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Ms. Michele Totten
Department of Environmental Protection
Bureau of Air Management
79 Elm Street
Hartford, CT 06106-5127

Re: UTC Power Comments on Connecticut Regional Greenhouse Gas Initiative Proposed Regulations

Dear Ms. Totten:

UTC Power submits these comments to the Department of Environmental Protection (DEP) in connection with proposed regulations Section 22a-174-31 (Section 31) - Control of Carbon Dioxide Emissions/Carbon Dioxide Budget Trading Program and Section 22a-174-31(a) (Section 31a) - Greenhouse Gas Emissions Offset Projects (Draft Rule). When implemented in final form, both regulations will implement Connecticut's Regional Greenhouse Gas Initiative (RGGI).

I. Background

UTC Power, a business unit of United Technologies Corporation, is a world leader in commercial stationary fuel cell development and deployment. UTC Power also develops innovative combined cooling, heating and power applications for the distributed energy market. An example of that technology is the PureComfort® power solution, an ultra-efficient natural gas driven combined cooling, heating and power solution, capable of meeting consumers' energy needs connected to or independent from the grid. When the PureComfort® system is integrated with a facility's central heating or cooling system, the energy input efficiencies can exceed 80 percent. Its capacity to provide cooling from what would otherwise be wasted heat from the combustion process, enables customers to reduce the use of electrically driven air conditioning significantly reducing the reliance on electricity from the grid during summer months. Such a benefit is critically important, from both an energy and environmental perspective, to Connecticut's future.

UTC Power strongly supports the RGGI program and purpose. UTC Power's comments focus on elements of the Draft that have a connection to program elements

intended to support deployment of small renewable energy resources, such as fuel cells, and combined heat and power (CHP) technologies to help meet Connecticut's energy and emissions reduction goals.

II. Section 22a-174-31 Control of Carbon Dioxide Emissions

A. The RGGI Definition of "Renewable Energy" Should be Consistent with the Definition of Connecticut Class I Renewable Resources and Recognize Fuel Cells Manufactured and Installed in Connecticut by Connecticut's Fuel Cell Companies.

The Draft defines "renewable energy" at Section 22a-174-31(a)(69) to include, among other technologies, fuel cells *operating on renewable fuels*. The Draft's definition, by incorporating the requirement for renewable fuels is inconsistent with the definition of Connecticut's Class I renewable energy set forth in Connecticut General Statutes Section 16-1(a)(26).

The final RGGI rule should be revised to reflect Connecticut's statutory definition of Class I renewable energy resources. In Connecticut General Statute Section 16-1(a)(26), the Connecticut legislature defines fuel cells as Class I renewable energy resources irrespective of the underlying fuel source. For that reason, fuel cells manufactured and installed in this state are Connecticut Class I resources and eligible to participate in the state's programs designed to encourage customers to invest in renewable energy resources. Further, Section 93 of Public Act 07-242, An Act Concerning Electricity and Energy Efficiency, specifically contemplates a connection between RGGI and Class I renewable energy resource incentive programs. The Draft recognizes this important connection in the context of transferring auction proceeds to the Connecticut Clean Energy Fund for Class I renewable resource development (See, Draft at page 31-24). The connection should carry through in the Draft's definitions.

Finally, as a compliment to Connecticut's statutory support for fuel cells irrespective of fuel source, Governor Rell, has offered the state's strong support to fuel cells manufactured and installed in Connecticut:

> "Connecticut's fuel cell and hydrogen companies are national leaders. We intend to make sure companies and businesses from around the country know that Connecticut supports these industries and that this is the state where they should be making or buying fuel cells and hydrogen equipment." (See, Governor Rell Press Statement dated March 15, 2007).

The RGGI rule's definition of renewable resources should reflect the statutory definition of Class I resources, consistent with the state's overall support for fuel cells as a technology that will help meet important energy and environmental goals.

B. The Set Aside Account for Combined Heat and Power Will Enable Important Energy Efficiency Gains Resulting in Lower Overall Emissions per Unit of Energy Consumed and Should be Implemented To Give Preference to Installations that are Highly Efficient, Low Emission and Capable of Meeting Cooling Needs.

The combined heat and power (CHP) set aside account will produce significant efficiency and environmental benefits (See, Draft at page 31-21). The benefits of CHP that the set aside account will promote are best illustrated by an example of a CHP installation at a Connecticut high school.

After installing a PureComfort® power solution, a Connecticut high school was able to reduce its demand for electric power produced at large, central station generators delivered over the grid. The school used the waste heat from the PureComfort® system to provide space heating in winter and produce chilled water for air conditioning in the summer, reducing natural gas or other heating fuel use in the winter and reducing peak electrical demand during the critical summer months. The PureComfort® system achieves efficiencies of more than 80 percent; this is substantially better than the 33 percent efficiency levels typical of central power generating stations. The CHP set aside account will make the high school's energy efficiency gains and reduced reliance on grid electric power possible on a broader scale.

