



August 7, 2017

Samantha Meserve
Department of Energy Resources
100 Cambridge St., Suite 1020
Boston, MA 02114

Via email: Samantha.Meserve@state.ma.us

Re: **APS Renewable Thermal Regulations (225 CMR 16.00)**

Dear Ms. Meserve:

On behalf of FuelCell Energy, Inc. (FCE), I submit the following comments on the Department of Energy Resources' (DOER) draft regulations to include renewable thermal in the Massachusetts Alternative Portfolio Standard (APS) pursuant to Chapter 251 of the Acts of 2014.

FCE appreciates this opportunity to provide comments on the DOER draft rules (225 CMR 16.00) and associated metering guidelines that will serve to bring the Acts of 2014, Chapter 251 ("the Act") into full performance and implementation. FCE stands ready to assist the Commonwealth in its efforts to further improve its Alternative Portfolio Standard, and we hope you will not hesitate to call on us if we can be helpful in any way. Thank you for your review and consideration.

Very truly yours,

A handwritten signature in black ink, appearing to read "S. Derek Phelps", written over a light yellow rectangular background.

S. Derek Phelps
Director, Market & Project Development

cc: Jennifer Arasimowicz, Esq.

Fuel Cell Energy Inc. (FCE) comments with respect to the Commonwealth of Massachusetts Department of Energy Resources (DOER) Proposed Regulations pursuant to 225 CMR 16.00 and associated metering guidelines

FuelCell Energy, Inc. (FCE), a manufacturer of ultra-clean high efficiency fuel cell power systems with operations in neighboring Connecticut, is pleased to provide these comments with respect to the Commonwealth of Massachusetts' policy decision to incorporate renewable thermal energy into its Alternative Portfolio Standard (APS). Moreover, FCE appreciates this opportunity to provide comments on the DOER draft rules (225 CMR 16.00) and associated metering guidelines that will serve to bring the Acts of 2014, Chapter 251 ("the Act") into full performance and implementation.

FCE employs more than 500 people worldwide in the fields of research, development manufacturing, installation, and servicing of clean energy technology. We currently generate more than 300MW of power across three continents.

GENERAL COMMENTS

1. Resiliency. Stationary, grid-scale fuel cell units offer a variety of resiliency benefits including:

- In the event of a grid outage, an FCE fuel cell will disconnect from the grid and maintain itself ready to reconnect and resume grid connected operation
- An FCE fuel cell is able to independently, or in concert with other distributed energy resources, form an intentional, off-grid island in either seamless or drop-and-pickup transition schemes
- When including the load leveler option (feature), FCE stationary fuel cells will help to avoid load cycles and long recovery rates (often up to 10 hours) in the event of grid outages

2. Societal Benefits. Stationary, grid-scale fuel cell units provide several societal benefits such as:

- Ultra-clean due to their virtual absence of pollutants which supports sustainability goals, facilitates clean air permitting during installation, and benefits public health throughout the lifecycle of the power plant
- Economical because high efficiency reduces fuel costs
- Reliable baseload power provides continuous electricity and heat around-the-clock
- On-site distributed generation improves power reliability and energy security
- Fuel flexible SureSource units can be operated on clean natural gas, renewable biogas or directed biogas
- Combined heat and power (CHP) further drives economics and efficiency — as high as 90 percent, depending on the application
- Avoid investment and maintenance in costly, difficult-to-site transmission & distribution (T&D) infrastructure
- Versatile Sure Source power plants convert biogas waste disposal problems into ultra-clean power generation solutions for operations that generate biogas
- High efficiency minimizes the carbon footprint of SureSource plants operating on natural gas; SureSource plants are generally classified as carbon neutral by regulatory bodies when operating on biogas due to its renewable nature
- Often generate significant tax revenue for their host municipalities

SPECIFIC COMMENTS

1. **Attribute Multiplier.** {225 CMR 16.05(1) (a)7.c}

FCE agrees with and fully supports the Department's concept of an Attribute Multiplier {225 CMR 16.05(1) (a)7.c} of one and one-half APS Alternative Energy Attribute for each MWh of electricity and/or 3,412,000 British thermal units of net Useful Thermal Energy for each MWh of electricity.

2. **Efficiency Standard.** {225 CMR 16.05(1) (a)7.b}

FCE works with the National Fuel Cell Research Center (NFCRC), and supports the comments being submitted by the NFCRC to the Department of Energy Resources (DOER) on the changes to the Massachusetts Alternative Portfolio Standard (APS). In lieu of the additional 60-percent overall efficiency standard proposed in the new APS draft {225 CMR 16.05(1) (a)7.b}, FCE supports the recommendation that the DOER use the defined emissions standard and eliminate the proposed efficiency standard. FCE supports this recommendation given that the proposed standard calls for different provisions for fuel cell technology in contrast to other technologies and otherwise detracts from a focus on the more critical standard of emissions.

Furthermore, as also suggested by the National Fuel Cell Research Center, FCE recommends that the DOER use metrics such as capacity factor, the reduction and elimination of greenhouse gases, and criteria air pollutants (nitrogen dioxide, sulfur dioxide, and particulate matter) to more appropriately map the contributions of fuel cell systems to APS goals.

FCE thanks DOER for the opportunity to comment on these draft regulatory changes to the Commonwealth's Alternative Energy Portfolio Standard and looks forward to working with you in the future.

Very truly yours,

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S. Derek Phelps
Director, Market & Project Development