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December 4, 2015

VIA EMAIL (info@rggi.org)

Subject: Comments of Calpine Corporation on the 2016 Program Review for the Regional Greenhouse Gas Initiative

I. INTRODUCTION

Calpine Corporation ("Calpine") appreciates the opportunity to provide input to the states of the Regional Greenhouse Gas Initiative ("RGGI") as part of the initial 2016 Program Review process.

Calpine operates the largest fleet of natural gas combined cycle ("NGCC") and combined heat and power facilities in the U.S. Calpine is also the nation's largest producer of electricity from renewable, baseload geothermal resources. Overall, Calpine is capable of delivering nearly 27,000 megawatts ("MW") of clean, reliable electricity to customers and communities in 19 U.S. states and Canada, with 83 power plants in operation or under construction. In RGGI states, Calpine owns approximately 3900 MW of operating capacity and all of our plants run on natural gas, some with fuel oil backup.

Calpine has been constructively engaged with the Environmental Protection Agency ("EPA") and stakeholders in the development of the Clean Power Plan ("CPP") and has a history of similar engagement with RGGI and member states, including active participation in the 2013 Program Review. We applaud the RGGI states for their leadership in implementing programs to reduce carbon emissions, and demonstrate that use of a mass-based carbon reduction program with interstate trading is a cost-effective and economically viable way to reduce carbon emissions. In the Clean Power Plan, the EPA has also acknowledged RGGI, as well as California's AB32 program, as a program that has been successful in reducing GHG emissions.

Calpine has consistently advocated from a set of principles that inform all of our investments. Our input on the questions posed by RGGI to frame the 2016 Program Review follows that framework, which includes the following tenets:

- A carbon emissions reduction program should place a clear price on carbon emissions in a way that allows such a price to be reflected in wholesale power prices. This will effectively align economic and environmental incentives such that market forces drive the desired outcomes.

- Programs should be designed and administered in a way that minimizes market distortions. This includes:

- o Broad coverage of power generation facilities that emit greenhouse gases, including both new and existing sources;

- o Effective and equitable methods for distributing emission allowances or similar instruments; and

- o Minimization of "seams" issues that result from differing requirements from one state to the next. This is particularly important because competitive power markets typically span multiple states and are not always defined consistent with state administrative boundaries.

- The EPA should continue to work with states and other stakeholders to develop the infrastructure to support effective regulation of carbon emissions with a minimum of administrative burdens.

We look forward to continuing to work with RGGI states and stakeholders, as well as with the EPA, to support the goals of the CPP in achieving meaningful GHG emissions in the United States.

II. USING THE CPP MASS GOALS AND COMMENT ON THE POTENTIAL ADVANTAGES OF DIFFERENT STATE PLAN PATHWAYS/INCREASING RGGI TRADING PARTNERS

Calpine believes that the RGGI states' leadership would best be preserved by continuing the existing basic architecture of the program, using mass-based plans that cover both new and the same universe of existing sources. Calpine supports the RGGI states' wish to analyze potential impacts of different trading arrangements with states outside of RGGI. Calpine suggests that states wishing to trade with RGGI must cover new EGUs at a minimum. RGGI should also assess the impacts of requiring the following as a precondition to being a RGGI trading partner:

- The same universe of coverage, and

- A requirement to transition at least partially to an auction for allowance distribution.

Calpine encourages the plan to be designed so that it is trading-ready given the above stipulations. Calpine asserts the goals of the CPP are best supported by pursuing a path that encourages states to implement similar programs and enjoy the compliance and economic benefits of participation in a broad and robust emission trading market.

Calpine also encourages the RGGI states collectively to consider the implications of the national scope of the CPP and the interplay of this broader program with the operation of competitive power markets. RGGI member states participate in the ISO-NE, NYISO, and PJM competitive power markets. While ISO-NE and NYISO are entirely contained within RGGI, two member states participate in the very competitive PJM market as does former member New Jersey. One principle of effective market-based environmental regulation, as noted above, is to align economic and environmental incentives. If the barriers to broadening RGGI's trading universe are too high, member states in PJM might face conflicting economic signals from their power markets and their GHG compliance markets. Given such a conflict, it would only be rational for these states to consider whether RGGI or another trading platform is best suited to the states' purposes, possibly leading to the further contraction of RGGI. However, RGGI states can avoid placing member states in such a predicament by carefully considering such preconditions to trading to ensure that they are not overly stringent, but instead simply ensure a broad and robust trading market with a level playing field.

III. EMISSION GOALS POST-2020 AND PURSUING ADDITIONAL EMISSION REDUCTIONS POST-2020

We urge the RGGI states to adopt an emission reduction strategy that continues to be sustainable. We suggest RGGI consider further reductions consistent but not considerably more stringent than CPP goals for the RGGI states. Additionally, we support the RGGI states' historical approach of performing economic modeling of a range of further reduction pathways in order to assess the impacts of those approaches relative to a base case preserving the currently established budgets at the end of the program.

