

RE-Powering America's Land Initiative Management Plan

EPA launched RE-Powering America's Land: Siting Renewable Energy on Potentially Contaminated Land and Mine Sites to encourage the siting of renewable energy facilities on thousands of currently and formerly contaminated properties across the nation. This management plan builds on the progress that's been made to date under this initiative, and lays out key areas that EPA will focus on over the next two years.

Goal 1 Provide Incentives and Technical Assistance for Siting Renewable Energy on Contaminated Land

Objective 1 Provide Effective Technical Assistance and Identify Incentives

Action 1 – Develop a “SWAT” Team to Deal with Issues as Soon as They Arise

Siting renewable energy on contaminated lands can be complicated; developers and communities often come to EPA with issues and concerns related to environmental laws and regulations at the federal, state, and local level that they would not face in developing green spaces. To best promote EPA's RE-Powering America's Land Initiative, EPA needs to be able to respond to all issues and concerns quickly and accurately. Because it would not be possible to educate EPA staff on all possible questions and issues raised by developers, land owners, and others, a “SWAT” team of experts from across the Agency (e.g., OECA, Superfund, Brownfields, RCRA, etc.) can be on call when needed to tap into their expertise. The SWAT Team could go beyond EPA to include other federal agency experts (e.g., NREL, DOE, etc.). OSWER Center for Program Analysis (CPA) will take the lead for this action item.

CPA, working with the EPA's RE-Powering America's Land Team will:

- ◆ Solicit volunteers for the SWAT Team from the RE-Powering team and EPA offices
- ◆ Establish the Team, provide training, and determine how it will operate.
- ◆ Issue a memo from OSWER AA notifying the Agency that the team exists and is there as a resource to help projects reach completion.
- ◆ Use the expertise of the SWAT Team to educate EPA staff with webinars and other materials, and over time, develop expertise across EPA program offices and Regions
- ◆ Establish a main point of contact in each Region to include as information on the Google Earth tool (member of RE-Powering America's Land Team).

Timing: Establish team August 2010.

Action 2 – Develop Principles for Siting Renewable Energy on Contaminated Land, both While Cleanup is Ongoing and After Cleanup Is Complete

Renewable energy, while viewed similar to any other redevelopment on a contaminated site, has practical differences from other types of reuse. Unlike many traditional reuses for contaminated sites, renewable energy can be sited on some sites even with cleanup work ongoing. While some at EPA have been encouraging this practice, there is no guidance for

employees or the public to help them decide if this is appropriate at a particular site. Additionally, practical guidance for EPA employees and the public on siting renewable energy on previously contaminated sites would also help encourage this practice. CPA will be the lead for this action, in coordination with the Land Revitalization Coordinators.

CPA, in coordination with EPA's Land Revitalization Coordinators will:

- ◆ Develop internal and external guidance or policy statements on siting renewable energy on contaminated land while the cleanup is ongoing and promoting renewable energy in all phases of cleanup work to the extent possible given site specific considerations.
- ◆ Develop internal and external guidance or policy statements on siting renewable energy on contaminated lands post cleanup.
- ◆ Insert into reuse guidance documents or other appropriate form.

Timing: Guidance or policy memo for siting renewable energy while cleanup is ongoing issued March 2011.

Action 3 – Develop Technical Guidance on Siting Photovoltaic (PV) Solar on Closed Landfills

Closed landfills present a unique opportunity for siting solar energy: there are few reuses for closed landfills, closed landfills are located in all parts of the country, and landfills are often located close to roads and transmission lines. Landfills may be suitable to a variety of renewable types, but PV solar has garnered much attention across the country. While each landfill will be different, guidance on how to site PV solar on landfills may facilitate reuse, streamline the practice, and potentially lower costs. CPA, Office of Resource Conservation and Recovery (ORCR) and OSRTI will take the lead for this task in coordination with states.

CPA, ORCR, and OSRTI, working with states and the EPA's RE-Powering America's Land Team will:

- ◆ Determine what environmental, legal, and technical considerations are necessary to successfully site renewable energy on landfills. Work with Department of Energy's (DOE) National Renewable Energy Lab (NREL) to ensure information is accurate.
- ◆ Create a how-to document explaining the environmental and technical considerations.

Timing: Document drafted April 2011.

