
# Welcome to the CLU-IN Internet Seminar

## Addressing the Potential Liabilities Associated with Siting Renewable Energy on Contaminated Lands

Sponsored by:
US EPA, OSWER

Delivered: July 6, 2011, 2:00 PM - 3:30 PM, EDT (1:00 PM-2:30 PM CDT)

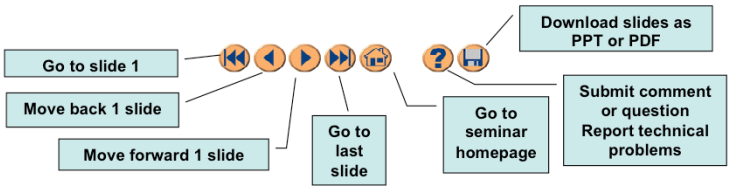
*Instructors:*
*Lura Matthews, Program Analyst, U.S. Environmental Protection Agency (mathews.lura@epa.gov or 202-566-2539)*
*Elisabeth Freed, U.S. Environmental Protection Agency (freed.elisabeth@epa.gov or 202-564-5117)*
*Amy Voisine-Shea, Site Development & Compliance Manager, WMECo Solar Program*
*Moderator:*
*Jean Balent, EPA Technology Innovation and Field Services Division, (balent.jean@epa.gov or 703-603-9924)*

***Visit the Clean Up Information Network online at www.cluin.org***

1

# Housekeeping

- Please mute your phone lines, Do NOT put this call on hold
  - press *6 to mute #6 to unmute your lines at anytime (or applicable instructions)
- Q&A
- Turn off any pop-up blockers
- Move through slides using # links on left or buttons




- This event is being recorded
- Archives accessed for free http://www.clu-in.org/conf/tio/siting/

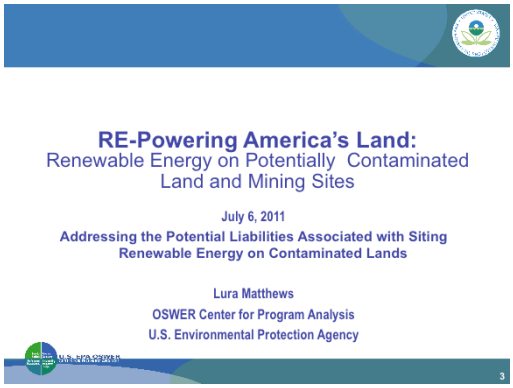
2

Although I'm sure that some of you have these rules memorized from previous CLU-IN events, let's run through them quickly for our new participants.

Please mute your phone lines during the seminar to minimize disruption and background noise. If you do not have a mute button, press *6 to mute #6 to unmute your lines at anytime. Also, please do NOT put this call on hold as this may bring delightful, but unwanted background music over the lines and interupt the seminar.

You should note that throughout the seminar, we will ask for your feedback. You do not need to wait for Q&A breaks to ask questions or provide comments. To submit comments/questions and report technical problems, please use the ? Icon at the top of your screen. You can move forward/backward in the slides by using the single arrow buttons (left moves back 1 slide, right moves advances 1 slide). The double arrowed buttons will take you to 1st and last slides respectively. You may also advance to any slide using the numbered links that appear on the left side of your screen. The button with a house icon will take you back to main seminar page which displays our agenda, speaker information, links to the slides and additional resources. Lastly, the button with a computer disc can be used to download and save today's presentation materials.

With that, please move to slide 3.


RE-Powering America's Land:
Renewable Energy on Potentially Contaminated Land and Mining Sites
July 6, 2011
Addressing the Potential Liabilities Associated with Siting Renewable Energy on Contaminated Lands
Lura Matthews
OSWER Center for Program Analysis
U.S. Environmental Protection Agency
3

## What Will be Covered Today

- What is RE-Powering America's Land?
- Why Focus on Renewable Energy Generation on Contaminated Sites?
- Existing RE-Powering Tools
- Feasibility Studies
- Next steps at EPA
- Success Stories

## RE-Powering America's Land: Renewable Energy on Contaminated Land & Mining Sites

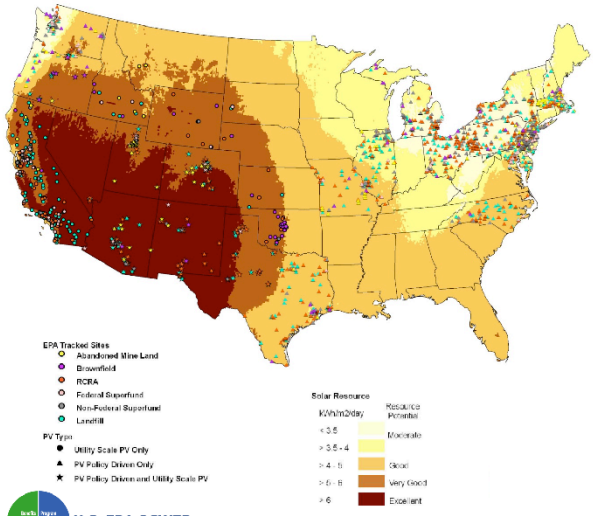
- EPA launched *RE-Powering America's Land* in 2008
- EPA has authority to investigate, assess, and clean up contaminated sites
- Recognized the potential redevelopment opportunities of these EPA tracked sites:
  - Brownfields
  - Superfund
  - Abandoned Mine Lands
  - RCRA – corrective action
  - Landfills

- To date, have mapped over 15 million acres, overlaid with RE potential

## Why the Focus on Renewable Energy Development on EPA Tracked Sites?

- **Many of these sites offer:**
  - Existing infrastructure - transmission lines, roads and railway
  - Potentially lower transaction costs
  - Improved Public Support and Faster Permitting/Zoning
- **Siting renewable energy on these sites may:**
  - Increase economic value for the property
  - Further environmental sustainability by maximizing land use
  - Reduce the stress on greenfields
  - Provide clean energy for use on-site, locally, and/or to utility grid
  - Create local jobs

# Potential for Solar

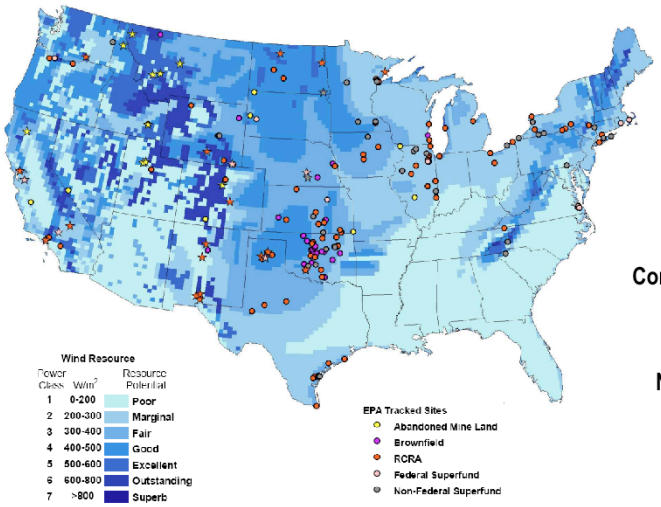



| | |
|---|---|
| Utility PV | 470 sites |
| Policy Driven PV | 1,397 sites |
| Non-grid PV | 11,384 sites |
| Utility CSP (Stirling) | 85 sites |
| Utility CSP (Trough) | 60 sites |

