

A. INTRODUCTION

This chapter describes the potential effects of the proposed project on energy consumption. The 2001 *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. Any 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 project's energy consumption.

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

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 (the latest year for which data are available), 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 development site currently consists of seven vacant lots. As such, there is currently no energy use on-site.

C. THE FUTURE WITHOUT THE PROPOSED PROJECT

As described in greater detail in Chapter 1, "Project Description," in the future without the proposed project, the development site would be developed with one of two scenarios: the Previously

Approved Project or the Expanded Development Scenario. This section considers the likely energy usage of each of these scenarios. Future planning affecting energy usage is also summarized 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 the 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.

PREVIOUSLY APPROVED PROJECT

The Previously Approved Project would contain a total of 250,000 gross square foot (gsf) divided between 180,000 gsf of commercial office space, 68,097 gsf of museum space, and 10,000 gsf of ground-floor retail space. These uses would create a demand for 19,027 million BTUs per year (see **Table 13-1**).

**Table 13-1
Projected Energy Consumption
Previously Approved Project**

Use	Size (Square Feet)	Rate (BTUs/Square Foot/Year)	Consumption (Million BTUs/Year)
Museum	68,097	65,300	4,447
Ground-Floor Retail	10,000	55,800	558
Commercial Office	180,000	77,900	14,022
Total Energy Consumption			19,027
Source: 2001 <i>CEQR Technical Manual</i> , Table 3N-1 “Energy Use Index Averages.”			

EXPANDED DEVELOPMENT SCENARIO

The Expanded Development Scenario would contain museum, hotel, and residential uses. The building would contain a total of approximately 508,012 gsf divided between 314,236 gsf of residential space, 125,679 gsf of hotel use, and 68,097 gsf of museum space. These uses would create an energy demand for 68,454 million BTUs per year (see **Table 13-2**).

Table 13-2
Projected Energy Consumption
Expanded Development Scenario

Use	Size (Square Feet)	Rate (BTUs/Square Foot/Year)	Consumption (Million BTUs/Year)
Museum	68,097	65,300	4,447
Residential	314,236	145,500	45,721
Hotel	125,679	145,500	18,286
Total Energy Consumption			68,454
Source: 2001 CEQR Technical Manual, Table 3N-1 "Energy Use Index Averages."			

D. PROBABLE IMPACTS OF THE PROPOSED PROJECT

The proposed project would result in a 786,562 gsf building, which would include approximately 68,097 gsf of museum-related space, up to 618,465 gsf of residential space, and up to 200,000 gsf of hotel space. The hotel space would include approximately 7,000 gsf of restaurant space. The applicant has stated that no more than 150 residential units and 120 hotel rooms would be constructed. The applicant will enter into a Restrictive Declaration which limits the number of units on the development site to no more than 300 residential units and 167 hotel rooms. Overall, these uses would create a total demand for 124,331 million BTUs of energy per year (see **Table 13-3**). Con Edison or another power company would provide electricity, gas, or steam to heat, cool, and light the proposed project.

Table 13-3
Projected Energy Consumption
Proposed Project

Use	Size (Square Feet)	Rate (BTUs/Square Foot/Year)	Consumption (Million BTUs/Year)
Museum	68,097	65,300	4,447
Hotel	200,000	145,500	29,100
Residential	618,465	145,500	89,987
Restaurant	7,000	113,800	797
Total Energy Consumption			124,331
Source: 2001 CEQR Technical Manual, Table 3N-1 "Energy Use Index Averages."			

Compared with the Previously Approved Project, the proposed project would create an incremental energy demand for 105,304 million BTUs per year. Compared with the Expanded Development Scenario, the proposed project would create an incremental energy demand for 55,877 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, each of these incremental increases would be considered a negligible increment.

Upon completion, the proposed project 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 significant adverse energy impacts would result from the proposed project. *