Action 4 – Explore opportunities to promote model RE-Powering incentives in Renewable Portfolio Standards (RPS) and Renewable Energy Certificates (REC)

The amount of contaminated land used for siting renewable energy would be greatly increased if there were specific incentives for using contaminated lands. Two methods that increase the amount of renewable energy generated in the United States could potentially include incentives for using contaminated land instead of greenspace. Renewable energy is economically viable in parts of the country because of Renewable Portfolio Standard (RPS) requirements and Renewable Energy Certificates (RECs). Some states have used RPS policies that mandate or encourage the use of solar. Similar provisions could be developed that would increase the

amount of renewable energy sited on contaminated land. EPA is engaged in the REC market by buying RECs to be a green-powered agency. EPA will explore opportunities to incorporate incentives for contaminated land in its REC purchases. CPA, Regions 8 and 9 will take the lead for this action item in coordination with states.

What is a Renewable Portfolio Standard (RPS)?

A renewable portfolio standard is a state policy that requires electricity providers to obtain a minimum percentage of their power from renewable energy resources by a certain date.

What are Renewable Energy Credits (RECs)?

RECs are tradable certificates representing electricity generated from renewable resources. Renewable energy projects create two products with value: 1) the electricity generated, which can be sold to utilities and consumers; and 2) RECs, which often represent the avoided emission of greenhouse gases (GHGs), and can be sold, traded or bartered. Utilities and other parties may purchase RECs from renewable power generators to comply with state requirements or voluntary green power standards. Though the market for RECs is still developing, the sale of RECs can potentially help finance renewable energy projects.

CPA, Regions 8 and 9 working with states and the EPA's RE-Powering America's Land Team will:

- ◆ Promote model language for an RPS incentive at the state level for the siting of renewable energy facilities on contaminated lands.
- ◆ Work with EPA Office of Administration and Resource Management (OARM) to explore opportunities for EPA to buy its RECs from renewable energy generation facilities on contaminated sites. If successful, promote to other agencies.

Timing: Begin working with state groups on model legislation winter 2011
Begin working with OARM summer 2010.

Objective 2 Assist Communities in Identifying and Reusing Sites for Renewable Energy

Action 5 – Issue a Solicitation for Site Specific Analysis

EPA will continue to work with the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) to evaluate the feasibility of developing renewable energy production on Superfund (Federal Facility and private), Brownfields, petroleum-contaminated properties such as former gas stations, and former landfill or mining sites at pilot communities across the country. These pilots provide a needed boost to a particular project and are intended to inform and serve as models for other related projects. Criteria for selecting pilots for future site analysis may include community support for the project, vulnerable communities, grid capacity, ability to leverage partnerships, and renewable resource potential of the site. CPA will take the lead for this action item.

CPA, working with the EPA's RE-Powering America's Land Team will:

- ◆ Identify other federal agencies that may be able to provide additional technical assistance.
- ◆ Develop criteria and issue a solicitation for new pilot communities.

- ◆ Select new pilot communities
- ◆ Continue to provide NREL feasibility studies for particular sites.

Timing: Draft solicitation in Fall 2010 and issue in Winter 2011.

Action 6 – Develop a RE-Powering America’s Land Initiative Training Module for the OSWER-wide Workforce Development Training

OSWER is exploring developing an OSWER-wide Workforce Development Training. The OSWER Environmental Workforce Development and Job Training (EWDJT) Program will bring together community groups, job training organizations, educators, labor groups, environmental contractors, investors, lenders, developers, and other affected parties to identify opportunities to provide environmental employment and training for residents in communities impacted by contaminated properties. EPA will ensure these opportunities include workforce development training for siting renewable energy on contaminated land. CPA, OBLR, and OSRTI will take the lead for this action item.

CPA, OBLR, and OSRTI, working with the EPA’s RE-Powering America’s Land Team will:

- ◆ Work with stakeholders to develop or enhance a renewable energy training module that can be incorporated in the OSWER-wide Workforce Development Training curriculum.
- ◆ Work with the Environmental Workforce Development Job Training grantees to enhance training where grantees believe there are opportunities for job creation.,
- ◆ Collaborate with Superfund on ways to partner with the Superfund Job Training Initiative (JTI).

Timing: Spring 2011

Action 7 – Enhance Capacity and Outreach to Tribes and State and Local Government Organizations

Where renewable energy makes sense for the site and fits into the community’s plan for redevelopment, tribes and state and local organizations expressed a need for more specific information on what needs to be done to successfully site a project on contaminated land. CPA will take the lead for this action item.

