

Connecticut Siting Council

Decisions

Docket No. 224 Opinion

DOCKET NO. 224 - Northeast Utilities Service Company application for a Certificate of Environmental Compatibility and Public Need for the replacement of a submarine electric transmission cable system from Norwalk, Connecticut to Northport, New York.	} } } }	Connecticut Siting Council September 5, 2002
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Opinion

On February 15, 2002, Northeast Utilities Service company (NU), as the agent for the Connecticut Light and Power Company (CL&P), applied to the Connecticut Siting Council (Council) for a Certificate of Environmental Compatibility and Public Need (Certificate) for the Connecticut portion of the replacement of an existing submarine electric transmission cable system extending from Norwalk Harbor Substation in Norwalk, Connecticut to Northport Substation in Northport, New York.

Parties and Intervenors to these proceedings include the applicant, State Attorney General Richard Blumenthal, the City of Norwalk, Save the Sound, Inc., and State Representative Bob Duff.

The existing 138-kV cable system extends from Norwalk Harbor Substation to Northport Substation for a distance approximately 11 miles. The cables, which were installed in 1969, are owned by CL&P in Connecticut and Long Island Power Authority (LIPA) in New York and consist of seven single-conductor cables. Six of the existing cables operate as one 300 MW circuit comprised of two sets of three cables, each having a 150 MW capacity. The seventh cable serves as a spare. NU proposes to replace the seven existing cables with three three-conductor submarine transmission cables, which would be limited to an operating capacity of 300 MW. One of the three proposed cables would serve as a spare if one of the other two cables were out of service.

The proposed replacement project is not intended to increase capacity or serve additional load. The seven existing cables are susceptible to damage from anchors or other objects hitting the cable, resulting in the release of alkylbenzene, the dielectric insulating fluid within each cable. The proposed replacement cables would be less susceptible to damage than the existing cables because they would be buried, would result in a reduction of costs from maintenance and repair, and eliminate environmental concerns associated with the escape of the insulating fluid from the cable. Most of the incidents that have caused external damage over the past thirty years have resulted in the accidental release of alkylbenzene into the environment.

The proposed cables would be solid dielectric cables with cross-linked polyethylene insulation and would be buried to a depth of six feet below the Long Island Sound bed and about four feet below grade on land. If a cable could not be buried to the proposed six-foot depth, concrete mattresses or rock would be placed over the area. A maximum of six fiber optic cables would be installed, two with each power cable, if there is demand for such a cable.

The existing cable system is necessary because it is one of eight high voltage transmission facilities that interconnect Connecticut's transmission facilities with transmission facilities in neighboring states allowing the import and export of electrical energy. The existing cable system delivers both reactive power and energy to southwestern Connecticut, which has greater load growth than other parts of the state.

The proposed replacement cable corridor is within the eastern portion of the existing cable corridor and would take up only a section of the existing corridor. This area was chosen because it was previously disturbed, shellfish impacts would be minimized, and the existing cable area would not have to be expanded. An alternative location along the western edge of the existing cable corridor contains surface and shallow subsurface bedrock expressions, and shipwrecks, which would be a significant obstruction to the burial of the proposed replacement cables. Alternative Route 1, which is located to the west of the existing corridor, would cross previously undisturbed seabed and shellfish beds that are not owned by CL&P; appears to have a significant amount of surface and subsurface bedrock; it would cross an area frequently used by lobster fishers; and is 1.5 miles longer for each cable, than the proposed replacement corridor. Alternative Route 1A, which is farther west than Alternative Route 1, contains surface and shallow subsurface bedrock, and would cross previously undisturbed seabed and shellfish beds that are not owned by CL&P. Alternative Route 2, located between Alternative Route 1 and the existing cable corridor, has significant amounts of surface and shallow subsurface bedrock. Alternative Route 2, which begins at Norwalk and heads southeast around Sheffield and Shea Islands then south rejoining the eastern route, would cross previously undisturbed seabeds and shellfish beds not owned by CL&P, and the federal channel in Sheffield Harbor. Alternative landfalls to the east and west of Norwalk Harbor Substation would result in more environmental disturbance than the proposed/existing landfall due to the proximity of a large tidal wetland to the northwest, residential areas, and beaches.

The applicant proposed three possibilities for the decommissioning of the existing cables, which include complete removal, a combination of removal and abandonment, and a combination of removal and selective abandonment. The Council feels that complete removal of the existing cables is preferred, in order to eliminate the possibility of causing navigational impacts of anchors getting snagged on the abandoned cables, or corrosion and component leaching from the copper and lead contained in the cable. The Council will require that the Development and Management (D&M) Plan include provisions for removal of the existing cables, and a pre-construction survey with obstructions and methods to provide cable protection noted.

The existing/proposed cable corridor crosses Sheffield Island where the island is narrow and bordered by coastal marsh. Between Norwalk Harbor Substation and Sheffield Island the proposed cable route crosses a few tidal flats and rocky shoals but would not cross inland wetlands or freshwater resources. Some areas of wetland vegetation may be disturbed as a result of construction activities but would be reestablished by seeding and transplanting. NU will be required to undertake pre-construction and post-construction survey of the benthic community in the D&M Plan.

In-water construction for the proposed project is proposed to begin in the late fall and end in the early spring. Construction activity would take place during the cold-weather months when most of the species in Long Island Sound are either not present or less biologically active, which would minimize potential impacts to finfish, shellfish, and other aquatic species.

