the electric system must take precedence over increasing California's renewables goals.

B. Energy Efficiency

1. CARB Should Include The Basis For The Energy Efficiency Savings Estimates Of 32,000 GWh And Potentially An Additional 8,000 GWh

The Draft Scoping Plan sets a target for statewide energy demand reduction of 32,000 GWh for 2020.¹⁸ In addition, the Draft Scoping Plan states that CARB is evaluating the possible inclusion of an additional 8,000 GWh energy efficiency goal.¹⁹ As discussed in the SCE Draft Scoping Plan Comments, the IOUs are currently pursuing very aggressive goals for energy efficiency. The recommended goals from the CPUC are based upon the estimated potential of energy efficiency in California. However, CARB is recommending additional savings beyond the CPUC's estimated potential of energy efficiency in California. CARB should include more information on the basis of the recommended savings amounts so that stakeholders can more fully evaluate whether such additional savings are achievable.

¹⁷ *Id.*

¹⁸ Draft Scoping Plan at 23.

¹⁹ *Id.* at 38.

2. CARB Should Include The Underlying Data Regarding The BAU Case For Energy Efficiency

The Draft Scoping Plan contains multiple references to CARB’s BAU energy efficiency assumptions, but does not provide the underlying data regarding these assumptions. Neither the energy savings levels, nor the cost savings resulting from the recommendations of the Draft Scoping Plan in the BAU case are adequately described. The Appendices should identify the source of the data and describe the calculation of these energy savings and the associated cost savings.

If CARB’s BAU case is based on the energy efficiency inputs developed for the CPUC Energy Division by Energy and Environmental Economics, Inc. (“E3”), then that source should be identified. Furthermore, even if the E3 model is the basis for CARB’s BAU assumptions, additional documentation regarding the E3 model should be set forth in the Appendices. SCE has previously commented to the CPUC that insufficient documentation has been provided regarding the energy efficiency inputs used in the E3 model thus limiting the ability of reviewers to assess the validity of these inputs. Regardless of the source of the data, additional documentation is needed regarding CARB’s energy efficiency BAU assumptions.

3. POU’s And All Other Non-IOU LSEs Should Undertake Their Share Of Energy Efficiency

As SCE recommended in the SCE Draft Scoping Plan Comments, the energy efficiency requirements should be equitable across all LSEs in California. The CPUC proposal would assign a disproportionately high share of the energy efficiency savings to IOU customers, unfairly burdening IOU customers to the benefit of POU customers. CARB should modify the Draft Scoping Plan and Appendices to ensure there are equitable goals for all LSEs in California and that all parties are responsible for equally contributing to energy efficiency savings and the resulting GHG reductions.

C. CHP

1. CARB Should Provide Sufficient Information For Stakeholders To Assess Estimates Of The Costs Of Increasing CHP

The Appendices estimate that a 32,000 GWh increase in CHP use will result in potential 2020 reductions of 6.8 MMTCO₂E at a net annualized cost of approximately negative \$1.3 billion.²⁰ However, the Appendices do not provide quantitative information regarding the amount of fuel consumed onsite, the amount of waste heat assumed for useful thermal load, and other information regarding CHP efficiencies necessary to assess whether CARB's preliminary recommendations are realistic. CARB must provide such information to stakeholders in order to allow for adequate discussion of CARB's proposed recommendations.

2. CARB Fails To Support The Need For Special Mechanisms To Address CHP Viability

CARB identifies a utility portfolio standard, encouragement of power export, and development of guaranteed rate structures as items "necessary to create a viable market for CHP system power."²¹ But the Appendices provide no quantitative basis upon which to assess CARB's recommendation that these specific actions are efficient or cost-effective means of reducing California GHG emissions. Without such an analysis, CARB's recommendations provide a very thin record upon which to assess the merit of providing preferential treatment to CHP generators.

In addition to failing to provide any quantitative assessment of how such policy recommendations will provide incentives for efficient and cost-effective CHP systems to grow without also subjecting California to increased emissions from inefficient systems, CARB also fails to provide any information regarding why it concludes that current market opportunities are

²⁰ Appendices at C-76.

²¹ *Id.* at C-74-75.

insufficient for CHP resources.²² For example, although CARB recognizes that “CHP systems can be an extremely fuel-efficient and cost-effective form of distributed generation,”²³ it does not address why technologies with such purported efficiencies require subsidies or special treatment not afforded to other cleaner generating plants.

Additionally, CARB’s recommendations fail to address other issues which are associated with its recommendations such as those relating to power exports. For example, the Appendices fail to address transmission grid-related issues associated with too much export from CHP resources.²⁴ If CARB does not address this fundamental failing of its CHP recommendations, the result will be electric utility customers subsidizing fossil fuel-fired CHP systems, through either direct incentives or indirect mechanisms such as waivers in other system or wire charges which reflect the costs necessary to integrate CHP and any other generating systems. Without vigilance as to these issues, such subsidization is likely given that presently the industrial sector is not subject to any regulations (other than the potential for having to participate in the cap-and-trade) under the Draft Scoping Plan, despite contributing 17% of the State’s GHG emissions.

