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Energy Plan Comments
NYSERDA
17 Columbia Circle
Albany, NY 12203-6339

Re: New York State Energy Planning Board Draft Scope of 2009 New York State Energy Plan
Written Comments Submitted by Innovative Energy Systems, Inc.

Dear New York State Energy Planning Board Members:

Thank you very much for allowing Innovative Energy Systems (IES), the opportunity to provide comment on your Scope Document for the next New York State Energy Plan. We are also very appreciative of the opportunity we had on June 30th to speak to some of the Board members directly about landfill gas to energy technology and the issues we face getting more of these projects on-line and supplying power to New York. We believe this kind of dialogue is imperative if we are going to be able to meet our energy needs quickly and responsibly for many years to come.

IES is a New York State company that develops, owns and operates landfill gas power plants. As I'm sure some of you may know already, a simple explanation of what we do is we take landfill gas (methane) produced by landfills and use it to run a power plant.

We have commented below on some of the most critical areas of concern for alternative clean producers like IES, why more landfill gas to energy projects are needed and an excellent choice for meeting our future energy needs. We have used the Issue Brief categories to organize out points as a matter of convenience to the Board, however we do believe the information does crossover to many areas of the Draft Scope document.

Meeting Future Energy Needs: Barriers to Market for Renewable Technologies

It is our belief that in order for NYS to successfully meet its future energy needs in conjunction with reducing greenhouse gas emissions the state must help remove the excessive requirements for interconnection to help make alternative energy projects economical and therefore spurring growth.

The lack of uniform interconnection standards significantly complicates the interconnection process and historically has deterred the deployment of renewables. On the other hand, well-designed uniform interconnection standards facilitate the deployment of renewables by specifying the technical and institutional requirements and terms by which utilities and renewable generator system owners must abide. For example, New Jersey's standards for interconnection and net metering,

widely regarded to be among the best in the country, have shown that when barriers are removed and adequate financial incentives are available, renewable energy projects flourish. A survey by the National Renewable Energy Laboratory found that virtually all distributed generation projects meet some sort of resistance from utilities when they try to interconnect with the grid. These onerous and/or expensive interconnection requirements, including some that may be unnecessary, comprise a key barrier to increased use of renewable energy.

Interconnection costs in the State of New York are causing renewable energy developers to cancel or abandon projects. The interconnection cost for energy developers is more than the cost of the renewable energy project itself. Fifteen years ago, interconnection for a landfill gas to energy project cost around $10,000 whereas today it can cost anywhere from $4-6 Million dollars. Projects must go through three studies during the interconnect process; the facilities study agreement, the feasibility study, and the system impact study. The full interconnect study cost is borne by the developer. The cost of each study varies from $30,000-$100,000. The overall cost for interconnection that is imposed on the facility will depend on the interconnection requirements. In some cases, the investment in additional equipment that is required to sell excess power may not be justified for some facilities.

Energy Infrastructure Needs and Regional Energy Issues: Congestion

IES supports implementing more in-state renewable energy projects to relieve local transmission congestion by siting these projects closer to or in the urban areas most effected by the congestion without adding to the local pollution and greenhouse gas emissions. We contend that some of the current efforts to relieve congestion are absolutely needed however they will ultimately not be enough to satisfy the growing demand while keeping power affordable and clean. In addition the date of completion of some of the projects continues to be pushed out and it is not clear when they will be on-line.

Transmission constraints exist that significantly limit the ability to efficiently move electricity from areas of the state where is it produced to those areas that need it. Transmission constraints have been limiting electricity flows on the PJM (Pennsylvania-New Jersey-Maryland Interconnection) and the NYISO (New York State Independent Operator), causing persistent congestion that adversely affects consumers in downstream urban load centers, including those in the metropolitan New York City area, New Jersey, eastern Pennsylvania, Delaware, eastern Maryland, the District of Columbia, and northern Virginia. As a result of transmission constraints, high-production-cost generators in eastern PJM and southeastern New York State are used extensively, while generating capacity at lower-production-cost generators in western PJM and western and northern New York State is available but inaccessible. In terms of the additional electricity production costs they cause, the constraints in PJM and NYISO are among the worst in the entire Eastern Interconnection. PJM, for example, reported total congestion costs within its footprint of $2.09 billion for 2005.

Transmission constraints in the State of New York limit the supply flowing into the southeastern populated regions of the state, particularly into New York City and Long Island, resulting in high LMP (Local Marginal Pricing) prices in those areas. Most transmission projects in the state are focused on relieving these constraints.

