EM U.S. Department of Energy
Office Of Environmental Management

Energy Parks Initiative

Leveraging Assets to increase the Taxpayer's Return on Investment"

Mark A. Gilbertson
Deputy Assistant Secretary for Engineering & Technology

EM Mission

"Complete the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development, production, and Government-sponsored nuclear energy research."






- Largest environmental cleanup effort in the world, originally involving two million acres at 108 sites in 35 states
- Safely performing work
  - In challenging environments
  - Involving some of the most dangerous materials known to man
  - Solving highly complex technical problems with first-of-a-kind technologies
- Operating in the world's most complex regulatory environment
- Supporting other continuing DOE missions and stakeholder partnerships

Program Priorities

- Essential activities to maintain a safe and secure posture in the EM complex
- Radioactive tank waste stabilization, treatment, and disposal
- Spent nuclear fuel storage, receipt, and disposition
- Special nuclear material consolidation, processing, and disposition
- High priority groundwater remediation
- Transuranic and mixed/low-level waste disposition
- Soil and groundwater remediation
- Excess facilities deactivation and decommissioning (D&D)

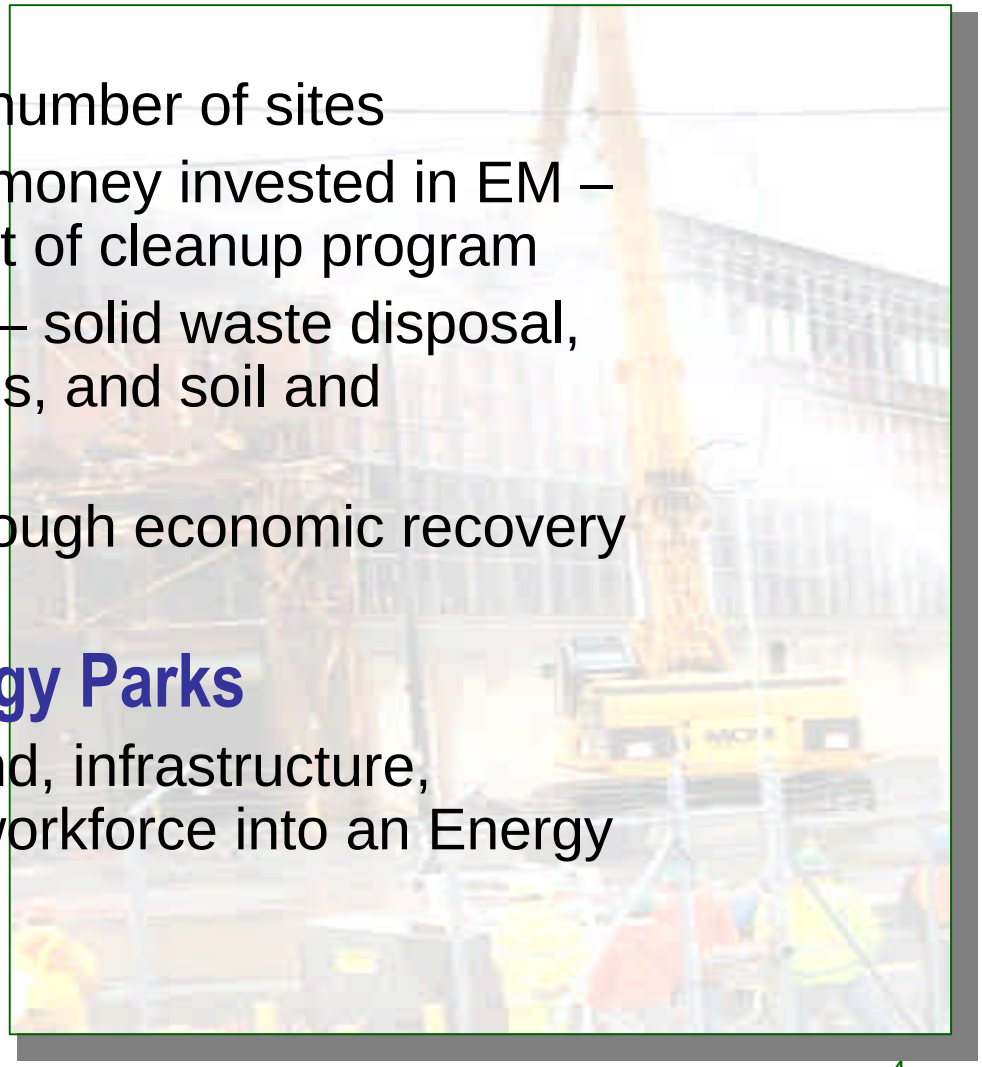
Top-Level Goals

Footprint Reduction

