

## RE-Powering America's Land

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**Organisation:** United States Environmental Protection Agency

**Country:** United States

**Level of government:** Central government

**Sector:** Environmental protection

**Type:** Public Service

**Launched in:** 2008

**Link to the innovation's website**

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# Description

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RE-Powering America's Land Initiative – The U.S. Environmental Protection Agency (EPA) promotes renewable energy development (i.e., solar panels, wind turbines) on current and formerly contaminated land, landfills and mine sites when such development is aligned with the community's vision for the sites. The Initiative bolsters the market for blighted lands, diminishes development pressures on open space and promotes renewable energy as an alternative to traditional fossil-fuel power generation. Through reuse of these sites, communities can transform vacant, underutilised or blighted properties and realise environmental, economic and social benefits. RE-Powering's innovative approach has provided tools, technical assistance and outreach to communities, local and tribal governments and other stakeholders involved in the remediation of contaminated lands and the development of renewable energy.

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## Why the innovation was developed

Given projected energy needs for the U.S. and the significant land requirements associated with wide-scale renewable energy deployment, EPA recognised the opportunity to create an entirely new market for contaminated sites. The Agency had the opportunity to build upon the successes of its land revitalisation efforts and to develop highly refined tools to address the particular needs of both the renewable energy and cleanup communities. The Initiative provides best practices, guidance and technical assistance that are readily applied by real-world stakeholders in renewable energy development.

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## Objectives

Enhance public trust, Improve effectiveness, Improve efficiency, Improve service quality, Increase citizen engagement, Support economic growth

- Provide technical and programmatic assistance.
    - Develop and enhance tools.
    - Position the agency as an ally and expeditor of projects.
    - Support capacity building, training and research.
  - Promote policies and best practices that encourage renewable energy on Contaminated lands.
    - Highlight incentives and analyse policies at the federal, state and local level.
    - Share best practices that remove barriers, streamline process and promote sustainability.
    - Communicate opportunities, evaluate successes and lessons learned.
  - Partner with stakeholders and leverage agency efforts.
    - Coordinate and collaborate with other federal agencies.
    - Leverage available funding and coordinate across programmes.
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## Main beneficiaries

Businesses, General population, Government bodies, Government staff

- Local Communities.
  - State, Local and Tribal Governments.
  - Other Federal Agencies.
  - Developers and Financiers of Renewable Energy.
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## Existing similar practices

**Brownfields Program; Superfund Redevelopment Initiative; RCRA Reuse and Brownfields Prevention; Petroleum Brownfields; Landfill Methane Outreach Program**

In my own organisation

U.S. EPA

EPA has developed a few programmes and initiatives to spur the cleanup and reuse of contaminated sites. RE-Powering America's Land distinguishes itself from these other redevelopment/revitalisation programmes by encouraging renewable energy production as the reuse option of choice.

<http://www.epa.gov/oswer>

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# Results

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## Effectiveness

Although difficult to directly attribute to the Initiative, the number of installations of renewable energy on contaminated lands has increased substantially over the last 5 years where now 73 projects providing over 200 MW of capacity are installed. (Projects and capacity are tracked through publicly available sources).

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## Service quality

### Responsiveness:

As part of the Initiative, the Agency established a Rapid Response Team to provide stakeholders names of individuals across the country to facilitate projects and expedite the consideration of issues.

### Other:

EPA has influenced the potential reuse opportunities for contaminated lands and has raised awareness and facilitated the transformation of these properties from health and environmental liabilities into community assets. The increase in activity, the number of inquiries and the engagement of an ever widening group of stakeholders speak to the effectiveness and reach of these efforts.

# Development

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## Design

In 2007, the EPA mining team identified renewable energy as a potentially viable reuse for challenging mine sites and noted how existing utility and transportation infrastructure could greatly reduce development costs and timelines. Discussions by EPA employees across its waste management programmes led to the recognition that many other urban, contaminated properties shared the same characteristics that made mining sites viable for renewable energy projects. EPA's Center for Programme Analysis (CPA), a policy and programme evaluation and analysis office, took an inventory of EPA-tracked contaminated sites and examined their characteristics against renewable energy screening criteria, which led to the formal launch of the RE-Powering America's Land Initiative.

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## Testing

The Initiative has from its inception engaged stakeholders to elicit ways in which the Agency could contribute towards the revitalisation of contaminated lands for renewable energy development, to determine whether the Initiative was “on track,” and to identify emerging issues. The Agency has periodically held stakeholder meetings across the country to gauge the effectiveness of its tools and to better understand obstacles to further implementation. Furthermore, RE-Power routinely holds webinars or other outreach sessions to solicit feedback.