U.S. EPA OSWER
CENTER FOR PROGRAM ANALYSIS

7

# Potential for Wind




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

U.S. EPA OSWER
CENTER FOR PROGRAM ANALYSIS

8

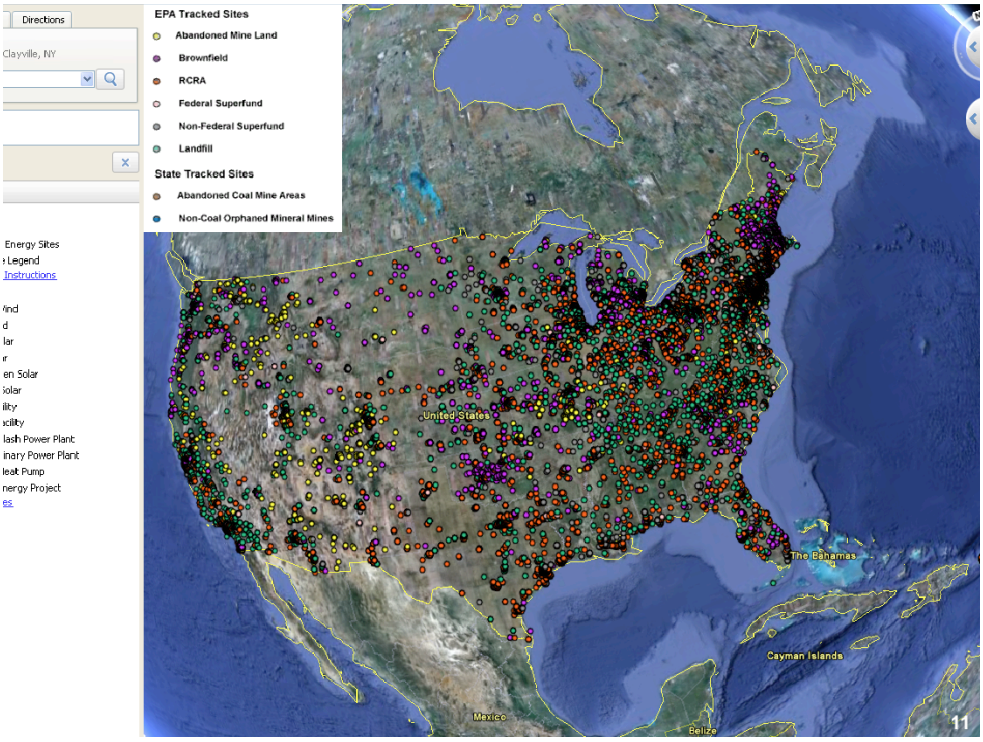
## RE-Powering Tools

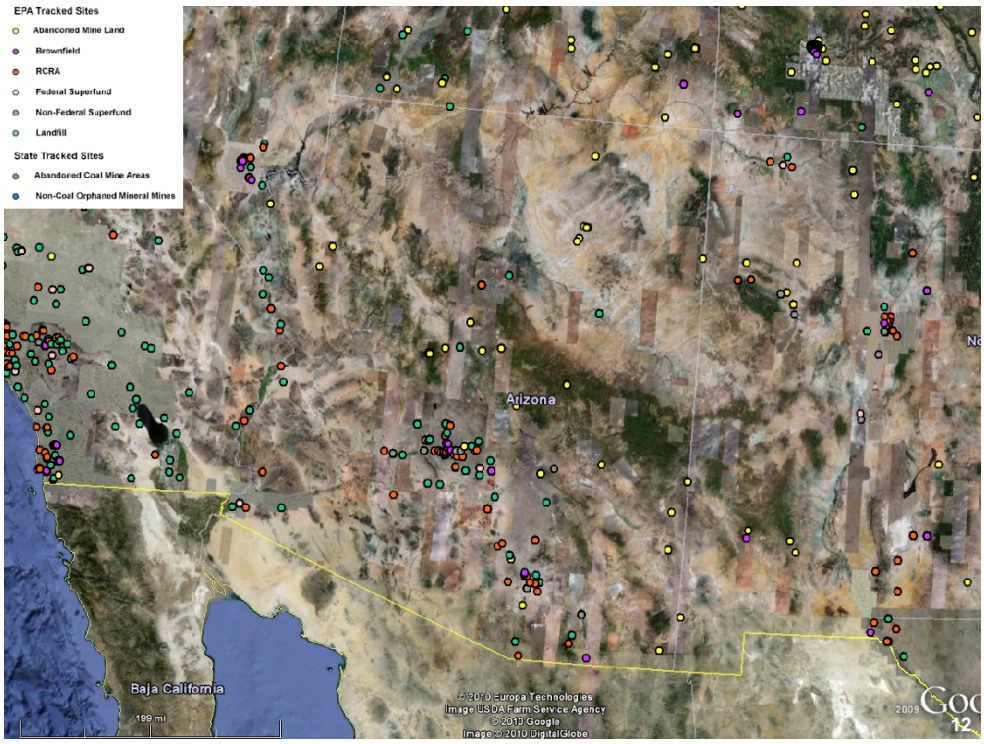
- **Google Earth Mapping**
  - Joint EPA-NREL venture produced interactive maps
- **Technical Assistance**
- **Success Stories**
  - Identifying and sharing successes
- **Incentives**
  - State-specific maps and financial incentive sheets describing renewable energy and contaminated lands redevelopment incentives in each state

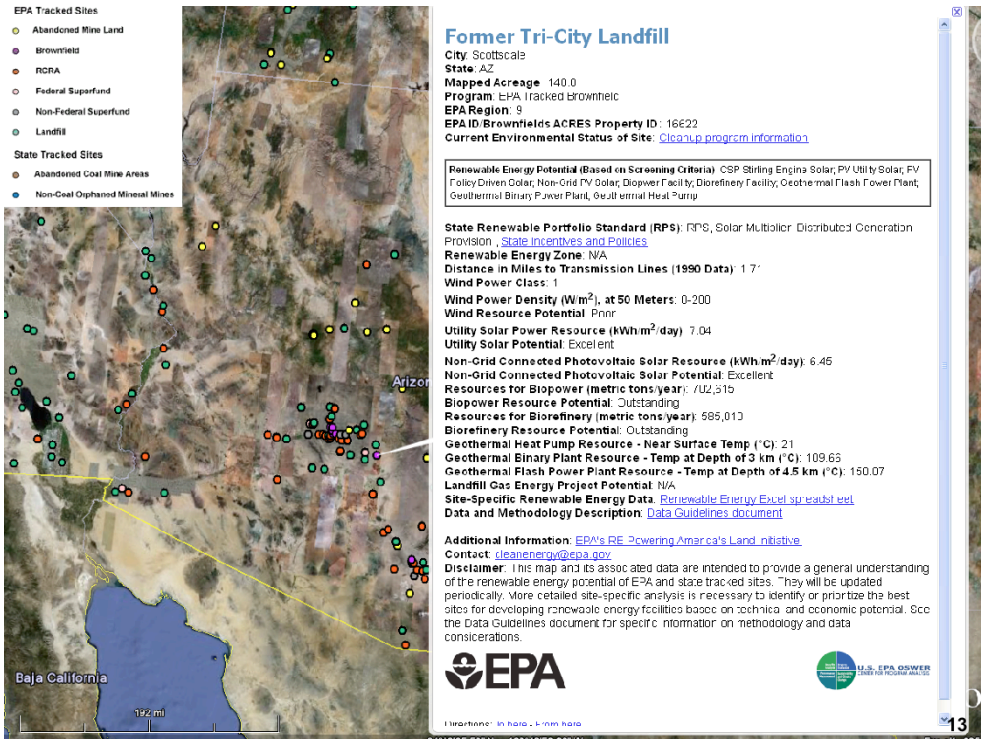
**Website:** www.epa.gov/renewableenergyland

## Google Earth Mapping Tool

- **Mapped EPA inventory of EPA tracked sites**
  - Abandoned Mine Lands
  - Brownfields – sites that received a Brownfields grant
  - 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


Directions
Clayville, NY
Energy Sites
Legend
Instructions
EPA Tracked Sites
Abandoned Mine Land
Brownfield
RCRA
Federal Superfund
Non-Federal Superfund
Landfill
State Tracked Sites
Abandoned Coal Mine Areas
Non-Coal Orphaned Mineral Mines
United States
The Bahamas
Cayman Islands
Mexico
Belize
11


EPA Tracked Sites
Abandoned Mine Land
Brownfield
RCRA
Federal Superfund
Non-Federal Superfund
Landfill
State Tracked Sites
Abandoned Coal Mine Areas
Non-Coal Orphaned Mineral Mines
Arizona
Baja California
199 mi
© 2010 Europa Technologies
Image USDA Farm Service Agency
© 2010 Google
Image © 2010 DigitalGlobe
2009