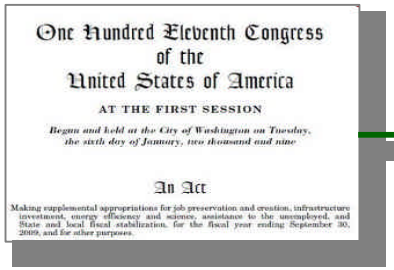
- Reduce the active area and number of sites
- Provide maximum return on money invested in EM – reduces overall life-cycle cost of cleanup program
- Focus on proven successes – solid waste disposal, D&D of contaminated facilities, and soil and groundwater remediation
- Create thousands of jobs through economic recovery investment

Reutilization of Assets/Energy Parks

- Transform EM resources: land, infrastructure, technologies, highly-skilled workforce into an Energy Parks Initiative (EPI)



Footprint Reduction


One Hundred Eleventh Congress
of the
United States of America
AT THE FIRST SESSION
Begun and held at the City of Washington on Tuesday, the sixth day of January, two thousand and nine
An Act
Making supplemental appropriations for job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State and local fiscal stabilization, for the fiscal year ending September 30, 2009, and for other purposes.

Economic Stimulus

Recovery Act

Office of Environmental Management (EM)

EM Footprint Reduction, small site completions, and other investment opportunities

Jobs created

Lifecycle cost reduced

Environment protected

Footprint reduced

Clean, Diverse Energy Sources

- **Energy security**
- **Establish long-term site mission**
- **Sustainable jobs**

Energy Parks

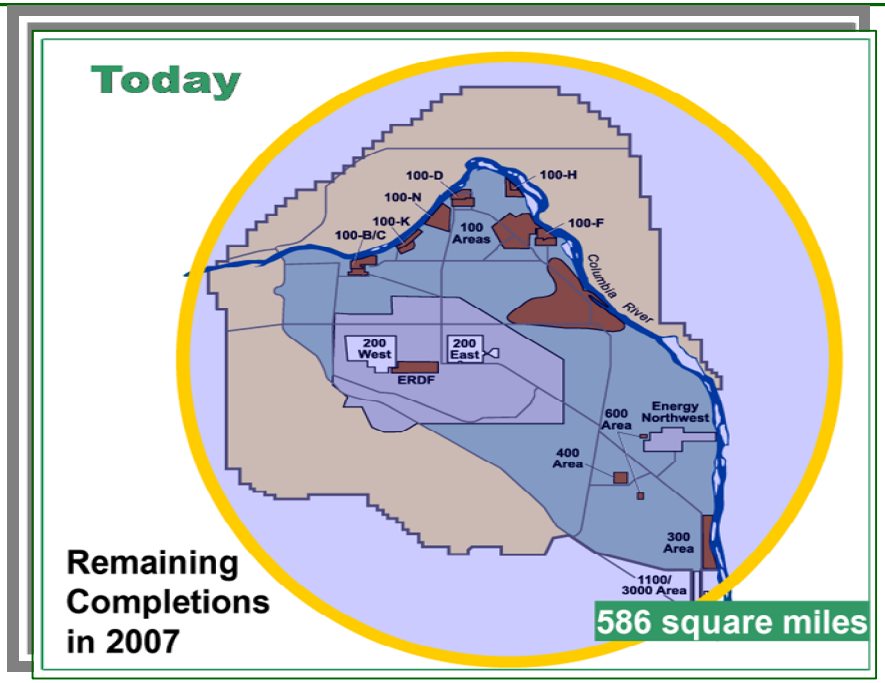
Large tracts of land and infrastructure available

