

## ECO MATTERS

Center for Environmental Research and Conservation

# Giulio Verne and the Windmills

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Giulio Verne off the 79th Street Boat Basin in the Hudson

By Madeleine Dale

Like some Quixotic dream, at long last the formerly Dutch island of Manhattan will embrace windmills.

Giulio Verne, the enormous ship making waves in the Hudson, is on a mission to increase access to alternative energy sources for New York City.

The 10-ton vessel, resembling a floating factory, sailed from Naples, Italy, and is carrying a crew of 70 and hefty machinery. With an elliptical helideck mounted forward on top of the bridge, a 75-foot turntable with winches appended like legs on a spider, and a collection of cranes aimed fore and aft, this ship is ready for some serious “heave-ho.”

The engineering marvel is laying 3 miles of underwater cable for the Hudson Project, which will connect a converter station in Ridgefield, N.J., with the Con Edison West 49th Street Substation. The engineers and architects will prevent the underground and underwater cables from having visual impact on New Yorkers; additionally, new construction will improve upon an abandoned industrial site on the New Jersey side. With completion expected by mid-2013, the transmission

system will reinforce the grid to withstand peak demand and system disturbances and provide a new source of electric power for NYC, facilitating access to renewable energy sources like Pennsylvania wind power.

When asked to comment about weaning NYC off carbon-emitting sources, Chris Hocker, vice president of planning for PowerBridge, LLC did not raise any expectations. “We provide the infrastructure, in this case analogous to a pipeline or perhaps a highway. Our customer, the New York Power Authority, will determine the type of resources it puts through the line.”

Reaching westward to diversify its power supply, the New York Power Authority estimates the Pennsylvania link will result in \$1 billion in savings over the 40- to 50-year life span of the project. Having a delivery infrastructure to feed NYC’s enormous appetite for energy might not electrify the market for alternative sources overnight, but increased consumption should provide incentives for suppliers.

A windmill seems like a simple device, but utilizing renewable energy requires real muscle: 10 years in planning and a budget of \$850 million (including \$180 million in upgrades to existing systems). Scaling up a viable supply to replace fossil fuels and integrating alternatives into traditional distribution grids entails foresight, will and massive capital investments. Giulio Verne, on display out in the Hudson, is just one part of the heavy lifting required to turn that dream into a reality.

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