CPA, working with the EPA’s RE-Powering America’s Land Team will:

- ◆ Develop examples of successful projects on municipally owned and tribally owned land
- ◆ Partner with the Institute for Tribal Environmental Professionals (ITEP) to educate tribes on siting renewable energy on contaminated portions of their land.
- ◆ Building on existing materials, work with local governments to explain the various considerations that go into determining the feasibility to site renewable energy.
- ◆ Working with NREL, develop training for state employees who assess and cleanup sites. The training would provide the skills needed to conduct a basic screening of sites to determine renewable energy potential.

Timing: Complete handbook Spring 2011. Offer training Fall 2011

Action 8 – Explore Adding Sites from Other Sources to the RE-Powering America’s Land Google Earth Tool

The RE-Powering America’s Land Google Earth tool currently holds only a fraction of the contaminated sites that exist across the country. Some states and federal agencies have their own databases of contaminated sites that would greatly expand the universe. Other contaminated sites are not located in any contaminated lands database. CPA and OSRTI will take the lead for this action item.

CPA and OSRTI, working with the EPA’s RE-Powering America’s Land Team will:

- ◆ Develop pilot initiatives to:
 - Explore ways to include state-tracked sites in Google Earth Tool.
 - Work with federal partners to include their inventories of federal contaminated lands in the Google Earth mapping tool.
 - Explore ways for additional sites that are not in either of the above universes to be added to Google Earth. For example, an interested party could fill out a form providing information on a site, the site could then be screened using EPA/NREL criteria for renewable energy resource potential, and put into Google Earth by EPA.
- ◆ Once pilots are complete, review results and determine which, if any, group of sites should be scaled up.

Timing: Initiate pilots in Summer 2011.

Goal 2 Create Unified Federal Approach to Promote Siting of Renewable Energy on Contaminated Land

Objective 3 Enhance Coordination and Collaboration among Federal Agencies

Action 9 – Partner with Other Federal Agencies to Promote RE-Powering America’s Land in Their Programs

Many stakeholders stated that technical and financial assistance from other agencies would help move their projects forward. In siting renewable energy projects on contaminated lands, EPA OSWER has a relatively small role to play in bringing the projects to fruition. EPA can have a positive role in bringing agencies together to understand the benefits and challenges of siting on contaminated lands, identify resources and technical assistance, and work with agencies to encourage siting on contaminated lands. CPA will take the lead for this action item.

CPA, working with the EPA’s RE-Powering America’s Land Team will:

- Work with DOE to collaborate on siting renewable energy on contaminated land.

- ◆ Establish a federal partnership workgroup, coordinated with the Brownfields Federal Partnership to:
 - Bring multiple agencies' financial and technical resources together to help communities develop renewable energy on contaminated lands in a way that benefits the community and is economically viable.
 - Incorporate incentives for siting renewable energy on contaminated lands into other federal agencies renewable energy grant/loan guarantee programs, tax incentives, and outreach programs.
 - Share expertise among federal agencies to learn from each other and reduce duplication on work on renewable energy.

Timing: Ongoing.

Action 10 – Work with Federal Land Owners to Site Renewable Energy on Contaminated Land

Many federal agencies that own or manage land have goals for siting renewable energy on these lands. Some of that land is contaminated and could be used to site renewable energy. Some mining lands and contaminated Department of Defense properties have been successful in siting renewable energy; EPA would like to leverage those successes to help spur new projects on federal lands. Federal Facilities Restoration and Reuse Office (FFRRO) and CPA will take the lead for this action item.

FFRRO and CPA, working with the EPA's RE-Powering America's Land Team will:

- ◆ Develop and implement a strategy for working with federal property owners. This should include:
 - Discuss renewable energy projects and ideas with other federal land-owning agencies at EPA's Federal Facilities Restoration and Reuse Office's quarterly meetings.
 - Work with Federal Land Management Agencies such as the Bureau of Land Management, US Forest Service, National Park Service and Office of Surface Mining to identify existing national or field guides which could be revised to encourage or promote the siting of renewable energy projects on federal or mixed-ownership lands.

Timing: Beginning fall 2010.

Goal 3 Improve Communication and Sharing of Data on Siting Renewable Energy on Contaminated Land to Enable Stakeholders to Successfully Reuse Sites for Renewable Energy

Objective 4 Improve How We Deliver Information

Action 11 – Develop Case Studies Tied to Specific Barriers

Many of the barriers raised by stakeholders in the four RE-Powering America's Land stakeholder meetings over the last year have been overcome at specific sites across the country. Providing real examples of how specific sites overcame these barriers would help address many of the concerns brought up by communities, developers, and land owners. CPA and OSTRI will take the lead for this action item.

