

6.0 EFFECTS ON THE USE AND CONSERVATION OF ENERGY

The SLW Project will have significant, long-term positive impacts on the use and conservation of energy and natural resources particularly as a contributor to meeting state, federal and international energy policies and initiatives. When the Project is in operation, it will deliver approximately 79.5 MW of clean renewable energy at the point of interconnection to the electricity grid. The Project will accomplish this without having to produce, transport, store, or burn any fossil fuel in the process. Production of this clean, renewable energy will not create air or water pollution or add to greenhouse gases in the atmosphere. This is enough electricity for over 26,500 homes in New York State (on an average annual basis).

SEQRA mandates that new energy generating projects demonstrate that they satisfy energy generating capacity needs in a manner reasonably consistent with the most recent NY State Energy Plan. The 2002 NY State Energy Plan and Final Environmental Impact Statement (NYSEP) (also see the March 2006 New York State Energy Plan Memorandum) incorporates energy policies designed to place New York at the forefront among states providing fairly priced, clean, and efficient energy resources. The SLW Project is consistent with the following major policy objectives of the NYSEP: 1) Enhanced energy and transportation infrastructure security; 2) Stimulating sustainable economic growth, technological innovation, and job growth in the New York energy sector; 3) Increasing energy diversity, including renewable based energy; 4) Promoting the achievement of a cleaner and healthier environment; and, 5) Ensuring equity, fairness, and consumer protections.

The SLW Project will add to and diversify the state's sources of power generation. Greater use of renewable energy would displace use of other less desirable sources of electricity generation, such as fossil fuels that pollute the air and water and contribute to global warming. New York State wind generation offsets the equivalent of burning 3.4 million cubic feet of natural gas per day. Expanding wind energy generation facilities through projects like the SLW Project will increase natural gas conservation and modulate price spikes typically associated with fossil fuel supply. Furthermore, wind energy projects are considered less vulnerable to terrorist activity than fossil fuel- or nuclear-fired electric generating facilities because of the physical size and distribution of turbines across a project landscape. Also, if a wind energy project is damaged, there are no secondary threats to the public from those typical of nuclear (fallout) or conventional power plants (explosions, release of toxic materials).

The New York State Energy Research Development Authority (NYSERDA) commissioned a study entitled *The Effects of Integrating Wind Power on Transmission System Planning, Reliability and Operations* (February 2005, the "NYSERDA Report"). The NYSEERDA Report

concludes, based on load and wind profiles from 2001 and 2002, that 65 percent of the electricity displaced by wind generation would come from natural gas, 15 percent from coal, 10 percent from oil and 10 percent from imports.

The NYSERDA Report also found that 3,000 MW of wind energy would result in total annual New York wholesale electricity market variable cost reductions of over \$400 million per year. Of this total, the SLW Project will be responsible for almost \$15-20 million in benefits to energy consumers each year. In addition, the NYSERDA Report found that it is not necessary to start up additional traditional generation to back up wind generation.

The New York Public Service Commission (NYSPSC) issued an Order approving a Retail RPS Policy on September 24, 2004. The Order presented the PSC's renewable energy policy. The Order identified targets and procedures to achieve an increase in renewable energy used in the State to at least 25 percent by the year 2013. The Project will facilitate compliance with this PSC order by providing over 79 MW of energy generation capacity. The Project adds to the diversification of the state's sources of power generation and addresses increasing power demand through the use of a clean and renewable natural resource (wind). This Project will displace generation from some of the older and dirtier energy generation plants found in New York State.

The SLW Project also supports compliance with Executive Order 111, issued by Governor George Pataki on June 10, 2001. The Executive Order requires all New York State agencies to purchase 10 percent of their electricity from clean, renewable sources. Wind power projects such as the SLW Project offset energy from other energy generating polluting sources. Electric generation is the leading industrial source of air emissions in New York State. Wind energy generating plants offset or decrease the amount of fuel being burned at other energy generating plants such as coal or natural gas. The NYSERDA study found that wind energy production in New York State displaces 4.1 million tons of carbon dioxide, 9,900 tons of sulfur dioxide, and 3,800 tons of nitrogen oxides that would be emitted by other energy generating plants. Wind energy does not require mining, drilling or transportation of fuel, nor does it generate radioactive or other hazardous wastes. To generate the same amount of electricity as a single 1.5 MW wind turbine for a lifespan of 20 years would require burning 80,000 pounds of coal or 126,000 barrels of oil.

At a national level, the U.S. Department of Energy Draft Strategic Energy Plan (September 2006) promotes America's energy security through reliable, clean, and affordable energy as its primary strategic theme. This Plan prioritizes reducing the growing national demand for fossil

fuel based energy sources, many of which are imported from foreign countries, and promotes the development of alternative energy as a key means to reverse this long-term trend.

At the international level, the Intergovernmental Panel on Climate Change (February, 2007) summarized the physical science basis for documented climate change. Based on broadening scientific evidence, this report concludes that “warming of the climate system is unequivocal” and that man-made greenhouse gases caused by fossil fuel based energy sources are a significant contributor to this increasing warming trend. In addition, such findings have prompted the United Nations Framework Convention on Climate Change and the Kyoto Protocol to establish global emission reduction targets. Increasing the use of pollution-free renewable energy, such as wind energy, to replace existing sources that contribute polluting greenhouse gases is integral to achieving these established pollution reduction goals, thereby reducing global warming

In today’s volatile energy market with an ever-increasing public demand for cleaner energy production, wind energy is a good hedge against pollution and inflation of electricity prices. Upon construction completion, wind energy provides a known cost of energy production that is not susceptible to changes in fossil fuel availability or transportation costs. Wind power reduces the demand for, and therefore the price of, natural gas and oil.