EPA Tracked Sites
Abandoned Mine Land
Brownfield
RCRA
Federal Superfund
Non-Federal Superfund
Landfill
State Tracked Sites
Abandoned Coal Mine Areas
Non-Coal Orphaned Mineral Mines
Baja California
192 mi
Former Tri-City Landfill
City: Scottsdale
State: AZ
Mapped Acreage: 140.0
Program: EPA Tracked Brownfield
EPA Region: 9
EPA ID/Brownfields ACRES Property ID: 16622
Current Environmental Status of Site: Cleanup program information
Renewable Energy Potential (Based on Screening Criteria): CSP Stirling Engine Solar; PV Utility Solar; PV Policy Driven Solar; Non-Grid PV Solar; Biopower Facility; Biorefinery Facility; Geothermal Flash Power Plant; Geothermal Binary Power Plant; Geothermal Heat Pump
State Renewable Portfolio Standard (RPS): RPS, Solar Multiplier, Distributed Generation Provision , State Incentives and Policies
Renewable Energy Zone: N/A
Distance in Miles to Transmission Lines (1990 Data): 1.7
Wind Power Class: 1
Wind Power Density (W/m2), at 50 Meters: 0-200
Wind Resource Potential: Poor
Utility Solar Power Resource (kWh/m2/day): 7.04
Utility Solar Potential: Excellent
Non-Grid Connected Photovoltaic Solar Resource (kWh/m2/day): 6.45
Non-Grid Connected Photovoltaic Solar Potential: Excellent
Resources for Biopower (metric tons/year): 702,315
Biopower Resource Potential: Outstanding
Resources for Biorefinery (metric tons/year): 585,010
Biorefinery Resource Potential: Outstanding
Geothermal Heat Pump Resource - Near Surface Temp (°C): 21
Geothermal Binary Plant Resource - Temp at Depth of 3 km (°C): 109.65
Geothermal Flash Power Plant Resource - Temp at Depth of 4.5 km (°C): 150.07
Landfill Gas Energy Project Potential: N/A
Site-Specific Renewable Energy Data: Renewable Energy Excel spreadsheet
Data and Methodology Description: Data Guidelines document
Additional Information: EPA's RE-Powering America's Land Initiative
Contact: cleanenergy@epa.gov
Disclaimer: This map and its associated data are intended to provide a general understanding of the renewable energy potential of EPA and state tracked sites. They will be updated periodically. More detailed site-specific analysis is necessary to identify or prioritize the best sites for developing renewable energy facilities based on technical and economic potential. See the Data Guidelines document for specific information on methodology and data considerations.
EPA
U.S. EPA OSWER
13

## NREL Partnership: Site Specific Analysis

- EPA Partnered with NREL to evaluate the feasibility of siting renewable energy on specific sites
- In 2010, conducting 12 site-specific analyses and one alternative gas station project
- 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
- Currently in the process of selecting more sites for feasibility studies

## Next Steps at EPA

- Expand the toolbox of resources for use by EPA staff, states, and stakeholders
  - Solar on landfill guidance
  - Case studies tied to barriers
- Webinar Series
- Clarify Liability Protections
- Adding other sites
- Federal Partners Network
  - Partner with DOE and other Federal Agencies to promote RE-Powering

# Examples of Success: Aerojet Solar Project

This solar facility is one of the largest single-site industrial installations in the United States.

## Aerojet Project

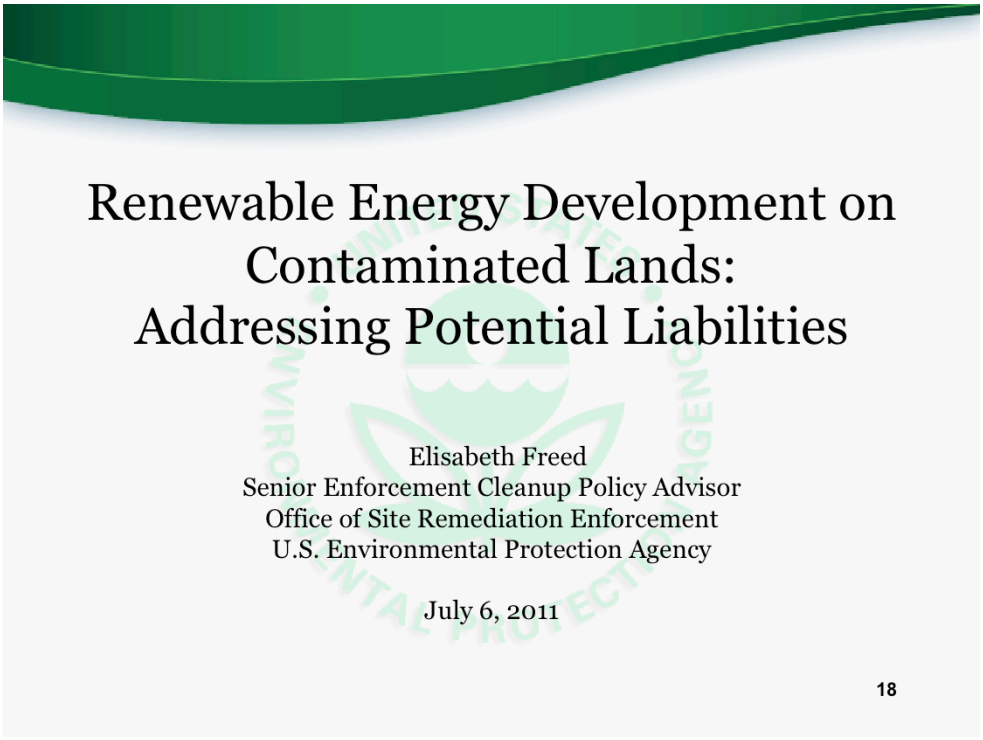
## Sacramento County, CA

- 6 MW
- 40 acres
- 30,000 PV solar panels
- Single axis tracking system
- Powers approximately 30% of energy used for cleanup of site

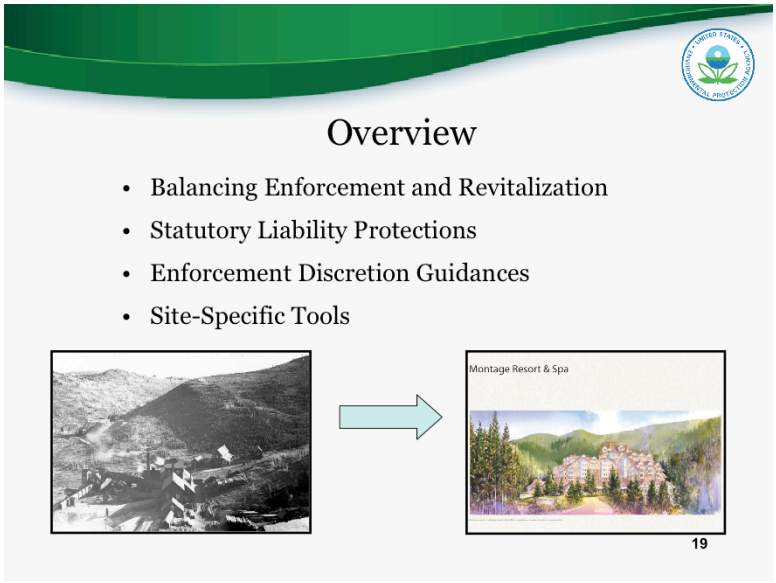
# Thank You!


