

EPA's Renewable Energy Initiative on Contaminated Lands

**Stephen Hoffman
OSWER
USEPA
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Background

- EPA is coordinating an integrated effort to incorporate renewable energy applications across remedial programs: Superfund, Brownfields, RCRA, and Enforcement, in both Headquarters and the Regions.
- The initiative encourages rapid development of solar, wind, geothermal and biomass projects on contaminated sites.
- Acknowledgements:
 - EPA Region 6 Team
 - EPA Headquarters Team
 - NMED and ENMRD

Background

- What is a contaminated site?
- Are Brownfields sites part of this effort?
Includes mine-scarred lands
- Does this effort deal with Superfund liability concerns?
- Goal for this meeting is to pull deals together, put people to work, and change how energy is produced in New Mexico.



Why Contaminated Sites for Renewable Energy Development?

- Contaminated sites have significant cost advantages over green field sites.
- Contaminated sites usually have existing electric, water and sewage infrastructure already in place. Use of existing utilities lowers project costs.
- Contaminated sites have existing roads on them. This further reduces development costs.



Why Contaminated Sites for Renewable Energy Development?

- Many contaminated sites have access to the electric grid. This however is a challenge at remote sites.
- Contaminated sites usually have large flat areas suitable for solar, wind, geothermal or biomass plants. Using such sites reduces site preparation costs.
- Contaminated sites often have low property values-site acquisition costs or leases will be lower than other sites.



Why Contaminated Sites for Renewable Energy Development?


- By developing a contaminated site, you will be reducing the overall environmental impact of the activity.
- Reuse of already used lands leaves other sensitive areas protected.
- Development of alternative energy has broad green house gas reduction benefits.



EPA Renewable Energy Initiative Tools

- Brownfield Grant Program
- Superfund redevelopment program-NPL
- RCRA redevelopment
- Office of Water Good Samaritan Program-Tool Kit
- Abandoned mine lands web portal is a tool for use in screening potential solar and wind sites
www.abandonedmines.gov

EPA Renewable Energy Initiative Tools

- Project-specific facilitation – site partial deletions
 - Superfund Technical Assistance Grants to Communities
 - Superfund Prospective Purchaser Agreements
 - Superfund Prospective Lessor Agreements
 - Ready for Reuse Determinations
 - Agreements on Consent- multi party approach for redevelopment (Park City)
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What has Worked to Date

- EPA has assisted in the development of alternative energy at 15 mining sites and at two landfills
- EPA has successfully issued grants to
 - conduct alternative energy technical feasibility studies
 - design and begin construction of alternative energy project at fund lead sites, and
- EPA has acted as a facilitator at both private and Superfund sites



What has Worked to Date

- Implemented a cooperative program to map wind and solar potential for all RCRA/CERCLA sites with NERL. See www.epa.gov/renewableenergy
- At the EPA Summitville NPL site, we are constructing a micro hydro power plant -\$500,000 capital cost with a 10 year payback
- City of Houston solar array –fund technical feasibility study-use in bid packages
- Through the Brownfields program we have funded studies to assess solar energy potential-see Beatty, Nevada effort

What has Worked to Date

- EPA has provided funding to assist with the development of a wind farm at a closed steel mill: see the Lackawanna New York “Steel Winds” project
- Funded studies to support a solar array development at the Fort Carson Colorado landfill - a 2 mw array on a 12 acre landfill site
- Through Superfund’s “Green Remediation” effort we have placed a solar array at the Pemaco Superfund site in Maywood, California as an emergency power backup system.



What Does EPA Need to Do to Move Projects Forward?

- Does existing EPA guidance meet state or developer needs?
- How does EPA avoid interfering with New Mexico-energy developer relationships?
- When should EPA become directly involved with a project?
- What limits should we place on EPA involvement?



What Does EPA Need to Do to Move Projects Forward?

- What role should the EPA Region play versus our HQ staffs?
- Do we need a separate effort that focuses on mine sites versus other sites?
- Is EPA clear about the differences between the Brownfields program and our other programs to encourage alternative energy development?
- What do you want EPA to do now?



Nellis Air Force, Las Vegas, Nevada Base Solar Array

- Built on top of base landfill
- Advantage: No additional land acquisition costs.
- Advantage: Reduced cost to connect to existing power grid
- Advantage: Site is flat -reduce site prep costs
- Advantage: Site had existing road access-transport costs reduced



Nellis Air force, Las Vegas, Nevada Base Solar Array

- Key Issue: Yes you can build on a federal facility
- One of the largest solar arrays in the US
- New Mexico has equal to or better solar resources



5 MW PG&E Livermore California Wind Farm

- Close to power consumption
- Reduces dependence on fossil fuel consumption
- Created jobs
- Avoided 197 million pounds of CO₂ per year.
- Generates significant power loads at design wind speeds.

