

## ***Chapter 11: Irreversible and Irretrievable Commitment of Resources***

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This chapter summarizes the potential impact of the Proposed Action on the loss of environmental resources in the near term and future. Both natural and man-made resources would be expended as part of the construction and operation of the Proposed Action. Certain resources would be irreversibly and irretrievably committed to the project as noted below.

Construction and operation of the KEC Project would involve the use of lands that would be occupied by the Proposed Action, human effort (time and labor), various construction materials for operation and maintenance, and fuels and energy for construction and operation of the Proposed Action. Some of the materials that would be used for the KEC Project are non-renewable resources, and are considered irretrievably and irreversibly committed, because reuse is not possible or is highly unlikely.

The majority of land area associated with the Proposed Action is already in use by DEP as part of the City's water supply system. The Kensico Campus and KEC Eastview Site were identified for the Proposed Action due to their proximity to Kensico Reservoir and existing infrastructure such as the Catskill Aqueduct, UEC, and CDUV Facility, which minimized the distance for conveyance, resulting in a more efficient design and construction effort and limiting the need for additional land to the extent practicable. The Proposed Action would therefore utilize the minimum amount of additional land necessary for construction and operation.

Construction materials would include concrete, brick, steel, glass, and other materials that would be used to construct the new shafts, approximately 2-mile-long deep rock tunnel, KEC Screen Chamber, ECC, improved UEC, Connection Tunnels, and additional supporting facilities. The Proposed Action would incorporate the use of sustainable building materials as part of its overall construction. Consistent with sustainability goals for the Proposed Action, materials with recycled content, such as steel and concrete, would be utilized to the extent possible. The construction of the Proposed Action would also require human labor over the duration of construction.

As discussed in Section 3.12, "Greenhouse Gas Emissions and Climate Change," and Section 3.16, "Energy," although construction of the Proposed Action would require a commitment of building materials, where practicable, the Proposed Action would use low-emission construction vehicles and equipment and other technologies to reduce the intensity of carbon emissions related to construction. DEP has evaluated energy conservation, efficiency, and reuse opportunities as part of the overall Proposal Action and its construction. Operation of

the Proposed Action also incorporates the use of energy efficient equipment to minimize potential future impacts due to increased energy needs. Overall increased energy consumption is expected to be minimal in comparison to energy currently provided by Con Edison within the region.

Construction of the Proposed Action would also maximize the reuse and recycling of excavated soil and rock and C&D waste. Excavated soil and/or rock would be used at Kensico Campus for site regrading needs. In addition, remaining materials not reused on site for the Proposed Action would be diverted from landfilling for potential reuse or recycling, to the maximum extent possible. C&D waste that would consist of a variety of materials would also be recycled to the maximum extent possible as discussed in Section 3.15, “Solid Waste and Sanitation Services.” As part of the overall Proposed Action, DEP has a goal to maximize the reuse and recycling of materials.

As discussed in [Chapter 4](#), “Potential Impacts from Operation of Proposed Action,” the operation of the Proposed Action would not result in substantial commitment of resources over the current water supply operation. The Proposed Action, as described, would also involve the gravity-based transport of water from Kensico Reservoir to the CDUV Facility or the existing Catskill Aqueduct when bypasses of the CDUV Facility may be required. This limits the need for extensive pumping of water as part of the Proposed Action and the commitment of resources associated with fuel and electricity to facilitate the conveyance of these waters. The integration of photovoltaics into several of the final structures at the Kensico Campus and the KEC Eastview Site would also limit electric use.

The KEC Project would ensure the environmentally responsible management of a valuable water resource to support the long-term safe and reliable transmission of drinking water.

The KEC Project would use the minimum amount of new land necessary for the Proposed Action and would result in the limited commitment of other resources such as labor, energy, and building materials, while incorporating sustainable practices and materials to the extent possible. The commitment of these resources is not exceptional or significant. Significant irreversible or irretrievable impacts to resources are therefore not anticipated.