EM Environmental Management

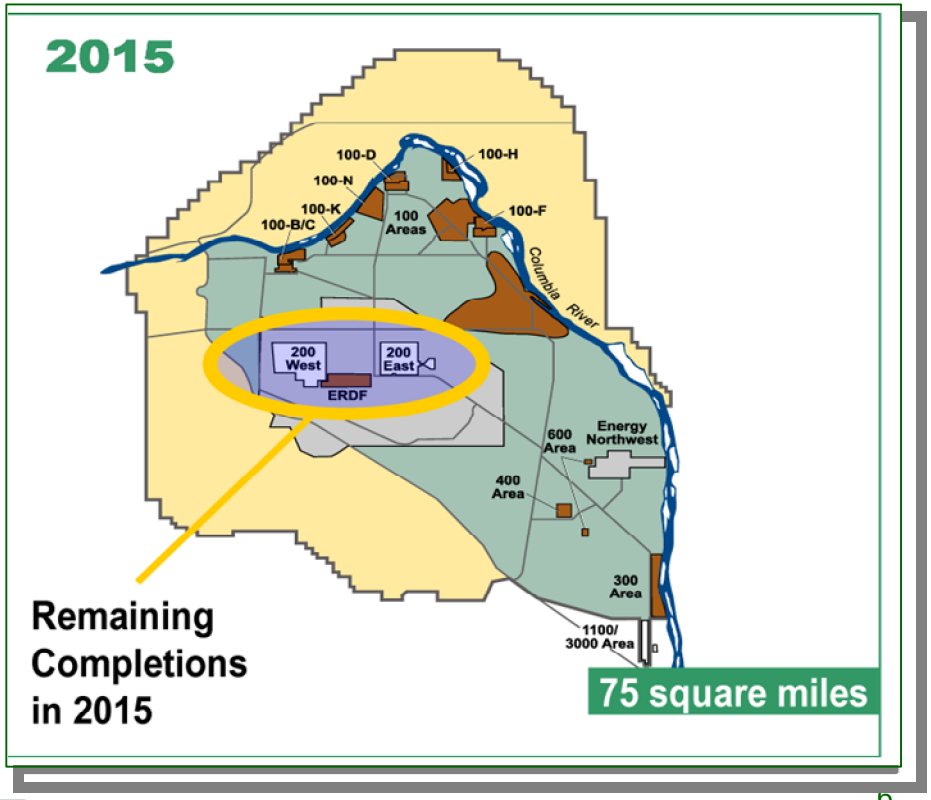
safety ❖ performance ❖ cleanup ❖ closure

www.em.doe.gov

Footprint Reduction – Hanford Site

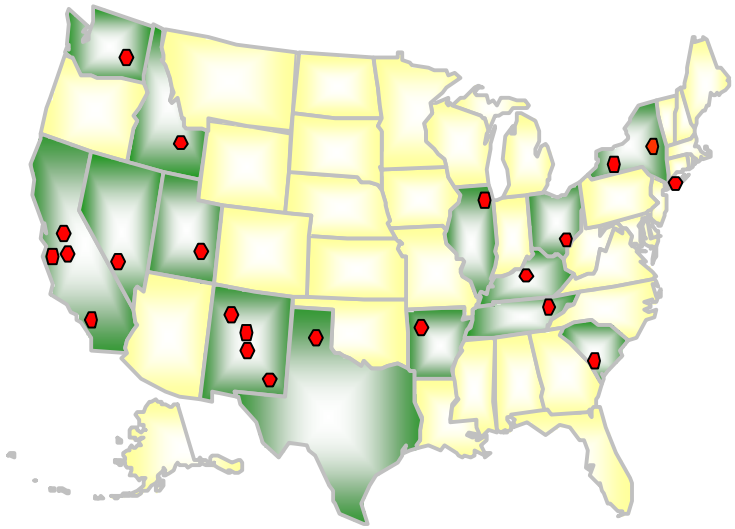


- Reduces environmental risk with large return on investment
- Results in roughly 90 percent reduction of the site footprint

