EPA’s other Manufacturing Nexus

• Re-Powering America - Development of Alternative Energy Sources
• Environmental Workforce Development and Job Training
RE-Powering America’s Land: Renewable Energy on Contaminated Land & Mining Sites

• EPA launched *RE-Powering America’s Land* in 2008
• Recognized the potential redevelopment opportunities of these EPA tracked sites
  – Brownfields
  – Superfund
  – Abandoned Mine Lands
  – RCRA Corrective Action Sites
  – Landfills
• To date, have mapped over 15 million acres
Why Focus on Renewable Energy on Contaminated Sites?

- Infrastructure
- Community Support
- Reduced Land Cost
- Tax Incentives
- Zoned Industrial
RE-Powering Tools

- **Google Earth Maps**
  - Joint EPA-NREL venture produced interactive maps

- **Success Stories**
  - identifying and sharing successes

- **Incentives**
  - State-specific maps and financial incentive information identifying renewable energy and contaminated lands redevelopment incentives in each state

- **Technical Assistance**

- **Guidance Documents**
  - **Decision Trees for Potentially Contaminated Sites** - EPA and NREL developed solar and wind potential decision trees.
  - **Coming Soon** - Solar on Landfills Best Practice Document

Website: [www.epa.gov/renewableenergyland](http://www.epa.gov/renewableenergyland)
Google Earth Mapping Tool

- Mapped EPA inventory of EPA tracked sites
  - Abandoned Mine Lands
  - Brownfields
  - RCRA
  - Superfund
  - Landfills
- National Renewable Energy Laboratory (NREL) Data
  - Wind, Solar, Biomass and Geothermal Resources
- Infrastructure Data
  - U.S. Highways
  - U.S. National Transportation Atlas Railroads
  - Transmission Lines
Energy Technologies Mapped

- **Wind Energy Generation**
  - Utility Scale, Community Scale, and Non-Grid Connected

- **Solar**
  - Utility Scale Concentrating Solar Power (CSP), Utility Scale Photovoltaic (PV), Non-Grid Connected PV, and PV Policy Driven

- **Biomass**
  - Biopower Facility and Biorefinery Facility

- **Geothermal**
  - Flash Power, Binary Power, and Heat Pump

- **Landfill Gas Energy Projects**
Potential for Solar

- Utility PV: 470 sites
- Policy Driven PV: 1,397 sites
- Non-grid PV: 11,384 sites
- Utility CSP (Stirling): 85 sites
- Utility CSP (Trough): 60 sites
Potential for Wind

- Utility Wind: 37 sites
- Community Wind: 169 sites
- Non-Grid Wind: 1,304 sites

EPA Tracked Sites:
- Abandoned Mine Land
- Brownfield
- RCRA
- Federal Superfund
- Non-Federal Superfund
NREL Partnership: Technical Assistance

- EPA Partnered with NREL to evaluate the feasibility of siting renewable energy on specific sites
- In 2010, conducted 12 feasibility studies and one alternative gas station project
- In 2011-2012, selected 26 additional sites for feasibility studies through public RFP
- The analysis will include:
  - determining the best renewable energy technology for the site,
  - the optimal location for placement of the renewable energy technology,
  - potential energy generating capacity,
  - the return on the investment, and
  - the economic feasibility of the renewable energy projects.
- Expected Outcome: A tool for the community to use when seeking developers for the site
Success Stories

• **Steel Winds – Lackawanna, New York**
  – 30 acre Bethlehem Steel idle for 30 years – Superfund and Brownfields
  – One of the first wind farms in the country
  – 50 million Kilowatt Hours each year, enough power to sustain 9,000 homes

• **Summitville Mine, Rio Grande County, Colorado**
  – 1,400 acre heap leach gold and silver mining
  – Constructing micro hydroelectric plant
  – Up to 290K kilowatt-hours per year, can power 25 homes AND operate a required onsite water treatment plant
Incentive Fact Sheets

• **State Incentive Fact Sheets for Clean and Renewable Energy and Development of Contaminated Lands**
  ➔ Funding – grants, loans, bonds
  ➔ Taxes – abatements, deductions, credits
  ➔ Other – technical assistance contacts, net metering and limited liability information

• **Federal Incentive Fact Sheet**
Next Steps for RE-Powering

• Expand the toolbox of resources for use by EPA staff, states, and stakeholders
  • Solar on landfill guidance
  • Case studies tied to barriers
• Host Webinar Series
• Clarify Liability Protections
• Add state-tracked sites to Google Earth
More Information

• RE-Powering America’s Land: Renewable Energy on Contaminated Land and Mine Sites

www.epa.gov/renewableenergyland

For further information, contact:

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Applicants must target dislocated workers, or those laid off as a result of recent manufacturing plant closures, severely under-employed individuals, or unemployed individuals, including low-income and minority residents of waste-impacted communities, veterans, and those with little to no advanced education.
Environmental Work Force and Job Training

• Still a focus on environmental and remediation fields

• FY14 guidelines allowed:
  – Solid waste management or cleanup training,
  – Wastewater treatment training,
  – Superfund cleanup (innovative/alternate treatment technologies) training
  – Enhanced Environmental health & Chemical Safety Training
Environmental Work Force and Job Training

Some exceptions apply:

• Grant can’t be used for general construction skills (ie. plumbing, electrical)

• Also can’t be used for ‘other’ (i.e. landscape, demolition)

• Ensure it does not duplicate other federal job training programs.
Environmental Work Force and Job Training

• Research local labor market
• Invite potential employers to help create the curriculum and become partners in the effort
• Secure the hiring commitments
• Follows nicely after a community has had a few assessment grants
• EPA’s Job Training Program can support many manufacturing & production roles:
  – Industrial pre-treatment and on-site treatment needs
  – Worker safety programs
  – Environmental permit monitoring & oversight of hired consultants/contractors
  – Transferable construction related practices (i.e. backhoe/heavy equipment operation)
  – Freon removal from white goods
  – Weatherization/ energy retrofit
• Durham, NC
  – Local labor survey showed need for construction safety course
  – Individual skills/course certifications gave hiring edge for non-environmental jobs for local manufacturing (i.e. knowledge of OSHA, MSD sheets, etc.)
Example: Graniteville, SC

- Graniteville, SC
  - Partnered with Superfund Job Training grant
  - Took a regional approach
  - Leveraged DOL’s WIA (workforce investment) program

For further Program Information, contact:

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