

MEMORANDUM

TO: NMIX STAKEHOLDERS

FROM: MURRAY E. BEVAN, ESQ.

RE: REQUEST FOR MODIFICATION OF NET METERING RULES TO QUALIFY FUEL CELLS POWERED BY NATURAL GAS FOR NET METERING

DATE: JULY 8, 2011

Bloom Energy (“Bloom”) is asking the Net Metering and Interconnection Committee (“NMIX Committee”) of the Board of Public Utilities (“BPU”) to modify the rules for Net Metering of Class I Renewable Energy Systems to include fuel cells powered by natural gas. As the rules are currently written, only fuel cells powered by renewable fuels are eligible for net metering.¹ Expanding the eligibility requirements to include new fuel cell technologies fired by natural gas, as has been the case in a number of states, including Maryland, Delaware, New York, Connecticut and California, will promote greater customer participation in the BPU’s net metering program, while maintaining the BPU’s goal of promoting highly efficient, reliable and environmentally-friendly distributed generation projects as part of New Jersey’s energy portfolio mix.

The controlling statute on renewable energy and net metering, the Electric Discount and Energy Competition Act, N.J.S.A. 48:3-49 et seq., defines “Class I Renewable Energy” broadly to include fuel cells powered by any source, including natural gas. It was the the BPU, in rules subsequently promulgated to implement the statute, which limited the definition of “Class I

¹ As provided in N.J.A.C. 14:8-4.1, the Scope of the Net Metering Requirements apply to “customers who generate class I renewable energy, as defined at N.J.A.C. 14:8-1.2.” N.J.A.C. 14:8-1.2 defines “Class I renewable energy” as “energy produced from solar technologies, photovoltaic technologies, wind energy, *fuel cells powered by renewable fuels*, geothermal technologies, wave or tidal action, and/or methane gas from landfills, or a biomass facility, provided that the biomass is cultivated and harvested in a sustainable manner” (emphasis added). Since the rules for net metering are up for re-adoption, but not the definitions related to all of the Chapter 8 Renewable Energy and Energy Efficiency rules at N.J.A.C. 14:8-1.2, we believe that N.J.A.C. 14:8-4.1 should be modified to apply to “customers who generate class I renewable energy, including energy produced from solar technologies, photovoltaic technologies, wind energy, *fuel cells*, geothermal technologies, wave or tidal action, and/or methane gas from landfills, or a biomass facility, provided that the biomass is cultivated and harvested in a sustainable manner” (emphasis added).

Renewable Energy” to only include fuel cells powered by renewable fuels. Although the BPU’s intent was to promote green technology, the effect has actually been to exclude green technology, like solid oxide fuel cells (“SOFCs”), from net metering. SOFCs powered by natural gas are environmentally friendly because they convert air and natural gas into electricity via a clean electrochemical process, rather than dirty combustion. As a result, they emit approximately 67% less CO₂ than a typical coal-fired power plant and virtually no SO_x, NO_x, or other harmful smog forming particulate emissions.

In addition to being a green technology, fuel cells powered by natural gas further the policies of the BPU and the Energy Master Plan of promoting distributed generation. Generating power on-site, rather than centrally, eliminates the cost, complexity, interdependencies, and inefficiencies associated with electrical transmission and distribution.

Moreover, SOFC systems powered by natural gas also reduce inefficiencies because they are designed around a customer’s baseload energy requirement and will seldom generate electricity in excess of that baseload, unlike some other intermittent technologies that qualify for net metering like solar and wind systems. Nevertheless, current customer economics related to acquiring and operating an SOFC system require that fuel cells do qualify for net metering in those limited instances when they do produce more electricity than they consume.

In conclusion, modifying the net metering rules to include fuel cell technology systems powered by natural gas will incent more New Jersey customers to install clean electrical generation, while preserving the BPU’s goal of promoting efficient, reliable distributed generation systems. Therefore, instead of simply referring to N.J.A.C. 14:8-1.2’s definition of “Class I Renewable Energy,” we recommend that N.J.A.C. 14:8-4.1 be modified to apply to “customers who generate class I renewable energy, including energy produced from solar technologies, photovoltaic technologies, wind energy, *fuel cells*, geothermal technologies, wave or tidal action, and/or methane gas from landfills, or a biomass facility, provided that the biomass is cultivated and harvested in a sustainable manner” (emphasis added).