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## Implementation

### Tools used:

EPA has developed mapping and screening tools to assist stakeholders in their consideration of renewable energy on contaminated lands. Using Google Earth as an accessible mapping platform, EPA has identified and mapped over 66 000 contaminated or potentially contaminated sites with renewable energy potential. EPA has also developed decision trees for solar and wind resources to further consider feasibility at specific sites. EPA also provides a number of handbooks, checklists and outreach materials to assist in the evaluation of renewable energy potential. Finally, the Agency in cooperation with the National Renewable Energy Laboratory provided feasibility studies for approximately 40 communities.

### Resources used:

The Initiative is supported by staff efforts and extramural resources. Agency personnel both at headquarters (Washington, DC) and across the 10 EPA Regional offices contribute to the development and implementation of the effort. Funds have been used to provide support from consulting firms and through interagency agreements from other Federal Agencies and laboratories.

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## Challenges and solutions

Through stakeholder meetings, RE-Powering identified three primary obstacles: liability; lack of understanding of the cleanup process and potential opportunities; and united federal assistance. Environmental liability was a concern due to effects on financing and insurance, as well as costs associated with cleaning up potential contamination. In support of RE-Powering, the Agency has clarified existing enforcement guidance and developed supportive policies associated with tenant liability. EPA developed handbooks, held workshops and webinars and other outreach materials to further educate stakeholders on the cleanup and development processes. EPA has also stepped up its collaborative efforts with other Federal agencies, and State/local governments.

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## Partnerships

### Developers

Private sector

To address potential issues to reusing sites.

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### US Department of Energy's National Renewable Energy Laboratory (NREL)

Other Public Sector

At its launch, RE-Powering developed a unique partnership with US Department of Energy's National Renewable Energy Laboratory (NREL) to leverage federal renewable energy expertise. Combining the waste management expertise of US EPA with the renewable energy expertise of NREL led to the successful promotion of renewable energy on contaminated lands. Moving forward, RE-Powering seeks to partner with other Federal Agencies (e.g., Defense, Interior), as they work to meet their renewable energy needs/goals. In addition, RE-Power works collaboratively with local and state governments, communities, as well as the private sector (e.g. developers) to address potential issues to reusing sites.

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# Lessons Learned

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## Lessons Learned

- RE-Powering America's Land has found success in promoting the development of renewable energy on contaminated levels by utilising a mix of strategies – national level screening tools to generate interest and provide initial feedback; handbooks, technical and non-technical outreach to discuss shared approaches, obstacles and opportunities; highlighting installations and case studies to explore the development path at particular sites; and technical assistance and engagement at a site-specific level.
  - Partnering with other Federal Agencies has allowed EPA to contribute its expertise on contaminated lands and leverage the expertise of others – in this case, the expertise of the National Renewable Energy Laboratory (NREL) regarding renewable energy.
  - Through tailored messaging, fact sheets, webinars, maps and other vehicles, the Initiative helps bring information to stakeholders that have the opportunity to influence and lead the development of renewable energy on contaminated land.
  - Engagement of stakeholders through periodic meetings, listening sessions and workshops has allowed the Agency to gauge the relevance, productivity and direction of its efforts.
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## Conditions for success

The Initiative has benefitted from sustained interest in and prioritisation of the productive reuse of contaminated sites and the commitment government wide to increase the share of renewable energy.

Such context will remain important for the future success of the Initiative. In addition, local communities have a vested interest in cleaning up contaminated sites and putting them back into productive uses and are often supportive of renewable energy projects as a reuse option when such projects align with the community's goals and interests.

Continued dialogue associated with periodic stakeholder meetings and workshops remain important in focusing the Initiative and making the most of a small staff and limited resources to promote a national effort. The Initiative has also sought to transform the perception of these properties from liabilities into assets and has, through analysis and outreach, created conditions where decision makers and other stakeholders become interested in these properties for the advantages they provide. Access to infrastructure, favorable zoning, and well characterised sites become attractive attributes in this regard. And finally, an approach that empowers and enables others to pursue renewable energy development on contaminated lands allows market forces, communities and public and private actors at all levels to forward this agenda in a way that the Federal government alone never could.

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## Other information

In 2013, EPA's RE-Powering America's Land Initiative was recognised as one of the Top 25 Innovations in American Government by Harvard University.

The agency is currently exploring approaches to evaluate the Initiative.

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