

# RE-Powering America's Land: Evaluating the Feasibility of Siting Renewable Energy Production on Potentially Contaminated Land

Keweenaw Bay Indian  
Community, Michigan

## EPA/NREL Partnership

In September 2008, the U.S. Environmental Protection Agency (EPA) launched the *RE-Powering America's Land: Siting Renewable Energy on Potentially Contaminated Land and Mine Sites* initiative. EPA and the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) are collaborating on a project to evaluate the feasibility of siting renewable energy production on potentially contaminated sites. EPA has provided more than \$650,000 through an interagency agreement that pairs EPA's expertise on contaminated sites with NREL's expertise in renewable energy. The project will analyze the feasibility of siting renewable energy on 12 sites across the country. The analysis will include, among other things, the best renewable energy technology for the site, the optimal area to locate the renewable energy technology on the site, potential renewable energy generating capacity, the return on investment, and the economic feasibility of the renewable energy projects. NREL will also pursue an analysis to explore the potential for siting alternative fuel stations (e.g., electric charging stations) at former gas station sites.

## Keweenaw Bay Indian Community Brownfields Site

The Keweenaw Bay Indian Community (KBIC) has several tribal brownfields properties. NREL visited three of these sites on Jan 21, 2010. The sites were evaluated for wind power potential based on several factors including: amount of ground clutter (buildings, trees, etc.) in the direction of the prevailing winds (N-NW); proximity to loads for more cost effective behind-the-meter wind applications; exclusion areas due to environmental sensitivity, cultural/historical significance, etc.; road suitability and available space for Met tower and turbine construction/installation; elevation relative to surrounding terrain; and proximity to existing residences, businesses, roads, etc.

Any future wind power development would be used to support tribal commercial business development and would also assist with commercial development decisions on and near the property.

## Feasibility Study: Begins Winter 2010

NREL is conducting a study on the potential for wind power generation on one of the brownfield sites. Continued discussion with the KBIC regarding the results of the site visit will finalize site selection in the very near future. Met tower erection will begin after the site has been finalized. The feasibility study will evaluate the technical and economic opportunities and challenges at the site. It will:

- Provide a preliminary analysis of the viability of the site;
- Assess wind resource availability;
- Identify possible system size, design and location; and
- Review the economics of the proposed system.

## Keweenaw Bay Indian Community

16429 Beartown Road  
Baraga, Michigan

### Site Facts:

**Site type:** Brownfields

**Renewable technology:** Wind

**Generation potential:** Community scale

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