CPA and OSRTI, working with the EPA's RE-Powering America's Land Team will:

- ◆ Use the RE-Powering America's Land Team's expertise and knowledge to research projects that have successfully overcome the major barriers to siting renewable energy on contaminated sites. Case studies will be developed linking the barrier to a successful approach. The case studies will cover different types of contaminated lands (i.e., Superfund, RCRA, Brownfields, and federally owned lands)
- ◆ Post the case studies on the RE-Powering America's Land website as part of our "Toolbox."
- ◆ Use the case studies to develop fact sheets and Qs & As on each of the barriers.
- ◆ Share case studies with appropriate audiences.

Timing: Begin developing case studies and posting on the web in the fall of 2010.

Action 12 – Evaluate the Advantages of Siting Renewable Energy on Contaminated Lands

While there are many advantages to using contaminated sites instead of greenspace sites, those advantages are not immediately clear to the public, developers, investors, and other stakeholders. EPA currently has anecdotal information on advantages such as reduced permitting time, lower land costs, and less public opposition. EPA will gather this, and additional information to quantify, where possible, the advantages of using contaminated sites for renewable energy project. This information will help inform owners, developers, and communities about the advantages of using contaminated sites and will hopefully lead to more contaminated sites developed with renewable energy. CPA will take the lead for this action item.

CPA, working with the EPA's RE-Powering America's Land Team will:

- ◆ Research and, where possible, quantify the advantages of using contaminated lands instead of greenspace sites for renewable energy generating facilities.

Timing: Complete November 2010.

Action 13 – Expand the Toolbox of Resources for EPA Staff and Outside Stakeholders

Contaminated sites pose a number of unique challenges for communities and developers. To help both EPA staff and stakeholders understand and resolve these challenges, an expanded toolbox of resources will provide information on the major issues and questions that arise with siting renewable energy on contaminated land. The toolbox will pull together materials that have already been developed and those being developed under this Plan. It is anticipated that the toolbox will become a clearinghouse of information including innovative financing information and links to existing resources prepared by stakeholders.

CPA, working with the EPA's RE-Powering America's Land Team will:

- ◆ Gather and prepare the materials using the expertise of the RE-Powering America's Land Team and stakeholders.

Timing: Enhanced toolbox is available spring 2011.

Action 14 – Implement Strategy to Improve Outreach to Stakeholders

Because the RE-Powering America's Land Initiative's stakeholders include many groups with whom EPA does not traditionally communicate (i.e., renewable energy developers, utilities, etc.), connecting with stakeholders is critical to achieving the goals of the RE-Powering America's Land Initiative. To reach these targeted audiences, EPA will update the RE-Powering America's Land communication strategy. Applying new creative media approaches is one way that EPA can reach these audiences. CPA will take the lead for this action item.

CPA, working with the EPA's RE-Powering America's Land Team will:

- ◆ Determine the best ways to reach target audiences such as DVDs and webinars; videos and video town hall meetings; and podcasts. Consider preparing short videos on success stories and pass on to local news stations.
- ◆ Where feasible, link the RE-Powering America's Land Initiative with the Brownfields area-wide planning initiative and grant program
- ◆ Develop targeted communication materials to reach out to utilities on the barriers, incentives, and misconceptions around siting renewable energy on contaminated lands.
- ◆ Implement strategy to improve communication and outreach.

Timing: Launch webinars series fall 2010. Begin utility outreach winter 2011.

Action 15 – Provide outreach to the financial industry and economic development groups

Under the RE-Powering America's Land Initiative, EPA will engage in strategic outreach to groups that finance renewable energy projects and promote economic development within a specific area, but may be unaware of the issues involved in siting those projects on contaminated lands.

OSWER front office, working with the EPA's RE-Powering America's Land Team will:

- ◆ Outreach to the financial industry and economic development groups on barriers, incentives, and misconceptions about siting renewable energy on contaminated lands. This would include developing targeted communication materials, webinars, and a workshop.

Timing: Begin outreach Fall 2010.

