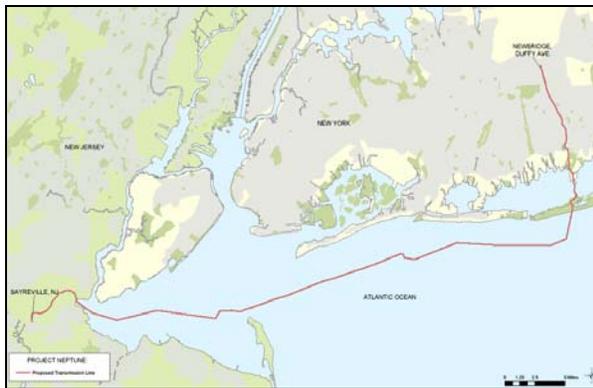


## PROJECT OVERVIEW

The NeptuneRTS™ Project involves the installation of an approximately 600-MW (500 kV) high-voltage, direct current (HVDC) submarine electric transmission cable that will connect power generation resources in New Jersey to electricity consumers on Long Island. The cable will extend from the GPU/First Energy, Inc., substation in Sayreville, New Jersey to the Long Island Power



The transmission line itself consists of a bundle of three cables, approximately 9 inches in diameter, to be installed entirely under water or underground. The converter station in New Jersey will transform alternating current (AC) power into direct current (DC) power for transmission to Long Island, while the Long Island converter station transforms DC power back into AC power for distribution to customers. The stations consist of valve and control buildings and an outdoor bank of electrical equipment similar to a conventional electric substation.

### Why is this Project Needed?

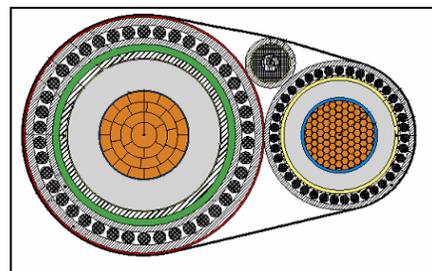
In May 2004, the Long Island Power Authority (LIPA) chose the Neptune cable as the centerpiece of its long-range plan to provide approximately 1000 MW of new, urgently needed power sources to Long Island by 2010.

Authority Newbridge Road substation in Levittown, Long Island, a distance of 65 miles. Converter stations will be located at Sayreville and at Duffy Avenue on Long Island. The majority of the route – more than 50 miles -- is underwater in the New York Harbor and the Atlantic Ocean; 14 miles will be buried in the existing right-of-way of the Wantagh State Parkway.

### Technology

The NeptuneRTS™ project will be built using proven, state-of-the-art, solid-state, HVDC undersea transmission technology. It will be constructed in an environmentally sound manner, avoiding major fishery and other environmentally sensitive locations. The NeptuneRTS™ sub-sea cable eliminates the need for new transmission line corridors through urban and suburban neighborhoods and rural areas. Neither the cable nor the converter stations will generate air emissions, and thus will contribute to current efforts to provide environmentally friendly electricity resources on Long Island.

NeptuneRTS™ will increase the amount of electrical capacity and energy available to Long Island electricity consumers. Because the cable is a transmission connection to the Pennsylvania, New Jersey, Maryland (PJM) system, it increases the capacity and energy available to Long Island in a more flexible and reliable manner than simply siting new generating facilities on Long Island. Moreover, it adds capacity and makes available more energy without adding local impacts associated with new power generation. Finally, because the cable connects to existing resources, more energy will be available relatively quickly compared to the long process of siting and permitting new generation plants.



HVDC Cable Cross-Section

## What Environmental Studies Were Conducted?

Neptune RTS has received a Certificate of Environmental Compatibility and Public Need from the State of New York Public Service Commission. As required by law, the Certificate was issued after extensive review by state and federal environmental agencies that focused on potential environmental impacts, as well as local neighborhood impacts and the overall need for the facility. Under the Certificate, Neptune RTS must comply with a wide range of conditions designed to assure that the facility will be constructed in an environmentally sound manner.



Architect's Rendering Showing Preliminary Design of Converter Station at Duffy Avenue, Long Island

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