Chapter 10: Energy

A. INTRODUCTION

This chapter describes the potential effects of the proposed development on energy consumption. The *City Environmental Quality Review (CEQR) Technical Manual* recommends performing a detailed assessment of energy impacts 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). All new structures requiring heating and cooling must conform to the New York State Energy Conservation Code, which reflects state and City energy policy. Therefore, an action that would result in new construction or substantial renovation of buildings, such as the proposed project, would not create adverse impacts, and therefore would not require a detailed energy assessment. Because the proposed project would not trigger any of the *CEQR Technical Manual* thresholds, this chapter simply discloses the proposed development's energy consumption.

As detailed below, because the proposed actions would not significantly affect the transmission or generation of energy there would be no potential for significant adverse impacts on energy.

PRINCIPAL CONCLUSIONS

Though the proposed project would increase demands on electricity and gas, the increases in demand would be insignificant relative to the capacity of these systems and the current levels of service within New York City. Electricity and gas would be supplied by Con Edison or another power company, which would be used to provide heating, cooling, and lighting to the proposed development. Con Edison could supply this energy without disruption to the main distribution system. Thus, there would not be any potential for significant adverse energy impacts from the proposed actions.

B. EXISTING CONDITIONS

Con Edison delivers electricity to all of New York City (except the Rockaway area in Queens) and almost all of Westchester County. The electricity is generated by Con Edison, as well as a number of independent power companies. In 2006, annual electricity usage totaled approximately 57 billion kilowatt-hours (KWH), or 196 trillion British Thermal Units (BTUs), in Con Edison's delivery area. In addition, Con Edison supplied approximately 108 trillion BTUs of natural gas and approximately 23 billion pounds of steam, which is equivalent to approximately 23 trillion BTUs. Overall, approximately 327 trillion BTUs of energy are consumed within Con Edison's New York City and Westchester County service area.

In 2001, New York State began implementing measures to address the increasing electrical power capacity needs of the New York City region. The Governor's Executive Order No. 111 (EO 111) was introduced in June 2001, directing state agencies, state authorities, and other affected entities to address energy efficiency, renewable energy, green building practices, and

alternate fuel vehicles. EO 111 identified the New York State Energy Research and Development Authority (NYSERDA) as the organization responsible for coordinating and assisting agencies and other affected entities with their responsibilities.

The Brooklyn Bay Center site ("project site") is currently occupied by a bus storage company and contains two buildings totaling approximately 10,400 square feet (sf). As a result, the project site currently has a low level of energy usage. Based on the rates presented in Table 3N-1 "Energy Use Index Averages" of the *CEQR Technical Manual*, the project site is estimated to have an energy demand of approximately 2,250 million BTUs.[1]

C. THE FUTURE WITHOUT THE PROPOSED PROJECT

In the future without the proposed project, the existing bus storage operation will remain on the project site. Therefore, the energy demand of the project site will remain the same as in existing conditions. In addition, future planning initiatives will affect energy generation and usage in the future without the proposed project, as described below.

FUTURE ENERGY-RELATED INITIATIVES

The demand for electricity is expected to increase by approximately 1.5 percent a year in New York City. To meet that demand, a number of power plant construction projects are planned or currently under way. In addition, a number of electric transmission projects are proposed to bring electric power from outside New York City into the City. While not all of the projects will likely be constructed, sufficient additional generating capacity is expected to be built to meet New York City's projected future energy demands.

In June 2002, New York State Energy Planning Board released the *New York State Energy Plan and Environmental Impact Statement*, which was updated in March 2006. This plan and its updates establish New York State energy policies and objectives. The plan's policy objectives are to support safe, secure, and reliable operation of the energy and transportation systems; to stimulate sustainable economic growth through competitive market development; to increase energy diversity; to promote a cleaner and healthier environment; and to ensure fairness, equity, and consumer protection. These objectives continue the policies developed in earlier energy plans. No large-scale changes in energy generation and consumption policies are foreseen at the present time. In the future, Con Edison and other energy providers are expected to continue to deliver energy throughout New York City.

D. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed project would result in an approximately 214,000-gross-square-feet (gsf) retail building; a three-level parking garage with approximately 690 parking spaces (approximately 120,000 gsf); and approximately 2.4 acres of publicly accessible waterfront open space on the project site. Overall, the proposed project would create a total demand for approximately 46,288 million BTUs of energy per year (see **Table 10-1**). Con Edison or another power company would provide electricity, gas, or steam to heat, cool, and light the proposed project.

[1] This estimate conservatively assumes that the buildings on the project site are currently used as offices for the bus storage company. This estimate is based on the commercial rate (216,300 BTUs/sf/year) multiplied by 10,400 square feet.

Table 10-1
Projected Energy Consumption of Proposed Development

Use	Size (sf)	Rate (BTUs/sf/Year)	Consumption (Million BTUs/Year)
Retail	214,000	216,300	46,288
Total Energy Consumption			**46,288**

Notes: Although the proposed parking and publicly accessible open space would generate some energy demand for lighting, etc., this demand would be negligible.
Source: *CEQR Technical Manual*, Table 15-1 "Average Annual Whole Building Energy Use in New York City."

Compared with the future without the proposed project, the proposed development would create an incremental energy demand for approximately 44,038 million BTUs per year. Compared with the approximately 327 trillion BTUs of energy consumed annually within Con Edison's New York City and Westchester County service area, this incremental increase would be considered a negligible increment.

Upon completion, the proposed development 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, the code provides requirements for the design and selection of mechanical, electrical, and illumination systems. In compliance with the code, the building's basic designs would incorporate all required energy conservation measures, including meeting the code's requirements relating to energy efficiency and combined thermal transmittance. Based on all of the above factors, no potential for significant adverse energy impacts would result from the proposed project. ✷