» Lura Matthews
» RE-Powering Lead
» OSWER Center for Program Analysis
» Phone: (202) 566-2539
» Email: matthews.lura@epa.gov


» **www.epa.gov/renewableenergyland**




Addressing the Potential Liabilities Associated with Siting Renewable Energy on Contaminated Lands



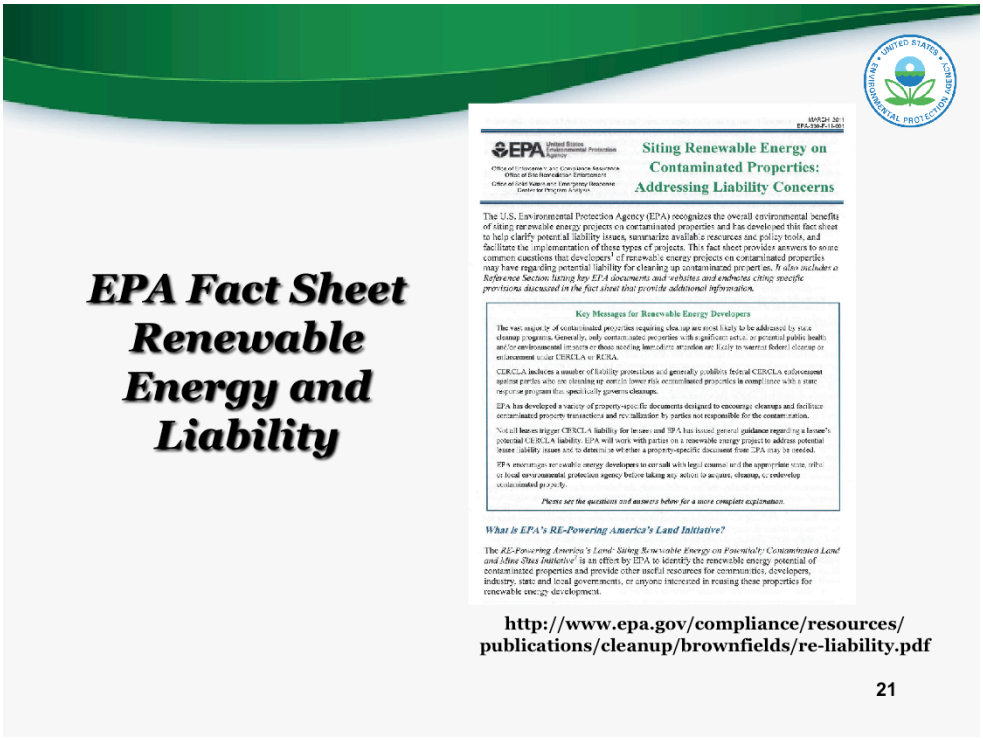

Here today to talk about:

- How EPA balances our enforcement mission with encouraging reuse of cleaned up sites
- Existing statutory protections from CERCLA liability
- EPA enforcement discretion guidances that support site reuse
- EPA site-specific tools to facilitate site reuse.

<u>Pictured: Empire Canyon ER3 Pilot</u>

- On April 17, 2007, EPA Administrator Steve Johnson formally announced the first project under the ER3 Initiative where an enforcement incentive influenced a developer to significantly minimize the environmental impacts of a planned redevelopment.
- The on-site event publicized the Prospective Lessee Agreement (PLA) for this development, which EPA and DV Luxury Resort, LLC (DVLR) negotiated to provide the developer liability relief from certain future enforcement actions by EPA in exchange for DVLR's assistance in completing cleanup actions and commitment to sustainable redevelopment at the site. DVLR agreed to develop a "green" hotel, spa and condominium project on a former contaminated mine site in Empire Canyon, a historic ore mining and processing area located in Park City, Summit County, Utah.
- The project, to be known as the Montage Resort & Spa, will incorporate "green" features into the design, construction, and operation of the development to minimize the project's environmental footprint. Sustainability features to be incorporated into the proposed project, such as native vegetation, conservation of open space, use of wind-generated power and a recycling program, are outlined in the Empire Canyon fact sheet.
- This resort will be not only a "healthy building," but will be built according to smart growth principles, encouraging alternative transit to and from the resort, as well as helping to provide affordable housing for resort workers.


- The Office of Site Remediation Enforcement implements the enforcement of EPA's hazardous waste laws, including CERCLA and the corrective action and underground storage tank provisions of RCRA.
  - The "polluter pays" for cleanups is the fundamental underlying principle of CERCLA.
  - To conserve resources of the Superfund, this principle is achieved through an "enforcement first" strategy for the cleanup of CERCLA sites.
- Today, Enforcement is balancing our primary mission of polluter pays and enforcement first with strong support for contaminated site revitalization and sustainable reuse.
  - While we will continue to have a robust enforcement program, we believe that reuse complements our enforcement first strategy and that there are significant environmental benefits associated with the reuse of contaminated properties.
  - So, today, all of EPA shares the same goal – to maximize site cleanup and reuse.
- We believe reuse can help us achieve a number of enforcement goals including:
  - Parties redeveloping sites may conduct, finish, enhance, and/or maintain the cleanup and thus conserve Trust Fund and state resources.
  - Reuse can lead to more cost-effective cleanups tailored to a specific reuse, potentially saving EPA, state, and PRPs money and time spent in negotiations.
  - Supports EPA's Strategic Plan
  - Faster cleanups
  - Enhanced remedies
  - BFPP cooperation guaranteed
  - Improves IC implementation
  - Reduces blight, increases property values and jobs
- In recognition that traditional redevelopment offers great environmental benefits such as preserving green space, reducing sprawl and conserving natural resources otherwise needed for new infrastructure, we work closely with and provide strong support for EPA and state cleanup and redevelopment efforts.
- We are also working closely with our partners to support their efforts to incorporate sustainability, green remediation and renewable energy projects into the Superfund, brownfields and RCRA cleanup programs.
  - Each of these efforts should reduce the environmental impacts of cleanups and reuse (and hopefully support local economies and lead to the creation of green jobs).




Though a number of OSWER listening sessions associated with its RE-Powering America's Land Initiative, EPA has learned that many renewable energy developers are not as familiar with CERCLA liability protections as brownfield developers and other contaminated property developers are.

As a result, OECA and OSWER are jointly developing a fact sheet to assist developers of renewable energy on contaminated properties by providing answers to some of the common questions they may have regarding potential liability.

EPA HQ is working closely with the Regions on this fact sheet and has requested comment the states through ASTSWMO on the latest and hopefully final draft.

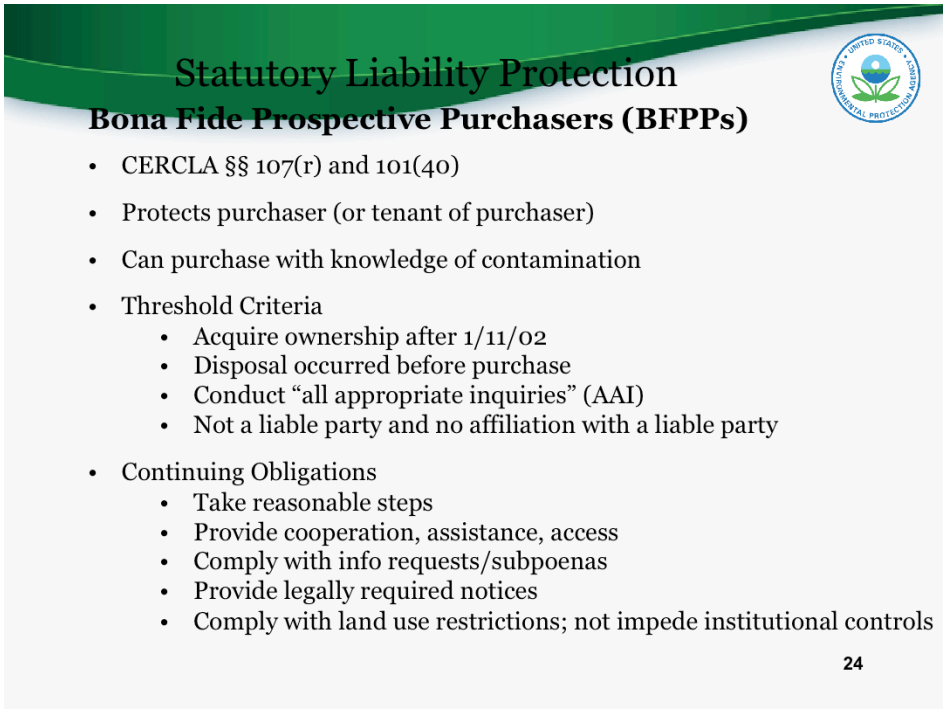
In a nutshell, the fact sheet provides 101 level information about existing EPA enforcement discretion policies and site-specific tools. While the fact sheet breaks no new ground regarding EPA policies, we believe it will provide valuable basic information that can assist renewable energy developers who may be unfamiliar with potential cleanup liability and protections.

