

A. INTRODUCTION

The *City Environmental Quality Review (CEQR) Technical Manual* recommends a detailed assessment of energy impacts only for actions that could significantly affect the transmission or generation of energy or that generate substantial indirect consumption of energy (such as a new roadway). Because the Proposed Action would not exceed these CEQR thresholds, this chapter simply discloses the Proposed Action’s anticipated energy consumption and concludes that the Proposed Action would not result in significant adverse impacts on energy supply or demand.

B. METHODOLOGY

Energy demand for the project has been analyzed according to the 2001 *CEQR Technical Manual*. This chapter will present data on the existing energy distribution system and estimated energy usage for existing conditions; determine future energy demands with the Proposed Action for the two analysis years using energy usage rates for typical land uses provided in the *CEQR Technical Manual* and other available literature sources; and, assess the effects of this incremental energy demand on the local distribution system and regional energy supplies.

Rates used to calculate energy demand were taken from the *CEQR Technical Manual*, and are as follows:

**Table 15-1
Energy Demand Rates**

| | Use | Rate/Per |
|---|--------------------|-----------------------|
| Energy Demand | Residential | 145,500 BTUs/sf/year |
| | Retail | 55,800 BTUs/SF/year |
| | Office | 77,900 BTUs/sf/year |
| | Schools | 65,300 BTU's/sf/year* |
| | Community Facility | 65,300 BTUs/sf/year |
| <p>Notes: * Energy generation information was not available for schools. It was conservatively assumed that it was equal to that of community facilities.</p> <p>Sources: <i>CEQR Technical Manual</i> (2001)</p> | | |

C. EXISTING CONDITIONS

Consolidated Edison (Con Edison), along with other smaller transmission companies, delivers electricity to New York City and almost all of Westchester County. The electricity is generated by a number of independent power companies. Electrical energy in New York City is supplied from a variety of sources that originate both within and outside the city. These sources include non-renewable sources such as oil, natural gas, and coal fuel; and, renewable sources such as

hydroelectricity and, to a much lesser extent, biomass fuels, solar energy, and wind power. New York City's electrical demands are met by a combination of sources, including electricity generated within New York City, at locations across the Northeast, and from places as far away as Canada. For the more distant sources, once electrical energy is generated as high voltage electrical power, a transmission grid conveys this power to New York City for distribution. An interconnected high voltage power grid extending across New York State and the Northeast allows for power to be imported from other regions as demand requires. An estimated total of 50 billion kilowatt hours (KWH) or 170.75 trillion British Thermal Units (BTUs) of electricity are consumed in the city annually.

KeySpan Energy provides natural gas service to more than 2.6 million customers in Brooklyn, Queens, Staten Island, Nassau and Suffolk Counties, Massachusetts, and New Hampshire. The company operates more than 21,000 miles of gas mains in its service territory, and also owns and operates electrical generating plants on Long Island and within New York City, with a total generating capacity of more than 6,600 megawatts.¹

D. 2011 THE FUTURE WITHOUT THE PROPOSED ACTION

By 2011, absent approval of the Proposed Action, Phases I and II of Nehemiah housing will be completed, adding additional residents to the Project Site. The study area will also see an increase in retail use, with the construction of a shopping center at the intersection of Flatlands and Fountain Avenues, and three residential developments will be completed. These projects will generate additional energy demand in the study area.

In January 2002, the New York State Energy Planning Board released the *New York State Energy Plan and Final Environmental Impact Statement*, which set forth the State's energy policies and objectives for the next five years. The plan promotes competition in the energy industries, secures reliable and reasonably priced energy supplies, reduces environmental impacts associated with energy generation and consumption, reduces vehicular congestion, and preserves energy-related public benefits programs. These two documents continue the large policies developed in the 1998 Energy Plan that is currently in operation. Therefore, no large-scale changes in energy generation and consumption policies are foreseen by 2011.

A number of power plant and transmission projects are planned or currently underway. While not all of the projects will likely be constructed, it is anticipated that sufficient additional generating capacity will be built to meet New York City's projected future demand for energy.²

Absent the Proposed Action, the Project Site is expected to see an increase in energy demand of 55 billion BTUs per year. When other developments surrounding the Project Site are considered, the cumulative increase in energy demand will be 109 billion BTUs per year.

¹ Keyspan Energy website: http://www.keyspanenergy.com/corpinfo/about/facts_all.jsp (April 10, 2007)

² Sources include: *Proposed Sale of Con Edison First Avenue Properties to FSM East River Associates, LLC. Final Generic EIS*, Case No. 01-E-0377, January 2004, Chapter 11: Infrastructure, Solid Waste, and Energy; *Brooklyn Bridge Park Draft EIS*, July 2005, Chapter 13: Infrastructure; *Downtown Brooklyn Development Final EIS*, April 2004, Chapter 13: Energy.

E. 2011 PROBABLE IMPACTS OF THE PROPOSED ACTION

All buildings constructed as part of the Proposed Action would comply with the New York State Energy Conservation Construction Code Act. This code governs performance requirements of heating, ventilation, and air conditioning systems, as well as the exterior building envelope. The code, promulgated on January 1, 1979, pursuant to Article 11 of the Energy Law of the State of New York, requires that new and recycled buildings (both public and private) be designed to ensure adequate thermal resistance to heat loss and infiltration. In addition, it provides requirements for the design and selection of mechanical, electrical, and illumination systems. In compliance with the code, the Proposed Action would incorporate all required energy conservation measures, including meeting the code's requirements relating to energy efficiency and combined thermal transmittance.

Energy demand for buildings consists of loads for heating, ventilation, air conditioning, lighting, and auxiliary equipment, such as elevators and pumps. The annual energy consumption is calculated applying factors from the Association of Energy Engineers, 1997. It is conservatively estimated that the proposed development program would generate a demand of approximately 190 billion BTUs per year by 2011. Coupled with energy demand from projected developments, it is expected that the increase in demand for the study area would be 243 billion BTUs per year by 2011. This energy demand would be a small portion of the demand in Brooklyn and New York City and would not constitute an adverse impact.

F. 2013 THE FUTURE WITHOUT THE PROPOSED ACTION

There are no projects planned which will expand electricity service in the project study area by 2013, but absent the Proposed Action, by 2013 energy demand will increase by 315 billion BTUs/year compared to the 2011 Future without the Proposed Action condition.

G. 2013 PROBABLE IMPACTS OF THE PROPOSED ACTION

It is conservatively estimated that the proposed development program would generate a demand of approximately 405 billion BTUs per year by 2013. Coupled with energy demand from projected developments, it is expected that the increase in demand for the study area would be 459 billion BTUs per year by 2013. This energy demand would be a small portion of the demand in Brooklyn and New York City and would not constitute an adverse impact. *