Objective 5 Clarify Liability to Address Perceived Barriers

Action 16 – Assess and Promote All Enforcement Discretion Tools Available for Reusing Contaminated Lands

The 2002 Brownfield Amendments established self-implementing liability protections for parties seeking to redevelop contaminated properties. EPA strongly supports this liability scheme and our goal, consistent with Congress' intent, is that EPA should not be involved in the vast majority of contaminated property transactions. EPA has developed enforcement discretion guidances to further address liability uncertainties and clarify potential liability for parties seeking to redevelop contaminated properties. EPA also has site-specific enforcement tools that have been effective in facilitating contaminated property transactions and revitalization when perceived liability remains an obstacle and EPA involvement is critical. Renewable energy developers and investors are often not aware of these statutory liability protections, enforcement discretion guidances, and site-specific tools.

OSRE, as part of its Environmentally Responsible Redevelopment and Reuse (ER3) initiative, and working with EPA's RE-Powering America's Land Team will:

- ◆ Review existing liability tools to determine if new tools are needed to specifically address liability concerns unique to renewable energy development,
- ◆ Develop new tools if warranted, and
- ◆ Compile existing tools in one place to make it easier for developers and their financiers to understand how EPA addresses liability concerns.
- ◆ Develop a checklist of steps a renewable energy developer should consider before leasing or purchasing a contaminated property.
- ◆ Increase the visibility of liability relief information on the RE-Powering America's Land website, including information on whom to contact with any questions.
- ◆ Assist OSWER to educate renewable energy industry groups about liability and the existing tools to help address liability concerns.
- ◆ Explore the use of renewable energy at all site-specific ER3 projects

Timing: Checklist completed fall 2010; Assessment of tools completed winter 2011.

Action 17 –Develop Case Studies That Explain How Developers Were Able to Lease Contaminated Sites

Many stakeholders were not aware of the current liability protections available to lessees and were concerned that liability protection for purchasers of contaminated land did not apply to a lessee. Highlighting examples where lessees have been able to obtain liability protection would help facilitate the private sector transaction. CPA, with OSRE, will take the lead for this action item.

CPA and OSRE, working with the EPA's RE-Powering America's Land Team will:

- ◆ Develop a fact sheet for potential lessees of contaminated property for renewable energy generation.
- ◆ Develop successful case studies, including as ER3 projects.

Timing: Begin developing case studies and posting on the web in the fall of 2010. Complete fact sheet Fall 2010.

Objective 6 Evaluate, Measure and Report on the Effectiveness of the RE-Powering America's Land Activities

Action 18 – Track Renewable Energy on Contaminated Lands Projects and Collect Specific Data That Can Be Used to Measure Progress and Environmental Benefits

Currently, very little information is collected on the many renewable energy on contaminated lands projects across the country. Collecting information on the sites and key indicators of the environmental and economic benefits of the program would be useful in communicating inside and outside the Agency. CPA will take the lead for this action item.

CPA, working with the EPA's RE-Powering America's Land Team will:

- ◆ Convene the RE-Powering America's Land Team to determine what information on sites should be collected and how the information will be used.
- ◆ Collect project information on a voluntary basis from all Regions.

Timing: Identify what data should be collected and reported in FY10. Begin collecting project information in FY11.

Action 19 – Measure Our Progress in Carrying Out Management Plan

EPA is using a variety of tools to promote the siting of renewable on contaminated land. To hold ourselves accountable and be transparent about our progress, EPA will track its efforts in carrying out the actions in this management plan. CPA will take the lead for this action item.

CPA, working with the EPA's RE-Powering America's Land Team will:

- ◆ Measure progress in meeting the Management Plan milestones for each action.
- ◆ Report progress annually.

Timing: Report progress annually.

Action 20 – Evaluate the Effectiveness of the RE-Powering Initiative

One way for a program to know how well it is accomplishing its goals and to improve in areas that are not working well is to conduct periodic program evaluations. At this early stage of the RE-Powering America's Land Initiative, it is too early to determine how well the initiative is meeting its environmental outcome goals of increasing the siting of renewable energy on contaminated land instead of green space. Instead, EPA can conduct an evaluation to determine how well EPA is carrying out the actions of the RE-Powering America's Land Initiative and where EPA can make improvements. CPA will take the lead for this action item.

CPA, working with the EPA's RE-Powering America's Land Team will:

- ◆ Set up a formative evaluation of the RE-Powering America's Land Initiative.
- ◆ Develop report with findings and recommendations for improving the program.
- ◆ Implement recommendations.

Timing: Begin in spring 2010