IV. IF POST-2020 A BANK OF CO2 ALLOWANCES REMAINS IN CIRCULATION, THE RGGI STATES ARE SEEKING STAKEHOLDER COMMENTS ON HOW TO ADDRESS OR ADJUST FOR THAT BANK INTO THE FUTURE

Calpine believes that banked allowances should remain in circulation post 2020. We would urge RGGI states to propose state plans that would allow the use of such banked allowances for compliance with the CPP. Banked allowances reflect excess reductions that were obtained in advance of the CPP, under a scheme that ensured that such reductions were real. While there are no explicit provisions within the CPP to allow this, the RGGI program (and the AB32 program in California) is unique in that it has been delivering measurable, verifiable emission reductions since 2009. The banked allowances could be thought of as a transitional supplement for the RGGI states, a reward for early action.

V. RGGI FLEXIBILITY MECHANISMS

The cost containment reserve ("CCR") was, and continues to be, an appropriate feature in RGGI, which is a relatively small market compared to the entire U.S. The CCR has been effective in ensuring an adequate supply of allowances at a reasonable price. Once the CPP is in effect, if RGGI participates in a broader trading market, the CCR may no longer be necessary. Participation in a broad market would insure against allowance price spikes, and against leakage to neighboring states. In addition, we believe the EPA's reliability safety valve measures are likely to be adequate to address both short-term and long-term reliability challenges in a way that supports the overall integrity of the program. If RGGI states ultimately adopt emission budgets more stringent than required by the CPP, one option would be to maintain a CCR, sized at the difference between the collective adopted state budgets and the collective budgets assigned to the states by the CPP. This would allow the RGGI states to continue their leadership in emission reductions, while maintaining the cost moderation effects of the CCR.

The RGGI offset program was put in place as another measure to allow for access to cost-effective emission reductions. It has proven to be unnecessary, as no offsets have been issued. It is unlikely that such a program will be needed once the CPP is in place. In any event, the CPP does not allow the use of offsets for compliance. At the same time, given the broader scope and possibly more aggressive targets of the CPP, such a program may still be approvable by the EPA, as long as the total emission reductions provided by the entire program in aggregate—state budgets plus CCR plus offsets—meet the requirements of the CPP. Calpine encourages the RGGI states first to consider whether there is a need for a continued offset program after the CPP is in effect, and then to consider the legal support for getting such a program approved, if it is determined that such a program is desirable.

VI. COMPLIANCE PROCESS

We support the current 3-year control period structure, with a requirement to hold at least 50% of allowances during the first two years of the control period. We support revision of the non-compliance penalty surrender ratio to match what is in the CPP. RGGI's proposal to extend the program with a 2018-2021 control period is a sensible way to flange RGGI up with the federal program. However, this is worth further exploration by RGGI states and stakeholders. Adopting this schedule would result in a 4-year compliance period in 2018-2021, followed by two 3-year compliance periods, and a 2-year compliance period, if CPP compliance periods are directly adopted. Similar to prior comments, owing to the fact that RGGI's program has been in effect since 2009, the states could consider simply maintaining 3-year control periods on the current schedule, which would result in a control period ending in 2029, the end of the interim CPP compliance period. This would require a demonstration by RGGI states that such a program would provide equivalent reductions, which should not be a problem, given the other features of the RGGI program discussed elsewhere.

VII. RGGI REGULATED SOURCES

We support RGGI's current regulatory scope of applicability. There is no driving reason for RGGI to reduce the scope of regulation in order to comply with the requirements of the CPP. Because the broader extent of RGGI makes it more stringent than the CPP, approvability by the EPA should not be an issue.

VIII. RGGI CO2 ALLOWANCE AUCTIONS & TRACKING SYSTEM

Calpine encourages RGGI to continue to develop RGGI COATS as the program matures, and to examine whether the goals of the CPP, which is national in nature, and those of RGGI would be best served by the adoption of a broader, preferably national, trading platform that is not limited to the RGGI region. Calpine submits that achieving the ultimate goal of a national trading program would best be supported by a trading platform common to all states, and furthermore, that adopting a common platform would likely reduce administrative burden for all participants, including regulatory agencies, the regulated community, and non-compliance participants. However, there may be additional ways to achieve comparable economies of scale, and Calpine is open to further discussion as to what these might be.

Calpine appreciates the opportunity to provide RGGI states with input at the outset of the 2016 Program Review. We look forward to continuing to work with the states and other stakeholders to ensure that RGGI continues its leadership in delivering meaningful and cost-effective GHG emission reductions while supporting continued electric system reliability. Please do not hesitate to contact me at derek.furstenwerth@calpine.com or 713.315.9357 if you have any questions or need additional information.

Very Truly Yours,

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