The concepts covered in the rest of my presentation capture the key themes of the fact sheet.

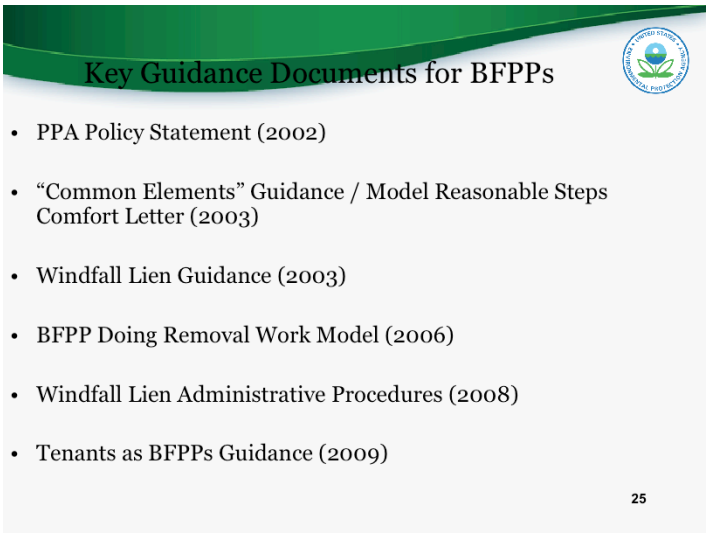

- Historically, liability uncertainty caused property owners to avoid real estate transactions regarding contaminated properties or seek government involvement (covenants) for such transactions.
- Since the late 1980s, out of a concern for fairness and equity toward certain parties, EPA has been issuing enforcement discretion policies and site-specific tools to address liability uncertainties (e.g., MSW Guidance, Contaminated Aquifer Policy, Residential Owners, PPAs, comfort letters).
- The 2002 Brownfield Amendments to CERCLA are so important because they codified the liability scheme EPA was applying through our enforcement discretion guidance approaches and established a number of self-implementing liability protections.
- EPA strongly supports the CERCLA liability protections for landowners and it is our goal and belief, consistent with Congress' intent, that EPA involvement is not necessary or appropriate in the vast majority of contaminated property transactions. Expectations of EPA involvement in contaminated property transactions, including those for renewable energy development, create unnecessary barriers.
- EPA has issued several additional enforcement discretion guidances since 2002 to further clarify our enforcement intentions and facilitate the implementation of the Brownfield Amendments to CERCLA.
- Finally, EPA also has developed site-specific enforcement tools that have been effective facilitating contaminated property transactions and revitalization when perceived liability remains an obstacle and EPA involvement is critical.

# Enforcement and Renewable Energy Development Transactions

- Renewable energy developers and investors are often not aware of the statutory liability protections, enforcement discretion guidances, and site-specific tools available to protect them from potential CERCLA liability.
- EPA also will use available enforcement resources when appropriate to facilitate transactions for renewable energy on contaminated properties when perceived liability remains an obstacle and EPA involvement is critical.
- Requests for such assistance should be the exception.




- The 2002 Brownfield Amendments provided a number of liability protections for parties who own contaminated property but did not cause or contribute to the contamination.
- The most important and widely applicable protection is for bona fide prospective purchasers (BFPPs).
- The BFPP provision protects a person (or a tenant of a person) who purchases with knowledge of contamination provided they meet certain threshold criteria and continuing obligations.
- Threshold criteria for BFPPs, CPOs, and ILOs include:
  - Acquires ownership after 1/11/02
  - Disposal occurred before purchase
  - Conduct "all appropriate inquiries" (AAI)
  - BFPPs must not be potentially liable or affiliated with any other person who is potentially liable for the site response costs
- Continuing Obligations include:
  - Taking "reasonable steps to prevent releases" with respect to hazardous substances affecting a landowner's property
  - Providing cooperation, assistance, and access to the property
  - Complying with information requests and subpoenas
  - Provided all legally required notices with respect to discovery or release of any hazardous substances at the facility
  - Complying with land use restrictions and not impeding the effectiveness or integrity of institutional controls




- As I mentioned earlier, EPA has issued a number of enforcement discretion guidances to further clarify our enforcement intentions and facilitate implementation of the 2002 Brownfield Amendments to CERCLA.
- PPA Policy Statement (2002)
  - Congress provided a self-executing statutory protection for BFPPs removing the need for any EPA involvement in the vast majority of real estate transactions, thus greatly reducing the need for EPA to enter into enforceable agreements called Prospective Purchaser Agreements (PPAs).
- Common Elements Guidance / Model Reasonable Steps Comfort Letter (2003)
  - Guidance includes a model reasonable steps letter that describes what steps a purchaser should take to stop any ongoing releases and prevent future releases at sites where EPA has this information. Letter can also be used to communicate the status of any EPA windfall liens.
  - Reasonable Steps and/or windfall lien comfort/status letters have facilitated a number of transactions. EPA has provided dozens of this type of letter to date.
- Windfall Liens Guidance (2003)
  - Identifies criteria for EPA pursuing a windfall lien, and specific circumstances where EPA will generally NOT seek a lien.
  - Explains that for specific circumstances where EPA will generally not seek a windfall lien, EPA may provide a "comfort/status" letter.
  - Includes model windfall lien resolution for circumstances where EPA will pursue a windfall lien.
- Model Removal AOC (2006)
  - Removal work to be performed must be more than "reasonable steps"
  - For use at sites of federal interest
- Windfall Lien Administrative Procedures (January 2008)
  - Discusses the timing for filing of a "windfall lien" notice under § 107(r) and the administrative procedures that should accompany the filing of a windfall lien notice.
  - Includes a model notice letter that should be used to notify property owners of the possible filing of a windfall lien notice and apprises the property owner of the procedures available to it should it contest the legitimacy of the windfall lien.
- Tenants as BFPPs Guidance (January 2009)
  - Guidance addresses questions related to the term "tenants" as it is used in CERCLA § 101(40) and whether the BFPP definition and liability limitation apply to all tenants, or merely to tenants whose property interest is so great as to make them potentially liable as CERCLA owners under the case law.
  - Provides guidance on how EPA intends to exercise its enforcement discretion with regard to "tenants" as that term is used in the BFPP provision.
  - Recognizes the important role of leasehold interests in facilitating the cleanup and reuse of contaminated properties.


- EPA enforcement staff have succeeded at a number of sites in encouraging PRPs and BFPPs to incorporate sustainability principles into their clean up and reuse plans. Similarly, EPA can work with renewable energy developers.

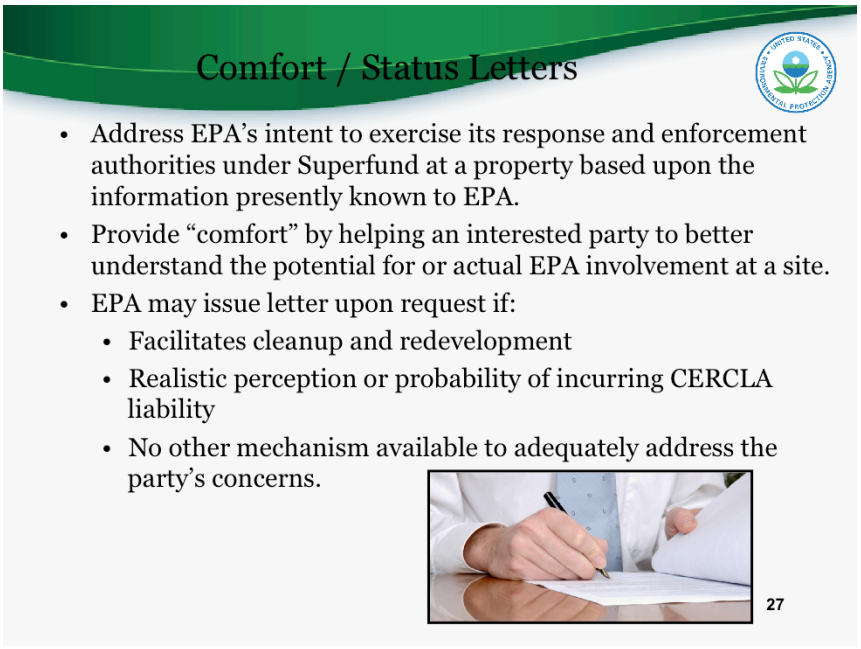
- One area where EPA enforcement staff can help is explaining potential liability protections to developers and prospective purchasers.