The project may have some impact to shellfish resources. NU holds the leases for the state and municipally managed areas crossed by the cable corridor. Outside of the beds leased by NU, adjacent shellfish beds may receive less than three millimeters of sediment deposition as a result of this project, which is less than the critical burial depth of juvenile oysters and clams. The Connecticut Department of Environmental Protection (DEP) expects that the proposed project would result in significant mortality of whatever lobsters are located in the path of the cable installation and, depending on time of year, possibly smother or bury lobsters in burrows for some distance from the cable trench. The Council will require that NU meet with commercial fishermen in the area regarding fishing activities and lobster migratory behavior within the cable corridor, in order to work together to minimize lobster mortality and disruption of fishing due to cable installation activities. The Council will also require that a plan to minimize impacts to shellfish, developed in consultation with the Connecticut Bureau of Aquaculture, be included in the D&M Plan.

Sheffield Island is a National Wildlife Refuge operated by the U.S. Fish and Wildlife Service. State-listed threatened species including the great egret, and the least tern and state-listed special concern species, including the American oystercatcher, the yellow-crowned night heron, and the common tern are known to occur in the vicinity of the project area. The Kemp's Ridley, Loggerhead, and Leatherback are sea turtles listed as endangered under the Endangered Species Act of 1973 and have been observed in Sheffield Island Harbor and the open

waters of Long Island Sound. Federally listed endangered species that have been observed in Long Island Sound include finback and humpback whales. The Council does not anticipate adverse impacts to these species and will require this issue to be addressed as appropriate through the D&M Plan.

Many bird-nesting habitats are located within the project area. Any disruption of nesting birds that may occur as a result of the proposed project would be temporary and localized, potentially resulting in one nesting season of disturbance. Five osprey platforms are located in the general project area, the nearest of which would be relocated to a more protected location. The Council will require that a plan to minimize impacts to nesting birds be developed in consultation with the DEP as part of the D&M Plan.

The thermal discharge that would be generated from the proposed replacement cable system would be less than 90 Btu/hr/feet of cable assuming the cable is running at full capacity. The proposed cables would generate less heat per conductor than the existing cable system. The magnetic field for the proposed cables was calculated to be 21.4 milligauss (mG) for a level of six feet above the proposed cables in the submarine and 17 mG at three feet above ground level in the upland portion. The magnetic field from the proposed cables would be a significant reduction from the magnetic field associated with the existing cables. The magnetic field associated with the proposed cable system is not expected to interfere with navigational compasses or other navigational instruments due to the distance of instruments from the cables. The proposed cable system would be a source of exposure to magnetic fields for marine organisms in close proximity to the cable. Currently, there is no evidence in the record that the magnetic field would have a harmful impact on fish or other aquatic species when exposed to power frequencies at or near 50 to 60 Hz. To confirm the predicted change in EMF levels, the Council will order NU to incorporate a post-construction monitoring plan for EMF levels in the D&M Plan.

Although there would be an increase of roadway traffic during construction, the proposed project would not be expected to be out of scale with current traffic patterns and capacities. During construction, within Long Island Sound, marine traffic may be interrupted for short periods of time due to a no-entry safety zone that would be established around the construction vessel and associated equipment. The exclusion zone would be outside of the Federal Channel and would be well marked, easily avoided by other vessels, and would have adequate water to navigate around the work area.

The upland portion of the existing/proposed cable corridor at Norwalk Harbor Substation is within an area zoned as "B residence;" use of the property as a substation is consistent with the uses permitted for this designation. The location of the cable corridor on Sheffield Island is zoned Island Conservation (IC), which indicates a need for protection of the environment while allowing development for limited residential uses. The proposed project would be consistent with the City of Norwalk Plan of Development.

Based on its record in this proceeding, the Council finds that the effects associated with the Connecticut portion of the replacement of an existing submarine electric transmission cable system extending from Norwalk Harbor Substation in Norwalk, Connecticut to Northport Substation in Northport, New York, including effects on the natural environment; ecological integrity and balance; forests and parks; scenic, historic, and recreational values; air and water purity; fish and wildlife; and public health and safety are not disproportionate either alone or cumulatively with other effects when compared to benefit, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application. Therefore, the Council will issue a Certificate of Environmental Compatibility and Public Need for the replacement of a submarine electric transmission cable system from Norwalk, Connecticut to Northport, New York.

To ensure that the proposed project is properly developed, NU will be required to submit Development and Management (D&M) Plan which will include provisions for a detailed site plan; an erosion and sediment control plan, consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control as amended; provisions for cable protection within Sheffield Island Harbor; provisions for indemnification for damage to the cable system; a plan for a pre-construction and post-construction survey of the benthic community; a post-construction EMF monitoring plan; a pre-construction survey with obstructions noted and methods to provide cable protection; independent monitoring of the cable system installation; a plan to minimize impacts to shellfish, developed in consultation with the Connecticut Bureau of Aquaculture; a plan to minimize impacts to nesting birds and rare, threatened, and endangered species and species of special concern, developed in consultation

with the Connecticut Department of Environmental Protection; provisions for removal of the existing cables, subject to approval from the Council and other appropriate agencies; cooperation and notification requirements with the Army Corps of Engineers, the Coast Guard, and the commercial fishing community; and post-construction mapping and reporting requirements.

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