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UTC Power
A United Technologies Company

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To: The Chairs and Honorable Members of the Energy and Technology Committee

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Re: Raised Bill No. 1081

UTC Power Corporation, a United Technologies company located in South Windsor and employing over 525 people in the development, design, production and service of fuel cells for use in stationary, transportation, space and defense applications, supports Section 2 of Raised Bill No. 1081, "An Act Concerning Class III Renewable Energy Credits". UTC Power has advocated for this change over the past two sessions.

UTC Power has been in the fuel cell industry for over 50 years and without the fuel cells produced in South Windsor, man never would have set foot on the moon. Today we are producing fuel cells for stationary applications that fulfill the promise for energy generation with system efficiencies approaching 90%, no combustion, no noise, no green house gas emissions and a significantly reduced carbon foot print from the same amount of energy input, compared to traditional power generation devices, through the use of combined heat and power. We also provide fuel cells and fuel cell technology for transportation applications, from working with various automotive manufacturers on fuel cell technology for light duty vehicles, to underwater vehicles, to the Space Shuttle, to the five fuel cell powered transit buses deployed with CT Transit in Hartford.

While fuel cells qualify as a Class I renewable in Connecticut, they also qualify as a Class III resource. Stationary fuel cells are able to provide outstanding energy efficiency with a significantly reduced carbon footprint by providing a clean and quiet source of electricity and also operating as a source of heating and cooling. By capturing the heat generated from the electrochemical process and providing that to the host facility, energy that might otherwise be consumed to meet the need for heating or cooling can be eliminated. Historical energy needs have been met by importing electricity from the electric grid, which is about 35% efficient in Connecticut and results in 65% of the energy being "thrown away" to the atmosphere as heat. Heating needs have been met by the use of boilers that capture up to 80% of the heat and then discharge the balance to the atmosphere. Both systems are typically based on combustion that creates various green house gases as a by-product of combustion which is then discharged to the atmosphere. The fuel cell, when integrated into a building's energy system, can provide heat, cooling and electricity at efficiencies of up to 90% of total energy input.

The use of heat from the fuel cell in a typical installation is driven by seasonality, with the winter months consuming the greatest amount of heat. This seasonality can affect the overall efficiency of a system. UTC Power supports the rolling twelve month average measured quarterly. The twelve month average provides a more balanced view of the use of energy by balancing total system efficiency, environmental benefit and economic considerations in encouraging energy conservation. Fuel cells used in this manner would be a significant step in reducing the amount of fuel used by Connecticut residents, reducing overall energy costs and providing significant environmental benefits.

Thank you for the opportunity to express our support for this bill. We would be pleased to provide any information to the Committee and the staff in support of the consideration of this bill.