- As I mentioned earlier, EPA believes that the existing statutory liability protections and enforcement discretion guidances address the potential liability concerns of purchasers and developers at the vast majority of contaminated sites.

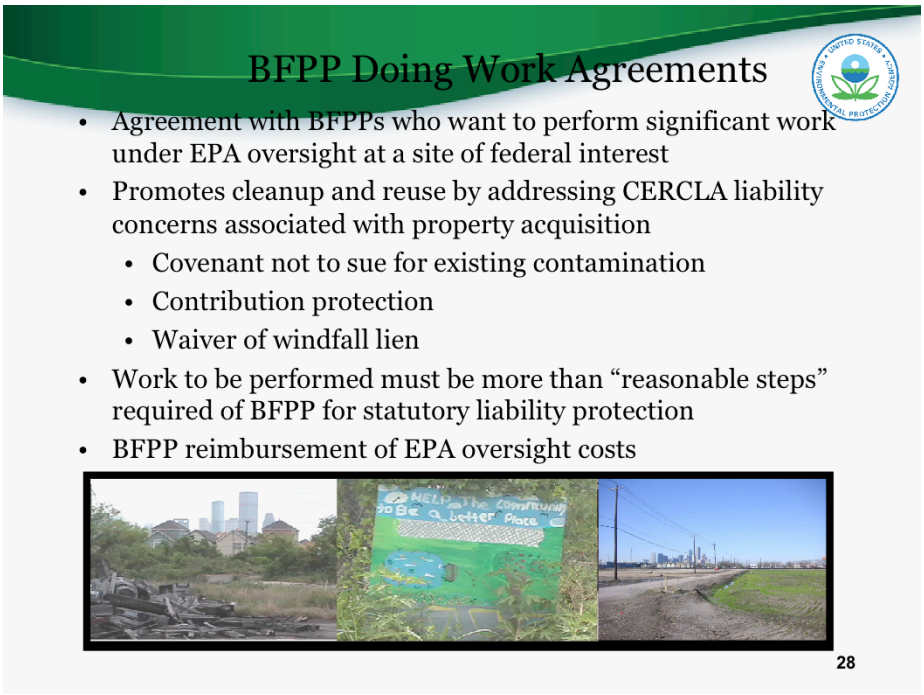
- Notwithstanding, another way EPA can help developers and prospective purchasers is through the use of site-specific tools when potential liability is the key barrier to a transaction (subject to available EPA staff resources).

- These tools are:
    - Comfort/status letters
    - BFPP Doing Work Agreements
    - Environmentally Responsible Redevelopment and Reuse (ER3) Initiative

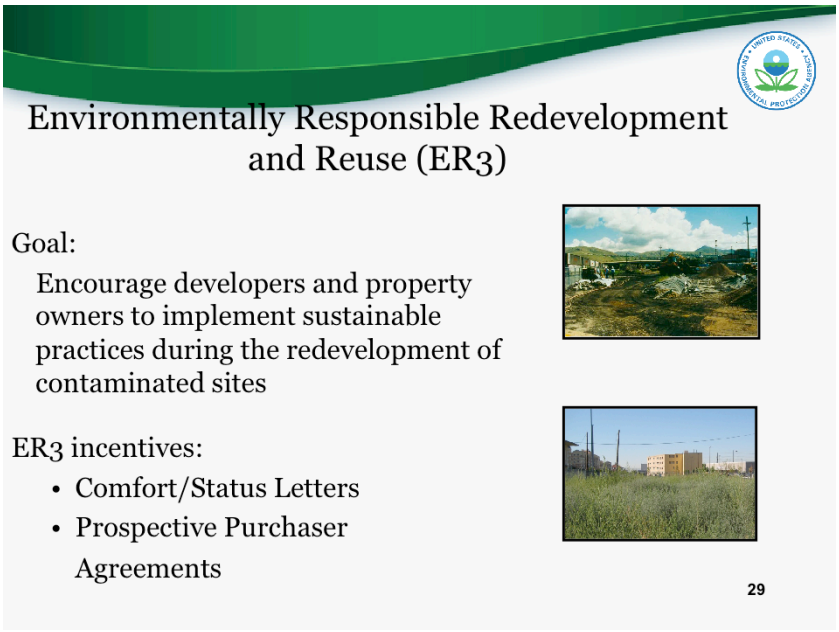
- When EPA has used these tools, we've been very successful in facilitating the transaction.




- Comfort/status letter is a key tool to allay fears of uncertainty of potential contamination and/or Superfund liability.
- Letters provide information about EPA's intentions to exercise its Superfund response and enforcement authorities toward a particular piece of property and offer "comfort" by helping an interested party to better understand the potential for or actual EPA involvement at a site.
- Letters are not "no action" assurances
- EPA intends to limit the use of such comfort to where
  - it may facilitate the cleanup and redevelopment of brownfields,
  - there is the realistic perception or probability of incurring Superfund liability, and
  - there is no other mechanism available to adequately address the party's concerns.
- EPA has issued hundreds of comfort letters to facilitate transactions where perceived federal liability was a barrier to reuse. Since 2002, EPA has issued dozens of "reasonable steps" and/or "windfall lien" comfort letters to facilitate contaminated property transactions.
- There may be federal-lead RCRA sites where a C/S letter is appropriate.
- Types of Superfund comfort letters:
  - No Previous Superfund Interest Letter -- may be provided to parties when there is no historical evidence of federal Superfund program involvement with the property/site in question.
  - No Current Superfund Interest Letter -- may be provided when the property/site either has been archived and is no longer part of the CERCLIS inventory of sites, has been deleted from the NPL, or is situated near, but not within, the defined boundaries of a CERCLIS site.
  - Federal Superfund Interest Letter -- may be provided at sites where EPA either plans to respond in some manner or already is responding at the site. This letter is intended to inform the recipient of the status of EPA's involvement at the property. The letter may respond to requests regarding the applicability of Agency Superfund policy, regulation or CERCLA statutory provision to a party or particular set of circumstances.
  - State Action Letter – used when a state has the lead for day-to-day activities and oversight of a response action *(e.g.,* deferred sites).
  - Reasonable steps Letter -- describes steps that a purchaser should take to stop any on-going releases and prevent future releases at sites where EPA has this information.
  - Windfall lien Letter -- discussing the status of EPA liens.

