

## Superfund's National Renewable Energy Certificate (REC) Purchase for Site Operations



Wind turbine installation at the former Nebraska Ordnance Plant Superfund site to help power site operations

Photos courtesy of Dr. Curt Elmore, Missouri University of Science and Technology

The U.S. Environmental Protection Agency's (EPA) Superfund program finalized a national purchase of 100,000 renewable energy certificates (RECs) from wind power to cover the electricity used for operations at fund-financed<sup>1</sup> Superfund sites in 2012.

### Renewable Energy Certificates Advancing Greener Cleanups

[www.epa.gov/superfund/renewableenergy](http://www.epa.gov/superfund/renewableenergy)

#### 1. What is a renewable energy certificate (REC)?

A renewable energy certificate (REC) represents the environmental benefits (such as reduced pollution and greenhouse gas emissions, conservation of natural resources) associated with generating one megawatt hour (MWh) of electricity from a renewable energy source.

#### 2. What is EPA trying to achieve with this national renewable energy certificate (REC) purchase?

The Superfund program has a long term goal of powering site operations with 100% renewable energy and this purchase is a cost-effective way to meet this goal.

#### 3. How does this renewable energy certificate (REC) purchase work?

The Superfund program initially estimated how much electricity is used during site operations for all of its fund-financed Superfund sites in one year (100,000 megawatt hours) and then purchased 100,000 RECs (because 1 megawatt hour = 1 REC) from wind farms in the Upper Midwest. Additionally, the Superfund program reviewed energy use with managers of sites that are high energy consumers to confirm the reasonableness of the estimates.

#### 4. How does EPA know that these are high quality RECs?

The RECs produced by these wind farms in the Upper Midwest (North Dakota, South Dakota, Minnesota, and Iowa) are [Green-e](#) certified, which ensures that the RECs are:

- only assigned once to the Superfund program and that no double counting of the RECs has occurred
- from new projects (all of the wind farms started operations in 2009 or later) and are therefore expanding the renewable energy market
- generated by operating wind farms

#### 5. What are some of the environmental benefits from the national REC purchase?<sup>2</sup>

- Equivalent of taking approximately 18,000 passenger vehicles off the road annually
- Equivalent of reducing carbon dioxide emissions from the electricity use of about 11,000 average American homes each year

#### 6. What other ways is the Superfund program using renewable energy at cleanups to achieve the 100% renewable energy goal?

- Onsite systems provide renewable energy for remedial operations through hydropower at the [Summitville Mine](#) site in Colorado
- Solar power at the [Frontier Fertilizer](#) site in California
- Wind power at the [former Nebraska Ordnance Plant](#) site in Nebraska
- Landfill gas at the [Operating Industries, Inc.](#) site in California

#### 7. Where can I find more information about this REC purchase?

Please visit the following website: [www.epa.gov/superfund/renewableenergy](http://www.epa.gov/superfund/renewableenergy) or contact Laura Knudsen ([knudsen.laura@epa.gov](mailto:knudsen.laura@epa.gov)) or Larry Zaragoza ([zaragoza.larry@epa.gov](mailto:zaragoza.larry@epa.gov)).

<sup>1</sup> Fund-financed sites are those where the cleanup is paid for out of the Superfund appropriation.

<sup>2</sup> Equivalencies were calculated by first using the [eGRID2020 Version 1.1 Year 2007 GHG Annual Output Emission Rates](#) to calculate total pounds of carbon dioxide, methane, and nitrous oxide and then inputting these values into the EPA's [Greenhouse Gas Equivalencies Calculator](#).