

COMMENTS OF SOUTHERN CALIFORNIA EDISON COMPANY TO THE
CALIFORNIA AIR RESOURCES BOARD ON CAP SETTING AND DATA REVIEW:
INTRODUCTORY DISCUSSION

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I.

INTRODUCTION

Southern California Edison Company (“SCE”) welcomes this opportunity to comment on the California Air Resources Board (“CARB”) staff’s workshop on Cap Setting and Data Review as presented on April 28, 2009. SCE appreciates the time and effort spent by CARB staff in discussing these issues and soliciting and reviewing stakeholder comments.

As discussed below, SCE agrees with the Scoping Plan that a cap-and-trade program must be broadly based in order to reap the most benefits in terms of cost-effective greenhouse gas (“GHG”) reductions and expanding the market for clean technologies. SCE therefore recommends that CARB pause the initiation of a California-only program to allow for the development of a national or regional cap-and-trade program. Given recent developments with the federal Waxman-Markey climate change bill and the Western Climate Initiative it is likely that a national or regional program will be adopted in the next few years and a more expansive program will increase the benefits of a market system, while avoiding the disadvantages of potentially conflicting state, regional, and federal programs. To the extent a federal or regional program does not materialize, CARB may then pursue a California cap-and-trade program for all regulated sectors. Notwithstanding SCE’s recommendation to pause the implementation and adoption of a California cap-and-trade program, SCE comments on issues related to the design of such a program below.

In particular, CARB should adopt consistent emission thresholds for capped sources in the electricity and industrial sectors. CARB proposes to exclude electricity generating facilities that emit less than 25,000 metric tons (“MT”) CO₂E per year from the cap-and-trade system despite the fact that industrial facilities with emissions under that threshold will be included. This is inconsistent with Assembly Bill (“AB”) 32’s intent to cover *all* emissions from electricity delivered to and consumed in California and may leave many in-state electricity generating facilities unregulated. CARB should use the same threshold for inclusion in the cap-and-trade

system that it uses for mandatory reporting – an electricity generating facility that is at least 1 MW and emits at least 2,500 MT CO₂E per year should be included as a capped source.

Additionally, CARB should establish a robust stakeholder process to develop the cap levels for 2012, 2015, and 2020. This process should take into account the realities of the electricity system's configuration and dispatch and also adjust for the impact of the recent economic downturn. Moreover, CARB should develop a trajectory for the cap during the first 2012 to 2014 compliance period for the sources capped during that period. CARB should also reject straight line cap trajectories. Instead, CARB should establish an adjustment period with a reduced reduction trajectory in the first compliance period to allow new technologies to develop, reductions from other emission reduction measures to materialize, and to reduce the economic burden of GHG regulation.

CARB's proposed pathway analysis is crucial to understanding the potential compliance opportunities available to regulated entities. Accordingly, CARB should involve a broad group of stakeholders in the process and perform such analysis before setting caps or cap reduction trajectories. The compliance pathway analysis should also account for expected emission reductions from direct regulatory measures.

Finally, offsets from uncapped sources should be permitted assuming they meet the eligibility requirements established by CARB. Offset credits from these uncapped sources should count for a defined term established when they are approved by CARB. They should not be suspended when uncapped sources are included in the cap-and-trade program, although no new offsets from capped sources should be allowed.

II.

SCE SUPPORTS A BROAD-BASED CAP-AND-TRADE PROGRAM

As discussed in the Scoping Plan, there are significant economic and GHG reduction benefits to increasing the scope from a California-only cap-and-trade program to a more far-

reaching program.¹ A more comprehensive program creates an opportunity for substantially greater GHG emission reductions, expands the market for clean technologies, helps avoid leakage (i.e., shifting of emissions from California to other states), may reduce the possibility that local businesses will shift production outside of California, and vastly increases the potential that necessary GHG reduction can be achieved at the least cost to California citizens. AB 32 recognizes the benefits of broad-based approaches to climate change by requiring CARB to consult with other states, the federal government, and other nations “to identify the most effective strategies and methods to reduce greenhouse gases” and to “facilitate the development of integrated and cost-effective regional, national, and international greenhouse gas reduction programs.”²

The Western Climate Initiative (“WCI”) is progressing towards the development of a regional cap-and-trade program. Moreover, the federal Waxman-Markey climate change bill, “The American Clean Energy and Security Act of 2009,” H.R. 2454, was introduced on May 15, 2009 and has been approved by the House Energy and Commerce Committee. CARB’s plans for a cap-and-trade program should allow time for these programs to develop before adopting a California-only program. The Scoping Plan itself acknowledged that a broader program will reap more benefits – including greater GHG reductions – than a program limited to California.³ Implementing a California-only cap-and-trade program alongside or in coordination with regional and national programs may lead to complex and potentially contradictory state, regional, and federal regulations that will seriously complicate compliance for regulated entities, substantially increase compliance costs, and potentially undermine the ability of the market to achieve the lowest cost emissions reductions.