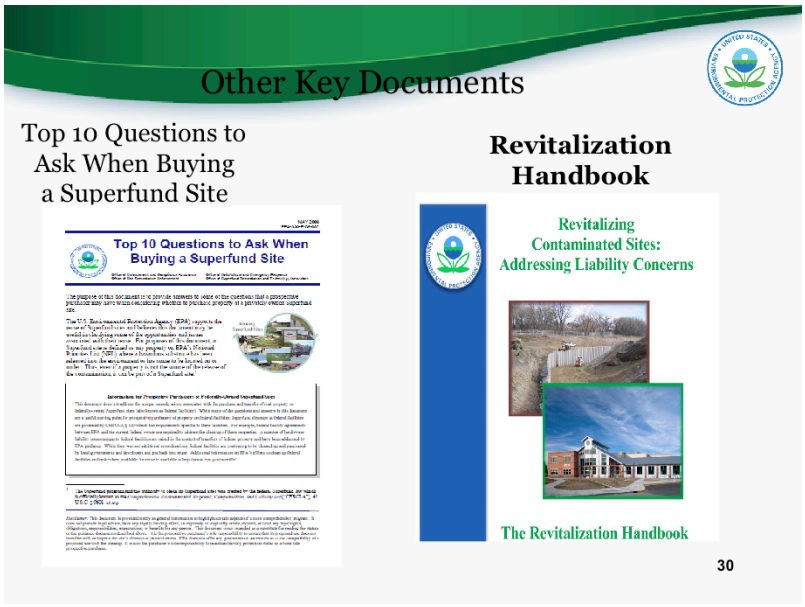



- Because BFPPs now have liability protection, we no longer use PPAs except in very limited circumstances.
- EPA has a model agreement for BFPPs who want to perform significant work (part or all of a removal, RD/RA) under EPA oversight at a site of federal interest.
- It's basically a PPA with work provisions inserted (work provisions mostly come from the model removal AOC).
- The work to be performed under a BFPP Agreement must be of greater scope and magnitude than the "reasonable steps to prevent releases" which must be performed by BFPPs in order to maintain their protected status under the statute.
- The BFPP Agreement is for use at sites of federal interest where the work is more significant and complex than other contaminated sites.
- The model is intended to promote reuse by addressing liability concerns associated with property acquisitions.
- The model provides a covenant not to sue for "existing contamination" and contribution protection and requires BFPP reimbursement of EPA's oversight costs.
- The agreement may satisfy part or all of any windfall lien.
- There are many reasons why a BFPP may want to perform a cleanup:
  - Faster Cleanup -- BFPP may be able to clean up a site more quickly
  - Better Coordination -- BFPP may be better able to coordinate cleanup activities into its reuse and/or redevelopment plans
  - Purchasing Incentives -- BFPP may be able to negotiate a lower purchase price from the seller by undertaking cleanup work that the seller would otherwise be responsible for
  - Windfall Lien Settlements -- BFPP may be able to settle a windfall lien by agreeing to perform all or part of a necessary cleanup; and/or
  - Cost Recovery -- BFPP performing a cleanup action may be entitled to cost recovery from non-settling responsible parties under appropriate circumstances.
- Many Diversified Interests Superfund Site in Houston TX
  - The 36 acre site in an environmental justice community approximately two miles east of downtown Houston and one block south of I-10. The Site's proximity to downtown Houston, its access to the highway, and the fact that there are no zoning restrictions in Houston, make the Site attractive to developers.
  - The MDI property was sold at a bankruptcy auction to competing bidders. EPA and DOJ worked with the bankruptcy trustee to entertain bids that included, as part of the bid, a commitment to perform the on-site cleanup work. This was the first administrative agreement in which a BFPP agreed to perform the cleanup work at a Superfund site.




- Environmentally Responsible Redevelopment and Reuse (ER3)
- One approach that might be a good fit for renewable energy developers with significant liability concerns is to participate in EPA's Environmentally Responsible Redevelopment and Reuse (ER3) Initiative.
- The goal of ER3 is to establish the next generation of environmental protection - one that proactively prevents and/or reduces contamination in the developed environment.
- To achieve this goal, EPA, through ER3, will collaborate with federal, state, public, and private partners to identify, develop, and deliver enforcement incentives to encourage developers and property owners to implement sustainable practices during the redevelopment of contaminated sites.
- Such incentives include site-specific tools such as comfort letters, streamlined orders, and prospective purchaser (or prospective lessee) agreements.
- Under ER3, we will expand the use of these tools after considering the sustainable components of the project.

- Case Examples
  - Empire Canyon -- Green resort and spa
  - Muskegon Heights -- Sustainable neighborhood
  - American Barrel -- Greening a former storage yard
  - Celotex -- PPA with a city that agreed to use sustainable development practices to develop a park at a Superfund site. The City's work will enhance the remedy being completed by the PRP



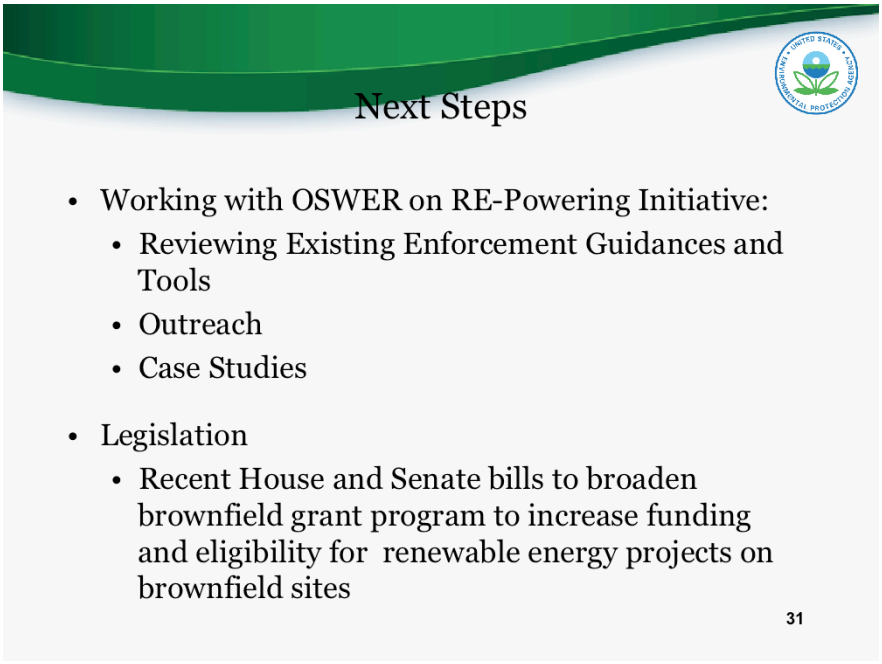

Top 10 Questions to Ask When Buying a Superfund Site (May 2008)

- This new fact sheet provides answers to questions that are useful to ask when acquiring Superfund sites.
- Its purpose is to support the reuse of Superfund sites by informing parties about the opportunities and liability issues associated with their reuse.
- http://www.epa.gov/compliance/resources/publications/cleanup/superfund/top-10-ques.pdf

Revitalization Handbook (May 2008)

- Comprehensive compilation of OSRE enforcement tools, guidance and policy documents that are available to help promote the cleanup and revitalization of contaminated sites.
- Includes a disk with electronic copies of key documents
- http://www.epa.gov/compliance/resources/publications/cleanup/brownfields/handbook/

These documents are available on EPA's website which I will provide at the end of my slides.




- Working with OSWER on RE-Powering Initiative:
  - Reviewing Guidances and Tools
  - Outreach
  - Case Studies

- Legislation
  - Recent House and Senate bills to broaden brownfield grant program to increase funding and eligibility for renewable energy projects on brownfield sites

- OSRE continues to develop guidances and tools as needed in response to the marketplace to address remaining liability concerns that are perceived as barriers to reuse.

- We're interested in emerging liability issues relating to implementation of the Brownfields Amendments. Real world examples help us develop useful guidance (*e.g.*, tenants issues, windfall lien administrative procedures, etc).

<u>Model BFPP Doing Remedial Work Agreement (coming soon)</u>

- EPA has entered into a number of BFPP Remedial Work Agreements adapted from our BFPP Removal Agreement.
- EPA plans to develop a Model Remedial Work Agreement to facilitate their consistent use.
- Regardless of whether it is a BFPP remedial or removal agreement, the work to be performed by a BFPP needs to be significant and of greater scope and magnitude than the "reasonable steps to prevent releases" which must be performed by BFPPs in order to maintain their protected status under the statute.


The policies and tools that I discussed today are available on the EPA websites listed on this slide.

