CALPINE CORPORATION

717 TEXAS AVENUE, SUITE 1000
HOUSTON, TX 77002

March 6, 2019

Virginia Department of Environmental Quality
P.O. Box 1105
Richmond, VA 23218
(submitted via email to ghg@deq.virginia.gov)

Re: Regulation for Emissions Trading Programs (Rev. C17) (adding 9VAC5-140-6010 through 9VAC5-140-6440).

To Whom It May Concern,

Calpine Corporation ("Calpine") submits the following comments on the Virginia Department of Environmental Quality's (DEQ) re-proposed regulation to establish a carbon cap-and-trade program for new and existing fossil fuel electric power generating facilities.

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, base-load geothermal resources. Overall, Calpine is capable of delivering approximately 26,000 megawatts (MW) of clean, reliable electricity to customers and communities in 19 U.S. states and Canada, with 80 power plants in operation or under construction. In Virginia, Calpine owns two generating units: Tasley Energy Center (33 MW) and Bayview Energy Center (12 MW). In the Regional Greenhouse Gas Initiative (RGGI) region, Calpine operates approximately 4,600 MW of operating capacity.

As expressed in our April 9, 2018 comments to DEQ on the proposal to establish a carbon trading system for EGUs (attached), Calpine continues to strongly support Virginia's development of a carbon cap-and-trade regulation. We continue to support the implementation of a program in Virginia that places a clear price on carbon emissions and that allows for trading with the RGGI market. In general, Calpine supports cap-and-trade programs that place a clear price on carbon emissions from both new and existing power generators in a way that allows such a price to be reflected in wholesale power prices and that are designed and administered in a way that minimizes market distortions. Virginia's program can be finalized to achieve that objective, but it is important for DEP to finalize an allowance budget at a level that will result in meaningful carbon reductions by incentivizing environmentally-efficient dispatch of power generation facilities.

For these reasons, we support Virginia's re-proposed regulations published on February 4, 2019 including the proposed emissions budget of 28 million short tons in 2020. Recognizing the historically low allowance prices in the RGGI region and the fact that Virginia's linkage with RGGI will significantly expand the size of the RGGI market, the budget must be based on reasonable assumptions about the expected generation mix in Virginia given market dynamics. We support the need for the reduced emissions budget based on the revised projections related to electricity demand, lower natural gas prices, and the projected generation from renewable resources.

Overall, Calpine supports additional states participating in the RGGI program to support a broader, more flexible emissions market, helping to improve market competitiveness and trading efficiency while helping to lower carbon abatement costs. As such, Calpine supports Virginia's regulatory approach of participating in RGGI in 2020 and also submitted comments supporting New Jersey's proposal to rejoin RGGI.

Calpine looks forward to continuing to work with the DEP in finalizing the Emissions Trading Program so that Virginia can participate in the RGGI program starting January 1, 2020. Please do not hesitate to contact me at Eileen.Howe@calpine.com if you have any questions or need any additional information.

Sincerely,

Eileen Howe

Eileen Howe
Fundamental Analysis Director
Calpine

CALPINE CORPORATION

717 TEXAS AVENUE, SUITE 1000
HOUSTON, TX 77002

April 9, 2018

Virginia Department of Environmental Quality
P.O. Box 1105
Richmond, VA 23218
(submitted via email to ghg@deq.virginia.gov)

Re: Regulation for Emissions Trading Programs (adding 9VAC5-140-6010 through 9VAC5-140-6430).

To Whom It May Concern,

Calpine Corporation ("Calpine") submits the following comments on the Virginia Department of Environmental Quality's (DEQ) proposed regulation to establish a carbon cap-and-trade program for new and existing fossil fuel electric power generating facilities.

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, base-load geothermal resources. Overall, Calpine is capable of delivering approximately 26,000 megawatts (MW) of clean, reliable electricity to customers and communities in 19 U.S. states and Canada, with 80 power plants in operation or under construction. In Virginia, Calpine owns two generating units, Tasley Energy Center and Bayview Energy Center. In the Regional Greenhouse Gas Initiative (RGGI) states, Calpine operates approximately 4,600 MW of operating capacity. Thus, Calpine has significant interest in and strongly supports Virginia's development of a regulation for emissions trading.

Calpine has long been engaged at the federal and state levels on climate change policy, including RGGI. We have consistently advocated for policies that support both environmental stewardship and fair competitive markets. We are supportive of cap-and-trade programs that place a clear price on carbon emissions in a way that allows such a price to be reflected in wholesale power prices and that are designed and administered in a way that minimizes market distortions, including:

- broad coverage of power generation facilities that emit greenhouse gases, including both new and existing sources;
- effective and equitable methods for distributing emission allowances or similar instruments;
- minimization of "leakage" issues that result from differing requirements from one state to the next; and
- setting allowance budget caps at a level that will result in meaningful carbon reductions by incentivizing environmentally efficient dispatch of power generation facilities.

For these reasons, Calpine supports the proposed regulations, including allowing Virginia sources to use allowances that either originated in Virginia or any other RGGI state. This linkage with RGGI will allow for a broader, more flexible emissions market, helping to improve market competitiveness and trading efficiency while lowering carbon abatement costs for affected generators. In its proposed regulation, the Virginia DEQ specifically seeks comment on whether the base budget should be 33 million tons or 34 million tons. Calpine recommends the adoption of a base budget of no more than 34 million tons. Our comments focus on that proposed budget.

Virginia's linkage with RGGI will significantly expand the size of the RGGI market;[1] therefore, it is important to recognize the potential impact of the level of Virginia's base budget on the RGGI program and on allowance prices. A budget that is not based on reasonable assumptions regarding the generation mix in light of a cap-and-trade program in Virginia has the potential to result in significantly higher or lower compliance costs for the overall RGGI program. In RGGI's most recent auction, CO_2 allowances sold at a relatively weak clearing price of $3.79[2]. This suggests that too high of a base budget in Virginia could further weaken the carbon price signal. At this price, the societal value of the RGGI program is largely limited to income it generates for the participating states; it is too low to impact power system dispatch to any meaningful degree.

Thus, Calpine recommends that Virginia set its initial base budget to no more than 34 million tons of CO_2. The proposed budgets account for recent trends in Virginia's electric generation sector, including planned retirements of fossil fuel generators, as well as opportunities for clean energy and energy efficiency. Additionally, the opportunity to trade with other RGGI member states, and the inclusion of the cost containment reserve, help to ensure that a base budget no higher than Virginia's proposed levels is reasonable and will ensure sufficient overall market liquidity.

Recognizing the historically low allowance prices in the RGGI region, Calpine supported RGGI's inclusion of the Emission Containment Reserve (ECR) because it offers a potential mechanism for states to achieve additional emissions reductions if allowance prices are lower than expected. Similarly, Calpine supports DEQ's proposal to include the ECR in the Virginia's program.

Calpine, therefore, supports the implementation of a cap-and-trade program in Virginia that places a clear price on carbon emissions and that allows for trading with the RGGI market. Calpine looks forward to continuing to work with the Virginia DEQ in this regulatory process. Please do not hesitate to contact me at Matthew.Suhr@calpine.com or (713) 820-4099 if you have any questions or need any additional information.

Sincerely,

Matthew Suhr
Director of Market Analysis
Calpine

[1] Based on Virginia's projected initial cap of 33 or 34 million tons and RGGI's cap of 78,175,215 tons in 2020.
[2] RGGI Inc., CO2 Allowances Sold for $3.79 in 39th RGGI Auction (March 16, 2018), https://www.rggi.org/sites/default/files/Uploads/Auction-Materials/39/PR031618_Auction39.pdf.