CARB should set a timeline that would provide the time for a national or regional program to be implemented. If a national or regional system is developed in the next few years,

¹ Climate Change Scoping Plan (“Scoping Plan”) at 33 (December 2008).

² Cal. Health & Safety Code § 38564.

³ Scoping Plan at 33.

California should use such a system to meet its AB 32 obligations to reduce GHG, thus avoiding the unnecessary complications and expense of coordinating potentially conflicting programs. If a national or regional system does not materialize, CARB may then revisit the development of a California-only cap-and-trade program covering all major emitting sectors.

This proposal is consistent with AB 32. Any proposed regulations for a California-only cap-and-trade program may act as a back-stop if no acceptable federal or regional system is implemented. Moreover, AB 32 provides that “[a]fter January 1, 2011, the state board may revise regulations adopted pursuant to this section and adopt additional regulations to further the provisions of this division.”⁴ Under this section, CARB can delay the adoption of a California-only cap-and-trade program. Further, while CARB may determine that some specific measures to reduce California GHG emissions should be adopted and enforced regardless of the path chosen at the national and regional levels, the State may find it more effective and less costly to merge its program with broader-based national or regional programs.

If CARB does proceed with a California cap-and-trade program, CARB should establish a process to adjust the caps if the emissions associated with capped electricity imports are later capped at the source. CARB should separately identify and estimate the portions of the 2012, 2015, and 2020 caps associated with electricity imports so those caps can be adjusted in the event that the imports are capped at the source through federal, regional, or state GHG regulation.

III.

CARB SHOULD BE CONSISTENT IN ITS TREATMENT OF CAPPED SOURCES IN THE ELECTRICITY AND INDUSTRIAL SECTORS

CARB has proposed that the electricity sector’s capped sources during the first 2012 to 2014 compliance period will include imported electricity and in-state electricity generating

⁴ Cal. Health & Safety Code § 38562(g).

facilities that emit greater than 25,000 MT CO₂E per year.⁵ During the first compliance period, the capped sources from the industrial sector will include large industrial facilities that emit greater than 25,000 MT CO₂E per year.⁶ For the industrial sector, small industrial fuel use for facilities that emit less than or equal to 25,000 MT CO₂E per year will be covered starting in the second compliance period in 2015.⁷ However, CARB has not proposed a similar expansion of the capped sources in the electricity sector to cover in-state electricity generating facilities that emit 25,000 MT CO₂E or less per year.

This inconsistency in the treatment of the electricity and industrial sectors is not justified. Many small electricity generating facilities could be completely excluded from the cap-and-trade program if CARB only includes electricity generating facilities that emit greater than 25,000 MT CO₂E per year as capped sources. Leaving these small electricity generating facilities out of the cap is contrary to AB 32, which includes “*all emissions of greenhouse gases from the generation of electricity delivered to and consumed in California,*” in the definition of “statewide greenhouse gas emissions” that are regulated by AB 32.⁸ As discussed below, such exclusion of small electricity generating facilities from the cap-and-trade program will create unintended negative consequences. Additionally, it makes little sense to cap imports from small out-of-state electricity generating facilities whose emissions are at or below 25,000 MT CO₂E per year, while at the same time excluding the emissions from similar in-state electricity generating facilities from the cap.⁹

CARB’s mandatory reporting requirements apply to all in-state electricity generating facilities that are at least 1 MW in size with emissions of at least 2,500 MT CO₂E per year.¹⁰

⁵ Scoping Plan at 31; Cap Setting and Data Review: Introductory Discussion Workshop Presentation (“Presentation”) at 8 (April 28, 2009).

⁶ *Id.*

⁷ *Id.* Commercial and residential fuel combustion and transportation fuels will also be included in the cap-and-trade program starting in the second compliance period.

⁸ Cal. Health & Safety Code § 38505(m) (emphasis added).

