

**STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

**Proceeding on Motion of the Commission
Regarding a Retail Renewable Portfolio
Standard**

Case 03 -E- 0188

INITIAL COMMENTS OF PLUG POWER, INC.

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Introduction

Plug Power, Inc. is a designer, developer and manufacturer of on-site energy generation systems utilizing proton exchange membrane fuel cells for stationary applications. Plug Power is based in Latham, New York. Plug Power's fuel cell systems for small stationary commercial applications have been delivered to select customers through a joint venture with the General Electric Company, and fuel cell systems for residential and small stationary commercial applications are expected to be sold globally through a joint venture with the General Electric Company, and through DTE Energy Technologies.

Plug Power employs approximately 300 people in New York State. Since 1999, Plug Power has paid over \$50,000,000 to suppliers located within New York, and Plug Power employees have paid over \$6,000,000 in State income taxes.

Plug Power strongly supports the Commission's initiative to establish a Renewable Portfolio Standard (RPS). In addition to the Comments of the Renewable Energy Technology and Environmental Coalition, of which Plug Power is a signatory, Plug Power offers the following comments:

Establishing an RPS will help to promote the development of a renewable energy industry within the state.

Location decisions made by manufacturers and research firms are strongly influenced by regulatory climate. NYSERDA has had success in causing companies involved with new energy products to locate and grow in New York. The State can now build on that success by establishing an RPS. Virtually every state has an energy policy that purports to favor clean and renewable resources. States that demonstrate a commitment to renewable resources by putting policies into action are the states that are favored by growing companies involved with new energy technologies. In that respect, the establishment of an RPS will have an economic multiplier effect.

Fuel cells should be included in the definition of renewable resources.

A proton exchange membrane (PEM) fuel cell combines hydrogen and oxygen to produce electricity, heat, and water. Because there is no combustion involved, fuel cells are free or virtually free of most of the pollutants typically associated with combustion, such as carbon monoxide, nitrogen oxides, and particulates.

The source of the hydrogen is immaterial to the operation of the fuel cell. In the absence of an infrastructure for delivery of pure hydrogen, fuel cells must be built to derive hydrogen from available sources such as natural gas. Fuel cells also have the potential to use bio-gas as a source of hydrogen. At present, the need to reform gas into hydrogen has a substantial impact on the cost and durability of a fuel cell. In the long term, as fuel cell technology develops in parallel with new methods for producing, storing and distributing hydrogen, the result will be a completely clean and renewable source of electricity and heat.

Recognizing that fuel cells represent a bridge toward a hydrogen-driven energy system, Governor Pataki in his Executive Order No. 111 included fuel cells within the list of “renewable sources.” Other states, including Connecticut, New Jersey, Maine, and New Mexico, have included fuel cells as eligible technologies within their Renewable Portfolio Standard requirements.

The RPS should include provisions that encourage the participation of emerging technologies.

The renewable sources to be included in the RPS are not all at comparable stages of commercial development. Some of these technologies, including photovoltaics and fuel cells, continue to evolve technologically as they develop toward commercial competitiveness. They have the potential to provide substantial environmental and economic benefits. The RPS should include technology targets and distributed resource targets in order to allow these emerging technologies a reasonable opportunity to participate.

While fuel cells remain more costly on a per-kwh basis than wind, hydro, and other more mature technologies, costs of fuel cells have been declining rapidly. FIGURES. Recognizing that this declining trend must continue in order for fuel cells to become commercially viable on a large scale, it may be advisable for an RPS to contain a phased-in goal for the amount of fuel cell energy included. In this manner, the overall costs of including fuel cells within the RPS will be reduced.

The RPS should include distributed generation owned by customers as well as distributed generation owned by energy providers.

If the RPS were only applicable to retail providers, customer-owned DG would not be eligible and the State would miss an opportunity to promote renewable resources that are located on customers’ premises. In many cases DG will be sited in the most efficient

location. Distributed generation can alleviate load pocket situations and can reduce line losses as well as the need for expensive upgrades of transmission and distribution facilities.

The method for including DG in the RPS will depend on larger issues involving the manner in which the RPS will be implemented. The preferred method will be to establish a separate target for distributed generation. It is very important to note that in many cases it will be inefficient for smaller DG owners to participate directly in credit markets. Small DG owners should have an option whether to participate in credit markets or to be automatically compensated by their distribution utilities. It is also important that distribution utilities be allowed to own and operate DG facilities for purposes of achieving the goals of the RPS.

Respectfully submitted,

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