



December 22, 2011

Lynette Green
California Energy Commission
Dockets Office, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512

DOCKET

11-ALT-01

DATE DEC 22 2011

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Re: Docket No. 11-IEP-1A, Draft 2011 Integrated Energy Policy Report

Comments of UTC Power Corporation

Dear Ms. Green:

UTC Power Corporation, a subsidiary of United Technologies Corporation, submits the following comments on the 2011 Draft Integrated Energy Policy Report, which was written by the California Energy Commission under Senate Bill 1389.

Respectfully submitted,

Lisa Ward
Business Development Specialist

STATE OF CALIFORNIA
THE CALIFORNIA ENERGY COMMISSION

Draft 2011 Integrated Energy Policy Report : UTC Power General Comments

COMMENTS OF UTC POWER CORPORATION

I. Introduction

UTC Power Corporation ("UTCP") is a United Technologies company employing 430 people in the development, design, production and service of fuel cell technology for use in stationary, transportation, and space and defense applications. California is also home to approximately 4,500 UTC employees in 35 locations, including Clipper Windpower, a supplier of utility-scale wind turbines based in Carpinteria, and Pratt & Whitney Rocketdyne of Canoga Park, which is developing concentrating solar power technology. A diverse portfolio of energy solutions is a strength to us, as well as to the State of California as it implements energy efficiency and greenhouse gas (GHG) reduction measures. We appreciate the opportunity to comment on the 2011 Draft Integrated Energy Policy Report.

We offer the following as areas for potential amendments within the selected sections and chapters to expand the focus of California's 2020 Renewable Portfolio Standard (RPS) goal beyond renewable clean energy generation to include discussion of highly efficient natural gas fed technologies that also provide clean power generation. Some of these technology types additionally offer integrated combined heat and cooling capabilities.

Additional comments within specific chapters have been provided as potential amendments in order to include information and/or discussion with regard to fuel cell buses and fuel cell electric cars.

II. Comments

A. Abstract Section

A critical aspect of the defined RPS goals within the state of California is the production of the remaining 66% of power that is not required to be generated by renewable energy sources by 2020. It may be useful to discuss and document the availability of advanced power generation technologies (such as natural gas fed fuel cells with a combined heat and power option) that do not fall into the renewable energy category but still help to reduce carbon emissions, reduce pollutant emissions and improve overall electrical efficiency state wide.

B. Executive Summary Section

Under the “topics covered in this report” section, a bullet point should be added to address additional power generation strategies, including but not limited to distributed generation and combined cooling, heat and power systems.

Under the subsection titled “California’s Continuing Commitment to Energy Efficiency”, discussion should be devoted to combined cooling, heat and power (CCHP) technologies as part of the strategy to meet energy efficient building goals as defined by LEED requirements and the RPS.

Under the subsection titled “California’s Natural Gas Assessment,” a discussion of the important role that natural gas fed distributed generation (fuel cells or turbines) plays in lowering cost for end users and reducing the strain on the grid should be included. This discussion should additionally touch upon the role of natural gas fed CCHP technologies, which operate at very high total system efficiencies. The higher system efficiency is the result of an increase in the amount of energy produced therm of natural gas consumed.

Under the subsection “California’s Electricity Infrastructure Needs”, distributed generation should be discussed as a key strategy for stabilizing the grid and creating a more clean electric infrastructure. When power is generated where it is consumed, the peak electricity demand is reduced, thereby reducing the need for additional central power plant and transmission infrastructure. Additionally, when combined cooling, heat and power are available as a byproduct of distributed generation, the demand for electricity for heating and/or cooling applications is reduced as well while simultaneously increasing the overall efficiency of the power generation source.

Within the electric vehicle paragraph (page 14), discussion of fuel cell electric vehicles and buses should be included.

C. Chapter 1: Renewable Energy

This chapter of the policy report should discuss the policy challenges related to injecting biogas into the natural gas pipeline. Although this topic is covered in more detail within Chapter 12, this particular challenge should be mentioned in the context of California’s overall renewable energy goals.

Within the final paragraph (page 38), fuel cells and gas turbines should be mentioned as a “complimentary technology” when discussing the management of renewable energy integration.

D. Chapter 3: Achieving Energy Savings in California Buildings

Under this chapter, discussion of natural gas (or biogas) fed combined cooling, heat and power should be included as part of the strategy for saving energy in California buildings (commercial and residential). Natural gas fed CCHP technologies can be integrated into new building projects or installed as a retrofit to older buildings in order to efficiently offset heat and cooling energy needs while reducing peak grid power at the end user.

E. Chapter 6: Energy Commission Natural Gas Assessment

Under this chapter, stationary fuel cells should be discussed as being the cleanest and most efficient technology available for converting natural gas to useful energy in a distributed generation configuration. Natural gas fed stationary fuel cells drastically reduce greenhouse gases emissions while operating at a fuel to electricity efficiency of 45-60%. When CCHP is additionally utilized, the total system efficiency (conversion of fuel to thermal plus electric energy) can be up to 90%.

F. Chapter 9: Transportation Energy Forecasts and Analysis

Under this chapter, an in-depth discussion of fleet transit strategies should be added. Advanced technology buses (particularly, fuel cell buses) are operating successfully in revenue service in California and are extremely critical to meeting the California Air Resource Board's (CARB's) Zero Emission Bus (ZEB) regulation.

III. Conclusion

Thank you for the opportunity to comment on the 2011 Draft Integrated Energy Policy Report. We would be pleased to provide you with additional information or clarification as needed.

Respectfully Submitted:

By:  _____

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