⁹ CARB should use consistent emission thresholds for all sources and should also clarify whether any thresholds will apply to electricity imports.

¹⁰ 17 CCR § 95101(b)(4).

SCE recommends that CARB use these same criteria to determine which electricity generating facilities should be included as capped sources in the cap-and-trade program.

A. CARB’s Proposed Threshold Could Exclude Many Electricity Generating Facilities

While SCE has not estimated how many in-state electricity generating facilities will be required to report their GHG emissions to CARB but will be excluded from the cap-and-trade regulation, the data in table below illustrates SCE’s concern. As shown in the table, a 45 MW natural gas-fired combustion turbine peaker facility with a 1,100 lbs per MWh emission rate could operate at an approximately 13% capacity factor and still not exceed 25,000 MT CO₂E per year. Historically, peaker units have operated at very low capacity factors; therefore, it is very likely that such peaker units would not have to retire any allowances when they operate under the proposed threshold. Similarly, a 5 MW natural gas-fired cogeneration facility with a 1,100 lbs per MWh emission rate could operate 100% of the time and still not emit 25,000 MT CO₂E per year. Exempting these and similar electricity generating facilities from the cap-and-trade program will undermine the program’s ability to reduce statewide GHG emissions

Profiles Resulting In Emissions Of 25,000 MT CO₂E Per Year

| Emission Rates | | Annual output | | 5 | 10 | 45 |
|----------------|--------|---------------|--------|-----------------|-----|-----|
| lbs/MWh | MT/MWh | MT | MWh | MW | MW | MW |
| | | | | Capacity Factor | | |
| 1,100 | 0.50 | 25,000 | 50,000 | 114% | 57% | 13% |
| 1,500 | 0.68 | 25,000 | 36,667 | 84% | 42% | 9% |
| 2,000 | 0.91 | 25,000 | 27,500 | 63% | 31% | 7% |

Additionally, CARB should make clear that cogeneration facilities will be included in the cap-and-trade program as recommended by the California Public Utilities Commission (“CPUC”) and California Energy Commission (“CEC”).¹¹ For the purposes of capping the emissions associated with the electricity portion of cogeneration facilities, such facilities should

¹¹ Final Opinion on Greenhouse Gas Regulatory Strategies, CPUC Decision 08-10-037, at 299-300 (October 16, 2008). Citation is to CPUC version of the decision.

be subject to the same size and emission threshold as electricity generating facilities, as discussed above.

B. Exempting Small Electricity Generating Facilities From The Cap-And-Trade Regulation Will Have Unintended Negative Consequences

Exempting small electricity generating facilities from the cap-and-trade program via the 25,000 MT CO₂E per year threshold will require large electricity generating facilities and other capped sources to disproportionately shoulder the burden of achieving the emission reductions that are necessary to meet the State's AB 32 goals. Moreover, small electricity generating facilities will enjoy a competitive advantage over larger facilities because they will not have to purchase GHG allowances for their emissions when selling their electricity in the competitive electricity markets, while large electricity generating facilities will have to acquire allowances and take the cost of allowances into account when bidding into the competitive electricity markets.

CARB's proposed threshold will also turn some small electricity generating facilities into use limited resources by creating a substantial incremental cost when these generating facilities are about to cross the 25,000 MT CO₂E per year threshold. This incremental cost creates a very large step-jump function when selecting which electricity generating facilities should be dispatched in their merit order ranking of incremental costs. For example, if the California Independent System Operator ("CAISO") wanted to dispatch a small electricity generating unit that was about to cross the 25,000 MT CO₂E threshold for the year, the CAISO would have to account for not only typical incremental fuel and start-up costs, but also the cost of allowances for the entire 25,000 MT CO₂E. The CAISO's single action of forcing the electricity generating unit to cross the 25,000 MT CO₂E threshold would require the unit's owner to retire GHG allowances for the entire 25,000 MT CO₂E because the unit would no longer be exempt from the cap-and-trade regulation, whereas before it crossed the threshold it was not required to retire any allowances. As a direct outcome of this huge step-jump in incremental costs for units crossing the threshold to be included as capped sources, less efficient units who nevertheless do not face

such step-jumps in costs would continue to be dispatched for a very long time before more efficient small electricity generating units were forced to cross the 25,000 MT CO₂E per year threshold.