The Linden Variable Frequency Transformer (VFT) project will provide an additional 300

megawatts of capacity over an existing cable from PJM into the New York City at Goethals. Equipment has been procured, and construction started, but the in-service date has been postponed to 2009. Other proposed projects to supply capacity located in PJM into New York City are the Cross Hudson AC generator lead (500 MW) and Hudson Transmission Project DC/AC line (660 MW). Both projects are aiming for 2011 in-service dates.

Two other larger projects have been proposed to bring power from upstate New York and New Brunswick to New York City. The 1200 MW Neptune DC line from New Brunswick is on hold with no activity occurring at this time and no planned in-service date. The 1200 MW DC New York Regional Interconnect (NYRI) is working towards a 2010 in-service date, but substantial opposition has developed so we do not expect it to be in service before 2012, and it is possible that it will not be built. The NYRI would not bring power into the City, but would terminate in Zone G; thus it would have no impact on the import capability to New York City.

Several projects are planned or underway to relieve local congestion, including Rochester Transmission, Ithaca Transmission, and Luther Forest (Saratoga) projects. While these projects are vital to serving the load in their immediate areas, they have no impact on the cross-state constraints.

Environmental Impact and Regulation of Energy Systems

The United States Environmental Protection Agency estimates that a LFG project will capture roughly 60-90% of the methane emitted from the landfill, depending on system design and effectiveness. The captured methane is destroyed (converted to water and the much less potent carbon dioxide) when the gas is burned to produce electricity. Utilizing methane to produce electricity displaces fossil fuels and avoids carbon dioxide that otherwise would have been released. According to the United States Environmental Protection Agency a typical three (3) megawatt project operating in 2008 will be equal to one of the following: reducing annual greenhouse gas emissions from 23,600 passenger vehicles, offsetting the use of 670 railroad cars full of coal, or offsetting the carbon dioxide emissions from 14.6 million gallons of gasoline.

IES suggests that the State focuses on renewable energy sources that can be readily utilized such as landfill gas to energy. Landfill gas to energy is a major contributor to the reduction of greenhouse gases. Landfill gas to energy projects offset the use of fossil fuels and leads to the destruction of methane, a greenhouse gas over 21 times more potent than carbon dioxide as a greenhouse gas. Municipal solid waste landfills are the second largest human-generated source of methane emissions in the United States, releasing an estimated 30 MMTCE to the atmosphere in 2006 alone. Because landfills generate such a significant amount of methane, it makes sense to utilize the gas for the beneficial purpose of energy generation rather than emitting it to the atmosphere. It is also important to understand methane has a short, 10-year, atmospheric life. Because methane is both potent and short-lived, reducing methane emissions from municipal solid waste landfills is one of the best ways to achieve a near-term beneficial impact in mitigating global climate change. In addition a very important fact is that Landfill gas to energy is the only renewable source of power that actually removes pollution from the air.

We believe that landfill as to energy projects should be recognized as a clean and renewable resource and that incentive for these projects should be made available because these projects result

in the reduction in greenhouse gas emissions and offset the use of fossil fuels.

Landfill gases to energy projects are one of the few clean and renewable energy resources that are reliable. They are not dependent on outside environmental factors such as wind and sun and they have a lower cost compared to wind or solar power projects. Landfill gas to energy projects consistently run 24 hours a day 7 days a week and have an average efficiency of 98%. Because these plants run at all times throughout the year, except in the case of repairs or scheduled maintenance, they are considered a base load power plant. Few other sources of renewable energy have this advantage because of the intermittency of the wind and solar power.

Landfill gases to energy projects have a nearly identical variability to coal-fired power stations and so they are base-load. They can be integrated without any additional back-up, as can efficient energy use. Because landfill gas can be used as a source of base load energy it offsets the use of coal, which is often used because it has a low fuel cost. However, coal-fired plants can take days to heat up to operating temperatures and are run more continuously than peak power plants where as landfill gas to energy plants are able to shutdown and startup in hours. In addition, landfill gas to energy projects have a greater efficiency than traditional coal power plants. In the years 2000-2004, coal plants were scheduled for maintenance 6.5% of the year and unscheduled maintenance accounted for another 6% of the year. On average the efficiency was 87.5% at any given coal-fired plant.

The New York State Energy Plan is a tremendous undertaking and I commend all of those tasked with gathering the relevant information necessary for its completion. Again we are very thankful for the opportunity to participate in helping with that task. We are available at anytime to help further educate about landfill gas to energy, its benefits and reliability. I very much look forward to continuing our discussions concerning the future of New York States energy needs.

Very Truly Yours,

Peter H. Zeliff
CEO