

# RE-Powering America's Land

## Evaluating the Feasibility of Siting Renewable Energy Production on Potentially Contaminated Land

Newport, Rhode Island

### RE-Powering: EPA/NREL Feasibility Studies

The U.S. Environmental Protection Agency's (EPA) *RE-Powering America's Land* Initiative encourages renewable energy development on current and formerly contaminated land, landfills and mine sites when it is aligned with the community's vision for the site. EPA and the U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL) are collaborating on a project to evaluate the feasibility of siting renewable energy production on potentially contaminated sites. This effort pairs EPA's expertise on contaminated sites with NREL's expertise in renewable energy. The feasibility studies provide site owners and communities with a technical and economic assessment of installing renewable energy on a given site.

### Site Description

Naval Station Newport was established during the Civil War era and encompasses approximately 1,063 acres on the west shore of Aquidneck Island in the Towns of Portsmouth and Middletown, and the City of Newport, Rhode Island. The base also includes the northern third of Gould Island in the Town of Jamestown.

The base includes multiple areas of contamination that pose a threat to human health and the environment, and the base became a Superfund site on the National Priorities List (NPL) in 1989. Cleanup of Naval Station Newport occurs under the Department of Defense (DOD) Installation Restoration Program and pursuant to the Federal Facilities Agreement for this site. The Navy is the lead agency for site investigation and cleanup, with formal oversight provided by EPA's Region 1 office and the Rhode Island Department of Environmental Management.

### Community Goals

Naval Station Newport is committed to working towards reducing its dependency on fossil fuels, decreasing its carbon footprint, and implementing renewable energy projects. EPA Region 1 and Naval Station Newport have engaged NREL in completing a 'Renewable Energy Master Plan' for the Naval Station. This plan will provide Naval Station Newport with a prioritization plan for implementation of a variety of renewable energy systems across the site, optimized based on renewable energy technology, site location, site use, cost, and carbon footprint reduction.

### Feasibility Study: Wind

EPA and NREL conducted a study on the potential for wind potential at Naval Station Newport. The feasibility study evaluated the technical and economic opportunities and challenges at the site. The completed study:

- Provides a preliminary analysis of the viability of the site;
- Reviews the economics of the potential solar system; and
- Highlights financing options for the system.

Wind speeds were measured in two areas, which resulted in an effective dataset for comparative analysis of wind speed, turbulence, and energy production. Results were modeled using a generic 1.5 megawatt (MW) wind turbine. The assessment then focused on the energy production potential of the Federal Aviation Administration (FAA)-approved 80 meter sites on or near Coddington Point and Coasters Harbor Island.

Assuming 9 MW of wind capacity, the study estimated that the project could produce enough energy to offset 22-29% of the annual electricity consumed by the Naval Station Newport. Overall, the wind resources at the selected sites were found to be sufficient for a wind energy project. Additional analysis is merited to explore development options.

### Naval Station Newport Newport, Rhode Island

#### Site Facts:

**Site type:** Superfund  
**Renewable technology:** Wind  
**Generation Potential:** Community scale  
(for the naval base)

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*The information presented in this fact sheet is from the site's initial proposal, site visit(s), discussions with community stakeholders, and other information collected in preparation of the feasibility study. This fact sheet is for informational purposes only and may not reflect the site's current regulatory or remediation status.*

For more information, visit [www.epa.gov/renewableenergyland](http://www.epa.gov/renewableenergyland) or contact [cleanenergy@epa.gov](mailto:cleanenergy@epa.gov)



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