

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

## RE-Powering Former Gas Stations Across the Country

### 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.

### Former Gas Station Sites

EPA estimates that there are over 200,000 petroleum brownfields sites across America. Many of these include former gas stations. Because these properties are often located near traffic intersections and other areas with high levels of automobile traffic, they may present opportunities to site or otherwise support the infrastructure for alternative fuel vehicles. Existing infrastructure and facilities suitable for reuse could be used to support station operations. Renewable energy resources, such as solar energy, could also help power operations and advanced vehicles.

### Feasibility Study: Winter – Fall 2010

NREL will conduct a study that aims to: (1) develop criteria to evaluate former gas station properties as sites for alternative fuel stations, and (2) determine how to convert these former gas stations into alternative fuel stations. The study will then identify the best locations for various alternative fuels based on traffic corridors and the supply and demand for each fuel. If applicable, the study may also explore opportunities for introducing renewable energy resources into the development of these stations.

### RE-Powering Former Gas Stations

Various Locations  
Across the Country

#### Site Facts:

**Site type:** Former gas station

**Renewable technology:** Alternative fuel stations, solar and wind

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