# Contact Information

Elisabeth Freed
EPA, Office of Site Remediation Enforcement
(202) 564-5117
freed.elisabeth@epa.gov

Phil Page
EPA, Office of Site Remediation Enforcement
(202) 564 -4211
page.phil@epa.gov

Matthew Sander
EPA, Office of Site Remediation Enforcement
(202) 564-7233
sander.matthew@epa.gov

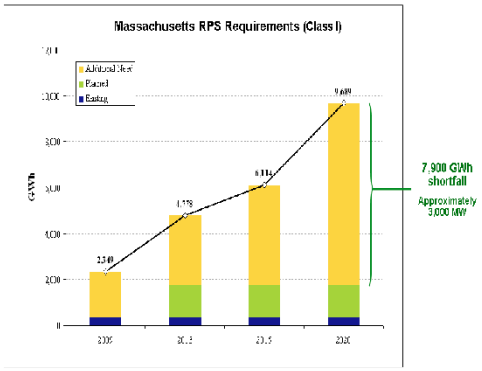
# The Challenges and Opportunities Associated with Developing Renewables on "Marginal Use Properties"

**Amy Voisine-Shea**
**Site Development & Compliance Manager**
**WMECO Solar Program**

**July 6, 2011**

## Why Solar? Fulfilling the Commonwealth's RPS objectives requires significant expansion in the development of renewable energy resources.

- New England has significant RPS objectives; forecasts indicate a large shortfall in renewable resources.
- Massachusetts has expansive goals for renewable power (particularly solar) supported by enabling policies.
  - 250 MW of solar by 2017
  - An RPS carve-out for solar
  - A robust S-REC program
  - "By Right" zoning for solar
- Progressive policies and good progress notwithstanding, MA is projected to be short on renewables by almost 3000 MW (in in 2020).




**Marginal Use properties are an abundant and ideal resource for the development of larger-scale solar energy facilities**

## WMECo's Solar Program

- On August 12, 2009 the DPU approved WMECo's Solar Program
  - The 1st & largest of its kind in Massachusetts and NE.
  - Utility owned & operated; customers receive energy value
  - Focusing on Landfill, Brownfield & Utility Sites
- Cost effectiveness is a key objective
  - Larger-scale projects offer economies of scale (and lower installation costs)
  - Extensive use of regional solar industry & competitive bidding creates efficiencies.
- Environmental & Community Benefits
  - Re-use of brownfield / landfill sites
  - New source of local property tax revenues

## Highlights of the Pittsfield Project – WMECo's First

- Consists of two separate parcels
  - 8 acres WMECo owned
  - 2 acres Pittsfield Economic Development Authority (PEDA) property
- WMECo's substation located between the two parcels
- Both sites have a long history of environmental issues
- Complicated permitting processes required for developing on these properties


**Major liability was concern for how environmental conditions and/or permitting complexities might affect the scope, schedule and cost of the project.**

## WMECO Property

- WMECO site – over the last 100 years the site was home to a coal fired power plant and several jet fuel turbines
  - In the 1980's there was a large jet fuel release
  - Site was actively remediated for the next 20+ years
  - Site was underutilized; used as pole laydown area
  - During construction WMECO filed an Activity and Use Limitation (AUL)
    - → AUL fit well with the plans for solar development
    - → 53 groundwater monitoring wells had to be retrofitted and designed around

## PEDA Property (Former GE Facility; PCB Impacts)

- Site has environmental restrictions which limited the constructability of the site
  - PV design and construction emphasized “no excavation”
  - No soils for disposal were generated as part of construction (limited via 500$/ton amount in RFP)
  - Very limited site preparation excavation (fence posts and one site light per side)
  - WMECo minimized risk by limiting any digging to the top 6 feet of soil
  - Site preparation work performed by a qualified remediation contractor
  - Detailed notification and excavation timelines had to be followed for the ERE
  - Created lots of seams in the construction process that had to be closely managed
  - Strict Training requirements for all contractors
  - Future access for GW monitoring had to be accommodated

## Additional Permitting Obstacles

- The majority of both parcels were within the 100-year floodplain
  - Site was fully built out, there was no place to get the required compensatory storage on-site
  - WMECo obtained required compensatory storage from neighboring PEDA property
  - Intense Compensatory Storage permitting process
  - Had to determine volume of solar development on a foot-by-foot basis for permitting.
    - → Calculations performed down to the level of determining the circumference and thickness of the conduit runs
- Construction also involved work within the wetland buffer
  - Submitted Notice of Intent/Order of Conditions issued
- Special Permit Needed for Construction in a Floodplain
  - Variances for Fence Height and setbacks were also obtained
- Local Permitting process was cumbersome and time consuming

## Site Use Agreement

- **Usage Rights**
  1. Surface Rights only; defined cost & terms
  2. Clear limitation on subsurface liabilities
     a) Grantor – responsible for all pre-existing liabilities
     b) Grantee – responsible for all PV-related liabilities
  3. Ensures adherence to site use restrictions

- **Encumbrances**
  1. Had to work around existing encumbrances (sewer lines, etc.)
     - Limits design/development potential
     - Site access issues
     - Potential implications for future panel relocations
  2. Access to Solar Array required by property Owner for continued compliance obligations (GW monitoring and inspections)
  3. Also, included a solar easement
     > Rights to unobstructed sunlight

- **Additional twist added on WMECo lakefront property**
  - Redevelopment Plan proposed by GE (as part of consent order) included beautifying our property along the lake with large trees
  - Had to modify redevelopment plans to include low growing trees and shrubs to avoid shading impacts (buy in needed from all parties)
  - Parties and EPA have agreed to modified site “beautification” plan

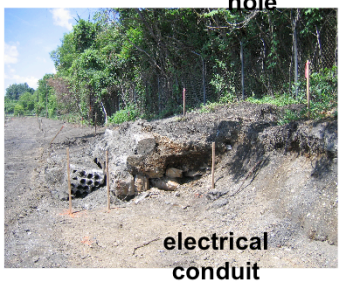
## Site Use Restrictions

- Limiting excavation and associated soil disposal reduced our liability and cost implications
- One area where we absolutely had to excavate was in our substation for the interconnection
  - Performed necessary test pits
  - Reportable levels of PCBs detected
  - Formal cleanups initiated
    - → Limited Removal Action
    - → Performance Based Cleanup
  - Delineation and disposal of 100+ tons of PCB contaminated soil and concrete
    - → Soils and concrete went to four different facilities for disposal
    - → Confirmation sampling and arranging for soil removal ate up several weeks of valuable construction time
    - → Costly disposal
- If we had allowed unfettered excavation on the rest of the property it could have had dramatic effects on the project costs and the timelines of the project.

## Still There Were a Few Surprises


sink hole


buried drum


electrical conduit


party crashers

## What Were the Opportunities

- Allowed us the opportunity to work with and create valuable relationships with regulators, which will help facilitate the success of our future renewable projects.
- This project has proven that this level of complexity can be resolved to not only minimize the company's liability, but also to complete projects under budget and on schedule.
- Provided us with a level of comfort that our model for future solar projects on brownfields/landfills can be done successfully.
- Collaboration is a critical success factor to these types of projects;
  1. Energy Policy – DPU, AG, etc.
  2. Compliance & Permitting – Federal, State & Local
  3. Zoning & Development – Municipal ordinances (by right zoning, etc.)
  4. Engineering & Design – balancing PV design w/environmental restrictions

**Opportunities to further leverage each of the four factors above can be a powerful catalyst in moving the development of renewables of marginal use properties forward.**

## Where We Are Today

- 1.8 MW of capacity
- 6,500 panels, ground-mounted on 8 acres
- 2M kWh's of annual energy production
- $9.5M of investment

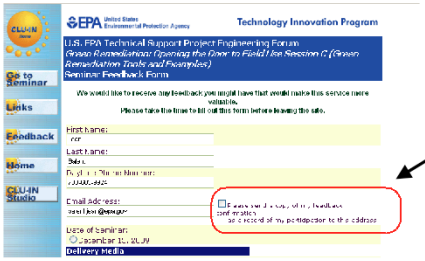
- Construction activities began in Pittsfield in early June
- Fully Operational December 2010
- Largest solar facility in New England
- WMECo's second 2+ MW project in Springfield is currently underway

# Contact Information

Amy Voisine-Shea
Site Development & Compliance Manager
WMECO Solar Program
Northeast Utilities
107 Selden Street
Berlin, CT 06037
voisial@nu.com

# Resources & Feedback

- To view a complete list of resources for this seminar, please visit the **Additional Resources**
- Please complete the **Feedback Form** to help ensure events like this are offered in the future




**Need confirmation of your participation today?**

**Fill out the feedback form and check box for confirmation email.**

47