3. CARB Should Adopt Performance Standards, Efficiency Requirements, And Minimum Emissions Standards For CHP

The Appendices purport to support CARB’s recommendation that CHP capacity be increased by 4,000 MW and suggest that such an increase will result in GHG emissions reductions.²⁵ However, CARB’s assessment does not consider that CHP technologies are vastly different and therefore result in varying GHG emissions.²⁶ To actually garner GHG reductions

²² For example, CARB fails to note current efforts to integrate CHP into California’s electricity market while also ensuring that CHP is the most cost-effective resource. Under current structures, CHP units can compete in any of the IOUs’ or POU’s requests for offers, or approach any of the IOUs, POU’s, ESPs, CCAs, financial intermediaries, or out-of-state buyers directly for bilateral negotiations regarding potential projects. These options are explored by every other generator in the market today and are also available to CHP owners.

²³ Appendices at C-73.

²⁴ The Appendices also fail to note whether CARB has addressed the implications of increased export from CHP units on the California Independent System Operator’s operation of large portions of California’s electricity grid.

²⁵ Appendices at C-73.

²⁶ See SCE Comments on Draft Scoping Plan at 24-25.

from CHP resources, individual systems need to be efficient and appropriately sized to meet on-site load. As the CPUC and CEC have noted, “[w]hile often characterized under the single heading of CHP, there are multiple types of technologies and fuel sources that are considered to be part of this broad category.”²⁷ SCE’s experience with CHP has been that a minority of existing CHP applications actually reduce fuel use, while some applications are extraordinarily wasteful of fuel. CARB’s assessment of likely emissions reductions resulting from increased CHP does not incorporate, or even address, differences in CHP technologies, preferring instead to calculate emissions reductions on the basis of generic assumptions.²⁸

Differences in CHP technologies must be recognized in the scoping plan so that any recommendation to increase CHP resources in the State does not result in the proliferation of inefficient fossil fuel-fired CHP units. One manner in which accounting for the differences in types of CHP can be accomplished is through recognition of specific parameters which recognize the benefits and GHG reductions of different types of CHP resources. Accordingly, CARB should adopt performance standards, efficiency requirements, and minimum emissions standards for CHP users. Adoption of such standards will ensure that incremental CHP usage is in fact contributing to the reduction of GHG emissions in a manner that is more environmentally friendly, more cost-effective, and more efficient than the alternative.²⁹

4. CARB Should Provide More Information Regarding Its BAU Projections For CHP

In assessing CARB’s CHP recommendations, SCE has found it difficult to determine the assumptions CARB has used to determine its BAU case for CHP analysis. Although CARB frequently refers to the 2005 draft report prepared for the CEC by the Electric Power Research

²⁷ Joint California Public Utilities Commission and California Energy Commission Staff Paper on GHG Regulation for Combined Heat and Power (“Joint CHP Report”) at 2 (May 1, 2008).

²⁸ Appendices at C-75-76.

²⁹ The CPUC has recognized that an efficiency threshold for CHP installations could be a way of ensuring that CHP installations actually result in a net reduction in GHG relative to power delivered from the grid. Joint CHP Report at 10.

Institute, the Appendices do not provide sufficient information for parties to assess the starting point from which CARB assumes increased CHP GHG emissions reduction contributions. SCE urges CARB to provide more quantitative information on its BAU assumptions in order to allow for a more robust assessment of forecasted GHG emissions reductions.

D. Offsets

1. CARB Should Consider The Offset-Related Definitions Set Forth In These Comments

SCE agrees with CARB that offsets can provide regulated entities a source of low-cost emissions reductions and can encourage the spread of clean, efficient technology outside California.³⁰ SCE further agrees that CARB should adopt regulations for verifying and enforcing any offsets used and that there should be clear and consistent rules for the use of offsets.³¹ SCE believes that these principles can provide the foundation for a robust offset policy. As SCE stated in the SCE Comments on the Draft Scoping Plan, SCE also supports the Draft Scoping Plan's statements that offsets must be validated in a rigorous manner with specific CARB rules to determine that offsets are real, permanent, quantifiable, verifiable, enforceable, and additional.³² With clear rules establishing the validity of offsets, the State can assure that real progress is being made toward meeting AB 32 requirements.

SCE recognizes that there are terms related to offsets that are not yet defined in AB 32. In its Voluntary Early Action application to CARB, SCE offered the following working definitions for the terms specified in Section 38562(d)(1):

- **Real:** The emissions reductions resulting from this activity would not have occurred if this program did not exist.

³⁰ Appendices at C-18-19.

³¹ *Id.* at C-19.

³² SCE Draft Scoping Plan Comments at 13-14.

