15.0 Energy

A. INTRODUCTION

This chapter describes the effects that the Proposed Action may have on energy consumption. Although present uses at the Project Site create some demand for energy, development resulting from the Proposed Action would place an increased overall demand on energy services. This chapter provides an assessment of the increase in energy demand that would result from the Proposed Action.

As discussed in this chapter, the Proposed Action would create new demands on energy, but the marginal increase in City-wide energy demand attributable to the Project would not be large enough to result in significant adverse impacts on energy services. The Project would be built in accordance with the New York State Energy Conservation Code, which is reflective of State and City energy policies. Though differing from the Preferred Development Program,, the three variations, like the Preferred Development Program, would not have a significant impact on the availability of energy.

B. EXISTING CONDITIONS

New York City is supplied with electricity by Con Edison. The Con Edison distribution system covers 604 square miles and serves approximately 8,800,000 people throughout the Bronx-Westchester region, Brooklyn-Queens region, Manhattan region, and Staten Island region. The electric distribution system consists of 54 area substations.[1] At peak summertime load, Con Edison generates approximately 13,000 megawatts. The Project Site currently contains a temporary power generation facility which has no net demand on energy consumption.

C. FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

Conditions at the Project Site related to energy consumption would be the same as described under Existing conditions. Con Edison would generate approximately 13,000 megawatts during its peak summertime load.

Projects anticipated to be completed by 2009 in the vicinity of the Project Site would total approximately 2,163,000 sf of commercial and 4,183,000 sf of residential development. These projects would increase demand on energy. In the future without the project, the NYPA facility would be relocated and the site would no longer have a net energy surplus.

[1] *New York City Energy Policy: An Electricity Resource Roadmap*. A report to Mayor Michael R. Bloomberg. January 2004.

D. FUTURE CONDITIONS WITH THE PROPOSED ACTION

The Proposed Action would increase energy use on the site and in this area. The Proposed Action would facilitate a mixed-use development containing studios, offices, residential, retail, and community facility uses. The residential component of the development would introduce up to 1,000 new residential units to the Project Site and introduce approximately 2,700 new residents to the area.

The new development would be required to comply with New York State energy conservation guidelines, which, according to the *CEQR Technical Manual*, would ensure that no significant adverse energy impacts would occur. As indicated in Table 15-1, the Proposed Action would generate demand for approximately 260,350 BTUs/hour of energy. Consumption at this level would not result in any significant impacts on energy systems.

TABLE 15-1: ENERGY DEMAND

Use	Floor Area	Rate (BTU/sf)	BTU/hr
Residential	1,045,000	0.1244	130,000
Office/Commercial	655,000	0.0964	63,140
Retail	77,000	0.1623	12,500
Cultural	131,000	0.1623	21,260
Film Studios	347,000	0.0964	33,450
		Total BTUs	**260,350**

Source: Rates taken from Energy Consumption in New Building Design, Arthur D. Little, 1976.

E. VARIATIONS

The replacement of office space with an equivalent amount of residential space with Variation 1 would result in a net increase in energy demand of approximately 18,340 BTU/hour compared to the Preferred Development Program (approximately 260,350 BTU/hour with the Preferred Development Program compared to approximately 278,690 BTU/hour with Variation 1). The replacement of cultural space with an equivalent amount of studio and studio support space with Variation 2 would result in a net decrease of approximately 8,632 BTU/hour compared with the Preferred Development Program. Variation 3 would result in the replacement of both office space and cultural space with equivalent amounts of residential space and studio and studio support space, respectively. This would result in a net increase in energy demand of 9,708 BTU/hour compared to the Preferred Development Program (260,350 BTU/hour with the Preferred Development Program compared to 270,058 BTU/hour with Variation 3). As with the Preferred Development Program, none of the variations would result in a significant impact on available electrical systems since all variations would be developed in compliance with the energy conservation code.