This outcome is contrary to the State's emission reduction goals and can be avoided by lowering the threshold for capped sources in the electricity sector, as recommended by SCE. If small electricity generating facilities with annual emissions at or below 25,000 MT CO₂E are not included in the cap-and-trade program, then their reported emissions should not be taken into account when determining whether California has met its AB 32 goals.

IV.

THE CAP LEVELS SHOULD BE ESTABLISHED THROUGH A ROBUST STAKEHOLDER PROCESS

At the workshop, CARB staff proposed that cap levels for 2012 and 2015 be based on the projected 2012 and 2015 best estimates of expected actual emissions for the "Narrow Scope" sources (i.e., in-state electricity generating facilities that emit over 25,000 MT CO₂E per year and electricity imports and large industrial facilities that emit over 25,000 MT CO₂E per year) and "Broad Scope" sources (i.e., all sources covered by the cap-and-trade program), respectively.¹² SCE supports this approach, provided that CARB develops the estimates of expected actual emissions via a public process with robust stakeholder input. Although CARB staff have suggested they will take into account various factors such as population growth, economic growth, and expected voluntary and mandatory emission reductions in developing the estimates, SCE believes that developing accurate estimates of future electricity sector emissions will require CARB to conduct detailed simulations of projected electricity system configuration, as well as likely electricity system dispatch under a variety of scenarios.

CARB should form a stakeholder group to design these system simulations and develop these scenarios. This task will be difficult given that a majority of electricity generating

¹² Presentation at 13.

resources in California are dispatched based on a market optimization achieved via locational marginal prices in the integrated forward market recently implemented by the CAISO. Furthermore, the dispatch of electricity resources could change based on the assumed prices of GHG allowances since the allowances will be a part of the underlying incremental cost for any electricity generation resource that emits GHG at a level that includes it in the cap-and-trade regulation. Electricity system dispatch in the western United States is also highly dependent on hydro conditions, which tend to vary annually. It is therefore imperative for CARB to take such variable hydro conditions into account in developing any estimates of future emissions from the electricity sector.

Additionally, CARB needs to take into account the impact of the recent economic downturn on electricity demand in California. Electricity demand that is temporarily lost due to such unusual economic events typically bounces back very quickly when the economy improves. Accordingly, it would be inappropriate to assume that the reduction in demand resulting from the economic downturn is permanent and will lead to a sizeable reduction in emissions in future years. In other words, the impact of the current recession should be considered temporary and should not be a part of “business as usual” projections for 2012 or 2015.

SCE suggests that CARB outline its proposed process for developing the best estimates of emissions for 2012 and 2015 and convene a stakeholder group to provide input into this process, as well as to review CARB’s modeling methodology and assumptions.

V.

CARB SHOULD DEVELOP A TRAJECTORY FOR THE CAP DURING THE FIRST COMPLIANCE PERIOD THAT ONLY APPLIES TO NARROW SCOPE SOURCES

CARB staff proposed that CARB will establish a 2020 cap level for Broad Scope sources (i.e., all sources covered by the cap-and-trade program) based on the 2020 target established in the Scoping Plan.¹³ CARB will also develop projected 2012 and 2015 best estimates of expected

¹³ *Id.*

actual emissions for the Narrow Scope sources (i.e., in-state electricity generating facilities that emit over 25,000 MT CO₂E per year and electricity imports and large industrial facilities that emit over 25,000 MT CO₂E per year) and Broad Scope sources to set annual caps in 2012 and 2015.¹⁴

Because the 2020 cap level is only available for Broad Scope sources and cannot be easily divided into Narrow Scope sources and the balance of Broad Scope sources, there is not an easy way to develop the cap trajectory for the first compliance period (i.e., during 2012 to 2014). In order to develop a trajectory for the first compliance period, CARB must develop, not only a 2012 starting point based on estimated emissions, but also a 2020 end point for the Narrow Scope sources only. In absence of a 2020 target for the Narrow Scope sources, CARB needs to propose a methodology to establish the trajectory for the first compliance period and seek stakeholder input in order to develop annual caps during the first compliance period. This trajectory would not only determine the compliance level during 2012 to 2014, but is also necessary to determine the 2015 estimate of emissions for the Broad Scope sources.

VI.

