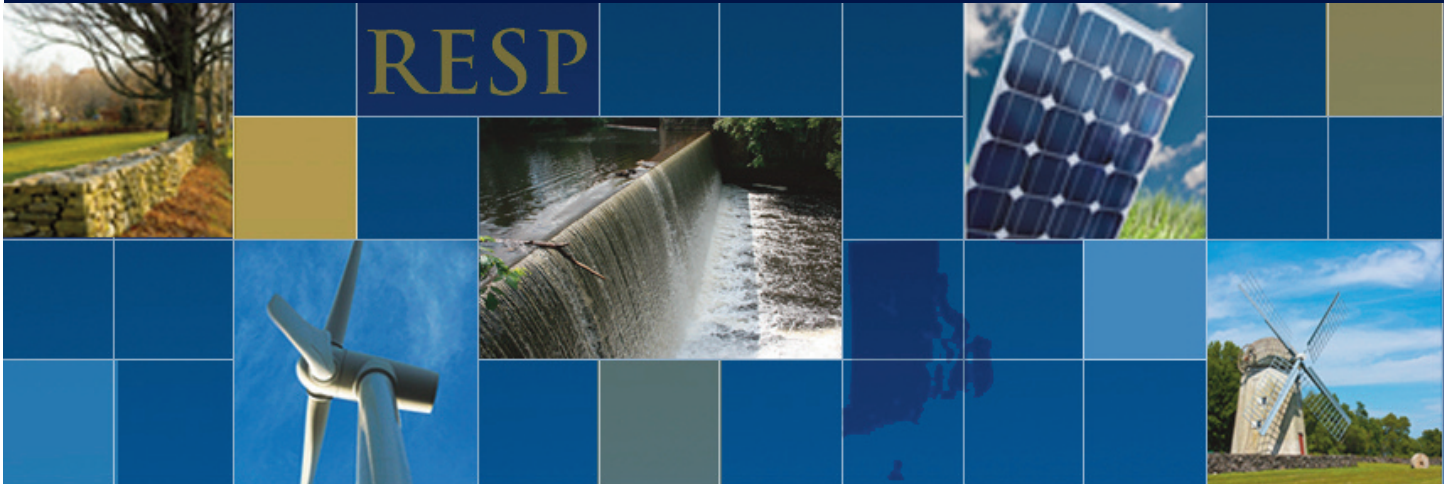


RENEWABLE ENERGY SITING PARTNERSHIP (RESP): Helping Communities Make Renewable Energy Decisions



The State of Rhode Island and many of its communities are considering investing in renewable energy infrastructure. URI has been invited by the state to provide technical expertise about the effects renewable energy may have on the people, wildlife and natural resources of Rhode Island. Based on this information, and through extensive public involvement, a URI team of skilled professionals in the fields of energy, research and planning will develop guidelines that can be used by Rhode Island's cities and towns to site and manage this new activity. Additionally, the RESP project will make state and municipal energy information accessible to the public through the creation of a comprehensive online energy database.

The RESP will also provide a stakeholder process to engage key constituencies and interested citizens. Stakeholder group members and meeting attendees will be able to voice their concerns and issues, provide thoughtful input, and learn about renewable energy research in Rhode Island. They will also have opportunities to preview tools the RESP project is developing to assist in the analysis of land-based wind, water and solar energy issues.

The RESP is not an advocacy effort. It brings science and lessons learned from other places to the table and builds on the multiple renewable energy efforts underway so municipalities and the state can make informed, fact-based decisions.

GET INVOLVED

JOIN the RESP ListSERV at RESP@listserv.uri.edu to learn about project events and receive information updates

ATTEND monthly stakeholder meetings to learn about research findings and ask questions

PARTICIPATE in study tours to existing renewable energy sites

VISIT the web site at: <http://seagrants.gso.uri.edu/resp/> for more details on project and review background information

PROJECT TIMELINE

September 1, 2011 – October 31, 2012

PHASE I: Issue Identification and Assessment (September 2011 – November 2011)

GOAL: Meet with stakeholders to identify issues of concern regarding the siting and management of land-based renewable energy. Identify existing research and data. Understand past renewable energy efforts.

PHASE II: Information Synthesis and Communication (December 2011 – January 2012)

GOAL: Provide technical responses to the issues of concern identified by the stakeholders during Phase I. Communicate to stakeholders the findings and opportunities for continued engagement.

