

**A. INTRODUCTION**

The new buildings proposed for the project area are expected to place new demands on New York City's energy supply systems. The evaluation of these new demands is based on the proposed and future residential, community facility, and retail space, which comprise:

- 1,770 new residential units;
- 99,900 square feet of neighborhood retail space;
- 120,000 square feet of space for Boricua College; and
- 20,000 square feet of community facility space.

The analysis in this Environmental Impact Statement concludes that the proposed and future projects would not result in any significant adverse impacts to the existing energy generation and distribution systems.

**B. EXISTING CONDITIONS**

Consolidated Edison (Con Edison) delivers electricity to New York City and almost all of Westchester County. The electricity is generated by a number of independent power companies as well as Con Edison. Annual electric sales total nearly 50 billion kilowatt hours (KWH) of electricity supplied to Con Edison's delivery area (New York City and Westchester County). This is equivalent to about 170.75 trillion BTUs and does not include the energy content in the natural gas and other energy sources used in New York City. Current energy use on the project sites is minimal.

**C. THE FUTURE WITHOUT THE PROPOSED AND FUTURE ACTIONS**

The demand for electricity is expected to increase about 1.5 percent per year in New York City. To meet that demand, a number of power plant construction projects are planned or are currently underway. 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 demand.

Transmission and distribution systems are put in place to meet growing energy demand in specific areas.

## D. THE FUTURE WITH THE PROPOSED AND FUTURE ACTIONS

### POTENTIAL ENERGY SAVING MEASURES

The New York State Conservation Construction Code requires buildings to be energy efficient. Executive Order 111 requires even more stringent measures be taken to ensure that New York State government buildings are energy efficient. New York State government buildings are required to achieve a 20 percent improvement over the requirements of the Construction Code, and renovated buildings are required to be 10 percent more efficient. The measures to achieve the required energy efficiency would include the building's mechanical, electrical, and plumbing systems. In addition, operational requirements would extend to the use of recycled materials, reduction in quantity of waste generated in the construction project, and enhancement of indoor air quality. No final determination has been made as to which measures would be implemented. Some of the green elements that may be considered are:

Use of façade glazing and curtain wall design optimized for energy conservation;

- Daylighting and glare prevention;
- Daylight dimming systems for all exterior offices;
- Occupancy sensors for all spaces, including the fire stairs;
- Fuel cells to back up electrical power generation;
- DOE-2 energy modeling to optimize all systems; and
- Digital controls to regulate all energy and air delivery systems.

Executive Order 111 also requires that New York State agencies obtain at least 10 percent of their energy from renewable sources through 2009. By 2015, at least 20 percent of the energy must come from renewable sources.

### PROBABLE IMPACTS OF THE PROPOSED AND FUTURE ACTIONS ON ENERGY

Table 13-1 shows the expected energy demand, conservatively based on meeting just the requirements of the New York State Conservation Construction Code, which governs performance requirements of heating, ventilation, and air conditioning systems, as well as the exterior building envelope of new buildings. It is expected that the proposed and future projects would meet the requirements of Executive Order 111, and be more energy efficient than shown by this analysis. The additional consumption of about 273,336 million BTUs per year would be very small, compared with the existing energy demands of New York City. Further, this additional demand is not expected to overburden the energy generation, transmission, and distribution system and would not cause a significant adverse energy impact.

**Table 13-1**  
**Expected Energy Usage with the Proposed and Future Projects**

Use	Square Feet	Unit Rate (BTU/Sq Ft/Yr)	Energy Consumed (BTU/Yr)
Residential	1,732,847	145,500	252,129,238,500
Community facilities	140,000	113,800	15,632,000,000
Retail	99,900	55,800	5,574,420,000
<b>Total</b>	<b>N/A</b>	<b>N/A</b>	<b>273,335,658,500.</b>

**Note:** Rates from the 2001 *CEQR Technical Manual*.

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