To ensure that investment of public dollars in CHP delivers the highest value, CHP technologies with favorable characteristics should be given preference in the RGGI program. Preferred CHP technologies include those that are:

1. ultra-low emissions;
2. highly efficient, such as over 80 percent; and,
3. able to serve customers' base load power, heating and cooling needs.

Giving preference to CHP installations that have low emissions and are highly efficient will further RGGI goals. Promoting CHP installations that provide cooling capacity and also displace combustion of other fuels will provide increased environmental value by reducing customers' needs for grid power to serve air conditioning loads during peak summer periods and reduce the amount of fuel combusted to provide heat.

III. Section 31a Greenhouse Gas Emission Offset Projects

A. The Definition of "Energy Conservation Measure" or "Energy Efficiency Measure" Should Make Clear that Combined Heat and Power is an Energy Conservation or Efficiency Measure.

In the Draft, Section 22a-174-31a(a)(18) provides a general definition of "Energy Conservation Measure" and/or "Energy Efficiency Measure" (See, Draft at page 31a-2). The value of such a broad and general definition is that new or emerging technologies are able to fit within the existing definition. UTC Power supports that approach with one suggested modification. The definition should make clear that it is intended to include CHP technologies which offer material improvements in total energy efficiency with consideration given for total system efficiencies (giving credit for heating and cooling applications) and the reduction in the dependence on the grid and avoidance of other less clean technologies to meet heating requirements. To accomplish this, the definition should cross reference Connecticut General Statutes Section 16-1(a)(42). That section defines "combined heat and power system" to mean "a system that produces, from a single source, both electric power and thermal energy used in any process that results in an aggregate reduction in electricity use."

B. Eligibility Standards for New Buildings That Are Overly Stringent at This Point in Time Could Result in the RGGI Program Not Helping New Construction Make Important Efficiency Gains.

According to the Draft, to be eligible as an offset project, new buildings are limited to those designed to replace an existing building on the offset project site or designed to be a zero net energy building. A zero net energy building standard is an appropriate overall long-term objective. However, establishing zero net energy as a current prerequisite for new buildings may preclude the RGGI program from assisting today's new building owners to move closer to that standard. A person who constructs a new building that is not zero net energy but who may nevertheless be willing to make substantial investments to reduce onsite CO2 emissions in that new construction should be encouraged and supported by RGGI in order to advance Rule's purpose. To exclude such new facility owners from the RGGI offset program at this time may be a lost opportunity for a new building to make investments that would further RGGI goals of lower emissions.

C. Small Clean Energy Technologies That Have Not Achieved Meaningful Market Penetration Should Be Allowed to Participate in RGGI and Other Programs Designed to Encourage Customers to Invest in Clean Energy Technologies.

The Draft requires an offset project that includes an electric generation component to transfer to the DEP the rights to all attribute credits, such as Renewable Energy Credits used to comply with a Renewable Portfolio Standard. The Draft also prohibits an offset project from receiving funds or other incentives from any systems benefit fund.

Clean generation resource projects that are: 1) small (defined as under 2 MW); 2) not cost competitive with traditional sources of power; and, 3) that have not achieved meaningful market penetration should be allowed to use multiple incentive programs. There is good reason not to provide public funds to a clean energy project that does not

have a need: such funds should instead be directed to a climate-friendly project that would not otherwise go forward. However, it is essential for the final rule to recognize that most small, climate-friendly clean energy generation projects require multiple sources of economic support to enable customers to pursue such projects. For this reason, the RGGI program should allow climate friendly projects under 2 MW that have not achieved real market penetration to use revenue from multiple programs that are designed to accelerate clean energy investment. Support for defining small clean generation sources as those 2MW and less can be found in Section 39 of Public Act 07-242, An Act Concerning Electricity and Energy Efficiency. Section 39 expands net metering opportunity for Class I renewable resources 2MW and smaller.

With respect to proof of market penetration rates, straightforward reporting could demonstrate that small, clean, climate-friendly generation technologies have not achieved material market penetration. Complex market penetration tests for small climate-friendly projects that are expensive relative to traditional energy options could create barriers disproportionate to the very low risk that they would receive windfalls if they, for example, retained renewable energy credits and participated in RGGI. An alternative would be a reclaim of the publicly funded benefits over time as the projects accumulate benefits from the REC market. Small project eligibility could be revisited over time as small climate-friendly technology costs decline and market penetration increases.

IV. Conclusion

UTC Power supports the Draft's overall approach to reducing emissions and encouraging gains in reliance on clean and efficient power sources. We respectfully suggest that the recommended modifications above related to small, clean and efficient energy projects such as fuel cells and CHP would result in increased efficiency and environmental benefits.

Sincerely,

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and General Counsel