PHASE III: Initiate Development of Final Products (February 2012 – March 2012)

GOAL: Start developing research products and creating specific siting and management guidelines for land-based renewable energy.

PHASE IV: Technical Advisory Committee (TAC) Review (April 2012 – June 2012)

GOAL: Identify key reviewers for each research component of the RESP and send technical reports & draft products to the TAC for review and comment.

PHASE V: Public Comment Process (July 2012 – September 2012)

GOAL: Release the RESP work products for public review and comment, and catalog all public comments received into a comment/response database.

PHASE VI: Submit Final Products (October 2012)

GOAL: Complete research products and develop specific siting and management guidelines for land-based renewable energy.

THINK BIG  WE DO™

THE
UNIVERSITY
OF RHODE ISLAND

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RESP RESEARCH PROJECTS

WIND RESOURCE ASSESSMENT AND FACILITY SITING METHODOLOGY

Based on existing information, this assessment maps the estimated average wind speeds and annual wind power production across the state. A methodology for siting facilities will also be developed to demonstrate how effects to humans and the environment may be minimized. Examples of some of the variables that will be considered in this siting methodology include land use, noise, visual and ecological impacts.

ACQUISITION, ANALYSIS AND DISTRIBUTION OF WIND PROFILE DATA AT SELECTED SITE

The primary objectives for this task are the acquisition, analysis, and distribution of wind data to support wind resource assessment. The goal is to substantially strengthen the quality and quantity of wind data to reduce the uncertainties in the wind resource analysis.

DEVELOPMENT OF GUIDELINES FOR ACOUSTIC AND FLICKER FIELDS ASSOCIATED WITH WIND TURBINE OPERATION

URI researchers will develop guidelines for both acoustic and flicker fields based on existing technical information and by collecting new acoustic and flicker data.

ASSESSMENT OF POTENTIAL ELECTROMAGNETIC FIELD (EMF) INTERFERENCE WITH COMMUNICATIONS SYSTEMS

The URI team will examine existing studies to summarize the potential EMF interference resulting from wind turbine operations on communication systems.

PROVIDE REGULATORY AND SCIENTIFIC INFORMATION ON THE ECOLOGY OF BIRDS AND BATS

URI researchers will summarize the effects of wind turbines on birds and bats as well as develop GIS maps for the distribution of breeding birds in Rhode Island, abundance of birds in winter in Rhode Island (based on Christmas Bird Counts), and the distribution of federally-listed and state-listed threatened or endangered species in Rhode Island. Guidelines for the siting of wind turbines will be developed based on this specific Rhode Island bird and bat data.

PROVIDE GIS SUPPORT AND BUILD A WEB DECISION SUPPORT TOOL

The URI technical team will develop an internet-based decision support tool that will include new research conducted through this study and allow users to evaluate construction locations based on parameters specific to their power needs and development objectives. Results from the URI research on wind resources, acoustic and flicker zone setbacks, impacts areas from EMF and for birds, bats, and wildlife will be presented on this web-based tool.

ASSESS THE POTENTIAL FOR LANDFILL SOLAR POWER IN RHODE ISLAND

This study quantifies Rhode Island's solar energy resources, especially those at closed and capped landfill sites. Siting tools, screening criteria, and a regulatory review will be provided to help communities assess barriers and opportunities to capturing solar resources at these locations.

ASSESS THE CAPACITY FOR HYDROPOWER FACILITIES AT EXISTING DAMS

The URI team will analyze hydropower resources at existing dams and develop interactive mapping tools to display existing dam infrastructure, power potential and development constraints. Environmental and regulatory issues associated with hydropower development in Rhode Island will be identified and detailed.

DEVELOPMENT OF RIENERGY.ORG WEBSITE

This project will provide a one-stop database on Rhode Island energy data -- information on energy prices, energy consumption trends, locations of generating facilities and energy infrastructure, and potential for new development and system reliability improvements. The website will feature a mapping interface to help visualize the data.

PROJECT ECONOMICS

URI resource economists will gather and synthesize data on renewable energy deployment in Rhode Island and provide baseline data for use by communities. Economic models will be applied to a number of case studies to assess project finances and broader impacts.