- **Permanent:** The emissions reductions will occur for the life of the equipment or program.
- **Quantifiable:** Calculations of emissions impacts are based on principles that include a baseline measurement, a program alternative, and a calculation of the difference between the two alternatives.
- **Verifiable:** The project or program has protocols or procedures in place that a verifier can use to express a conclusion that provides an agreed-upon level of assurance that the GHG assertion contains no material errors, omissions, or misrepresentations.
- **Enforceable:** Ownership of the GHG emissions must be demonstrated in tangible manner that may include contracts or legal instruments that define their creation, provide for transparency, and ensure exclusive ownership.

SCE suggests that these working definitions could assist CARB in its development of an offset program.

2. CARB Should Allow The Use Of Offsets For Purposes Of Compliance With A Cap-And-Trade Program And Other Regulations That May Apply To Regulated Entities

In the Appendices, CARB appears to be limiting its discussion of offsets to the context of a cap-and-trade program. SCE reemphasizes the need for offsets within the context of other regulatory measures that may apply to regulated entities. As the Draft Scoping Plan suggests, specific measures can be drafted in a manner that provides for the use of offsets when compliance with the measure is not possible (e.g. when control technology or process changes are not available or when permits to effect the desired change cannot be obtained) or when compliance is unreasonably costly.³³

³³ Draft Scoping Plan at 44.

3. CARB Should Not Limit Out-Of-State Offset Projects

CARB suggests that offsets should be limited to locations within California, the Western Climate Initiative (“WCI”) region, and the Mexico border region to realize co-benefits.³⁴ As SCE stated in the SCE Draft Scoping Plan Comments, the location of an offset project should have no bearing on its validity as long as the criteria for a valid offset can be met. In order to be used for AB 32 compliance, offsets should be required to be validated to ensure that they are real, permanent, quantifiable, verifiable, and enforceable. The practicalities of finding valid offset projects that meet these criteria will tend to advantage projects that are easier to monitor and enforce, most likely leading to a preference for projects within the United States and its neighbors. However, offsets outside those jurisdictions should not be ruled out. Restricting offsets to inside California (or the WCI or Mexican border regions) to achieve co-benefits is not good policy because it weakens the primary objective of AB 32 to return GHG emissions to 1990 levels by 2020 to address the clear and present danger of global warming.³⁵

4. CARB Should Refrain From Placing Limitations On The Quantity Of Offsets

In the Appendices, CARB indicates that it is considering placing limits on offsets, such as 10% of the compliance obligation for an individual firm.³⁶ As SCE stated in the SCE Draft Scoping Plan Comments, CARB should refrain from placing limitations on the quantity of offsets that can be used to meet a regulated entity’s compliance obligations. To address the apparent concern about a flood of offsets, SCE suggests that CARB adopt offset rules that include a clear indication that CARB will review experience gained in the first five years of the program and determine if amendments to the measure are needed to regulate future applications for offsets. By indicating its intent to gain experience with offsets before unduly limiting them,

³⁴ *Id.*; Appendices at C-19.

³⁵ Although co-benefits are potential additional benefits of reducing GHG, they should not take precedence over AB 32’s overall goal of reducing GHG to reduce the risk of global warming.

³⁶ Appendices at C-19.

CARB can fulfill the intent of the law by minimizing costs while assuring the public that only valid offsets will be accepted and that other desirable aims of reducing GHG will be achieved.

E. The Net Metering Cap Does Not Need To Be Increased To Support Increased Solar Capacity

The Appendices suggest that the net metering cap could pose a challenge to the 3,000 MW by 2017 target of the Million Solar Roofs Program.³⁷ CARB states that Senate Bill (“SB”) 1 already raised the cap from .5% to 2.5% of peak demand, but that it is anticipated that the cap will need to be raised again before the State reaches the 3,000 MW solar capacity goal.³⁸ CARB does not provide any support for this statement. Nor does CARB consider the cost of net metering credits in its analysis of the costs of the Million Solar Roofs Program as a GHG reduction measure.³⁹

In fact, one of the objectives of SB 1 was to establish a self-sufficient solar industry. SB 1 should reduce the price of solar over time and help reduce the ongoing need for net energy metering subsidies. Additionally, there are many other available programs under which a solar project can interconnect, sell its output, serve its customer’s load, or sell the “excess” of load amounts besides net metering. It is premature to assume that the net energy metering cap must be raised to reach the State’s solar capacity goal. If SB 1 achieves its goal of creating a self-sustaining solar market or decreases the cost of solar, the State may reach 3,000 MW of increased solar capacity without the need for additional subsidies from net metering. Moreover, other programs and the existing net metering cap may be sufficient for the State to reach its goals. CARB should not assume that the net metering cap will need to be increased at this time.

³⁷ *Id.* at C-71.

³⁸ *Id.* at C-71 n.31.

³⁹ *Id.* at C-72 (noting that the cost of net metering credits are excluded).

IV.

CONCLUSION

SCE appreciates the considerable work done by CARB staff to develop the Draft Scoping Plan and Appendices. SCE looks forward to working with the CARB, other agencies, and other stakeholders on the implementation of AB 32 and the consideration of SCE's concerns as discussed above and in the SCE Draft Scoping Plan Comments.

Respectfully submitted,

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