CARB SHOULD NOT ESTABLISH STRAIGHT LINE CAP TRAJECTORIES

CARB staff proposed to establish straight line trajectories to the 2020 cap for both Broad Scope and Narrow Scope sources.¹⁵ SCE agrees that any trajectory should have an end point that meets AB 32's goal of 1990 emission levels by 2020. However, SCE recommends that the first compliance period be viewed as a transition period, with a reduced reduction trajectory in order to allow a period of adjustment for new technologies to develop and reductions from other emission reduction measures to materialize, as well as to reduce the economic burden of emission reductions.

It will take time for new low carbon technologies that will reduce emissions to develop. Moreover, the reductions from other emission reduction measures are not likely to occur on a

¹⁴ *Id.*

¹⁵ *Id.*

straight line trajectory. For example, the need to build transmission to interconnect new renewable resources and the time required to construct such transmission makes it more likely that emission reductions from new renewables will be back-loaded.

Furthermore, it is well known that prices will increase as a consequence of GHG reduction measures. To a certain extent, moderate price increases are not only inevitable but desired, since consistent and accurate price signals will help drive investment to low-emitting technologies and reward obligated entities and consumers for taking actions that reduce GHG emissions. However, even moderate price increases may cause a significant economic burden. It takes time to adjust to a carbon-constrained world that features higher energy prices. Individuals and businesses need time to adjust their behavior and make investments to reduce their energy and fuel use. Moreover, experiences such as the California electricity crisis of 2001 show that rapid increases in prices of critically-needed commodities result in regulatory exceptions that threaten the integrity of emission reductions systems. During the California electricity crisis, the South Coast Air Quality Management District's nitrogen oxide declining cap RECLAIM program was effectively temporarily abandoned to assure existing power plants could continue to operate.

Consequently, the trajectory of cap should begin with moderate emission reductions in the first compliance period, and then "ramp up" with greater reductions in the second and third compliance periods. The cap trajectory should not be a straight line. Instead, the first period should have a relatively moderate slope, and the second and third periods a relatively steeper slope. This trajectory will allow time for adjustments to GHG pricing and reduce the economic burden of the new GHG reduction program, while still meeting the 2020 AB 32 goals.

VII.

CARB'S PROPOSED COMPLIANCE PATHWAY ANALYSIS IS ESSENTIAL TO UNDERSTANDING AND FORECASTING GHG REDUCTIONS FROM A CAP-AND-TRADE PROGRAM

A. CARB's Proposed Pathway Analysis Is Crucial To Understanding The Potential Compliance Opportunities Available To Regulated Entities

CARB committed to conducting a compliance pathway analysis of the compliance opportunities available to regulated entities between 2012 and 2020.¹⁶ CARB envisions using this analysis to ensure that the cap trajectories are reasonable and achievable in each compliance period. SCE agrees that a compliance pathway analysis is critically important in order to properly administer the cap-and-trade program. Such an analysis should be performed prior to setting a cap or a reduction trajectory. Moreover, involvement from a broad group of stakeholders will be required to fully understand the various compliance opportunities available.

B. A Complete Compliance Pathway Analysis Must Take Into Account The Expected Reductions From Direct Measures

Understanding the magnitude and timing of the forecasted reductions from direct measures such as energy efficiency programs is vital to developing an achievable GHG reduction path under the cap-and-trade program. Many of the reductions forecast from direct measures are not expected to occur in the early years of the cap-and-trade program. The trajectory of the reductions from the cap-and-trade program must take into account the trajectory of reductions forecast from the direct measures and should not assume these reductions.

VIII.

UNCAPPED SOURCES SHOULD BE A PERMITTED SOURCE OF OFFSETS

As explained in SCE's prior comments, SCE supports broad use of offsets. CARB should permit otherwise eligible offset projects from uncapped sources before such sources are

¹⁶ *Id.* at 16.

covered by the cap-and-trade program. Moreover, offset projects should be provided credit for a defined term at that the time they are approved by CARB.¹⁷ Financing and developing offset projects entails significant effort and risk. Adding a requirement that offset credits from a particular source be suspended once that source is included in the cap-and-trade program would discourage offset developers from moving forward with otherwise valuable projects. Approved projects should continue to be considered additional for their credited periods. Once a source is covered by the cap-and-trade program it should not be allowed to create any new offsets.

IX.

CONCLUSION

SCE appreciates this opportunity to comment on cap setting and data review. SCE urges CARB to adopt regulations which are in line with the principles SCE set forth herein.

Respectfully submitted,

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¹⁷ For example, CARB staff discussed crediting terms of from five to ten years for non-biological sequestration projects and potentially much longer terms for biological sequestration projects.