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On behalf of Bloom Energy, I welcome the opportunity to provide comments on the Draft Scope for the 2013 New York State Energy Plan (2013 SEP). Bloom supports the Draft Scope for the 2013 SEP and my comments are meant to provide information for additional consideration by the Planning Board as it sets the final scope of the 2013 SEP. As discussed below, we believe that fuel cells, especially the most electrically efficient solid oxide fuel cells (SOFC) will be an important contributor to the goals and objectives likely to be finalized in the 2013 SEP, if the advantages of the technology are recognized in the scope of the plan. While the Draft Scope does not explicitly mention fuel cells of any type, clearly the technology will help meet the plans objectives for energy efficiency, renewable resources, fuel diversity, economic development, clean energy innovation and develop and climate change and environmental impacts. Bloom Energy is a manufacturer of solid oxide fuel cells utilizing low cost ceramic materials to produce baseload distributed electricity with a high efficiency. The individual fuel cells are stacked to form Energy Servers, providing anywhere from 100kW to megawatts of power, utilizing either renewable or fossil fuels, and are also capable of being reversed for energy storage. Bloom believes that the Draft Scope should explicitly include consideration of fuel cells, including the most electrically efficient all-electric SOFCs, specifically in the following sections: I. Overview of New Yorks Energy System Bloom believes that fuel cells, including SOFCs, should be included in the supply options studied for meeting future energy needs. Electrically efficient fuel cells used for baseload generation, due to their reliability, fuel flexibility, and small environmental footprint, will become an increasingly viable choice for end-use customers and electric distribution utilities seeking to lower costs, to manage supply options, to minimize emissions and to enhance system reliability. Therefore, fuel cells should be carefully considered in any assessment of the states energy systems. II. Meeting the States Energy Needs and Goals with Energy Efficiency and Renewable Resources The Draft Scope includes assessment of the impacts and effectiveness of existing energy efficiency initiatives and an assessment of potential future increased efficiency. Fuel cells are a highly efficient generation technology which increase overall electric system efficiency. For example, Blooms SOFC has an electrical efficiency of nearly twice the rate of some legacy technologies. It is also deployed quickly and easily on site, so customers avoid paying for transmission and distribution system line losses (save capacity on the T&D system) and can get power quickly, where they need it. III. Renewable Resources Fuel cells, because of their high efficiency, low emissions and low carbon footprint are considered renewable resources in New York State for the purpose of the customer sited-tier (CST) of the Renewable Portfolio Standard and LIPAs renewable program. Therefore, fuel cells deserve

continued consideration as a cost-effective means for achieving the states renewable goals, and should be included in any assessment of the costs and benefits, technology, innovation, the balancing of intermittency of other renewable resources and other features of clean energy resources. IV. Meeting the States Energy Needs and Goals by Fuel Type Fuel cells can utilize a variety of fuels to produce electricity and/or heat. The Draft Scope should consider the potential for widespread adoption of fuel cells as the technology continues to improve in efficiency, durability, size and economics. Fuel cells will play a growing role in the electricity, end-use energy storage and transportation sectors. For example, Blooms SOFC technology not only efficiently produces electricity, but will, in the future, also be able to produce hydrogen from electricity for energy storage or transportation applications. In conclusion, Bloom Energy thanks the State Energy Plan Coordinating Working Group for the opportunity to provide input on the scope of the 2013 SEP.