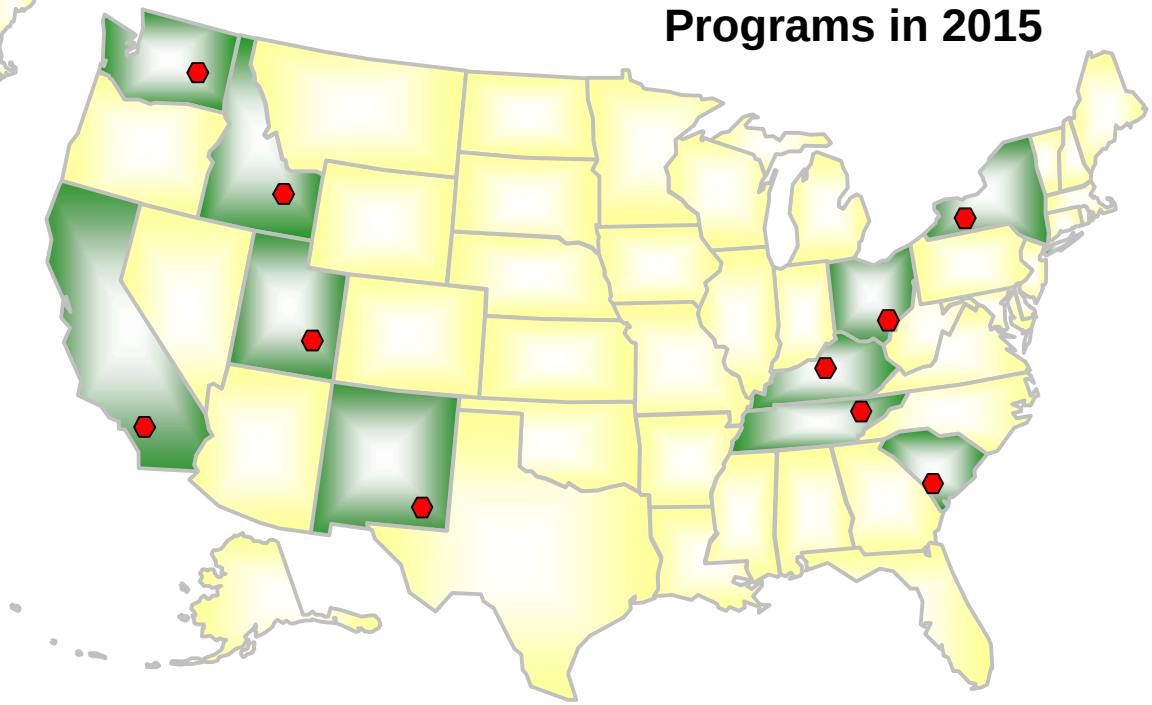


- Accelerate River Corridor cleanup
- Complete D&D of the plutonium finishing plant

Small Site Near-Term Completion



Sites with Active EM Programs in 2008



Sites with Active EM Programs in 2015

Cleanup activities at 22 sites in 14 states – to 10 sites in 10 states
Reduce EM footprint from 900 square miles to 135 square miles
Significant reduction in life-cycle cost

American Recovery and Reinvestment Act of 2009 (Recovery Act)

- **Signed into law on February 17, 2009**
- **Unprecedented Congressional action**
- **Priority at highest Federal levels**
  - President
  - Congress
  - Secretary of Energy
  - Assistant Secretary for Environmental Management
- **Unprecedented transparency and accountability**
- $6 billion in *additional* funding for EM to be used by 2011

American Recovery and Reinvestment Act - 2009

- Focusing on “shovel ready, boots on the ground” projects contributing to footprint reduction and small site completions
- Requiring rapid deployment of resources with transparency of activities and accountability for results
- Developing dedicated EM project team
  - **Safety/Operational Readiness**
  - **Project Management**
  - **Budget**
  - **Contracting**
  - **Regulatory**
  - **Communications**

Contributes to jobs creation, EM life-cycle cost savings, and energy parks

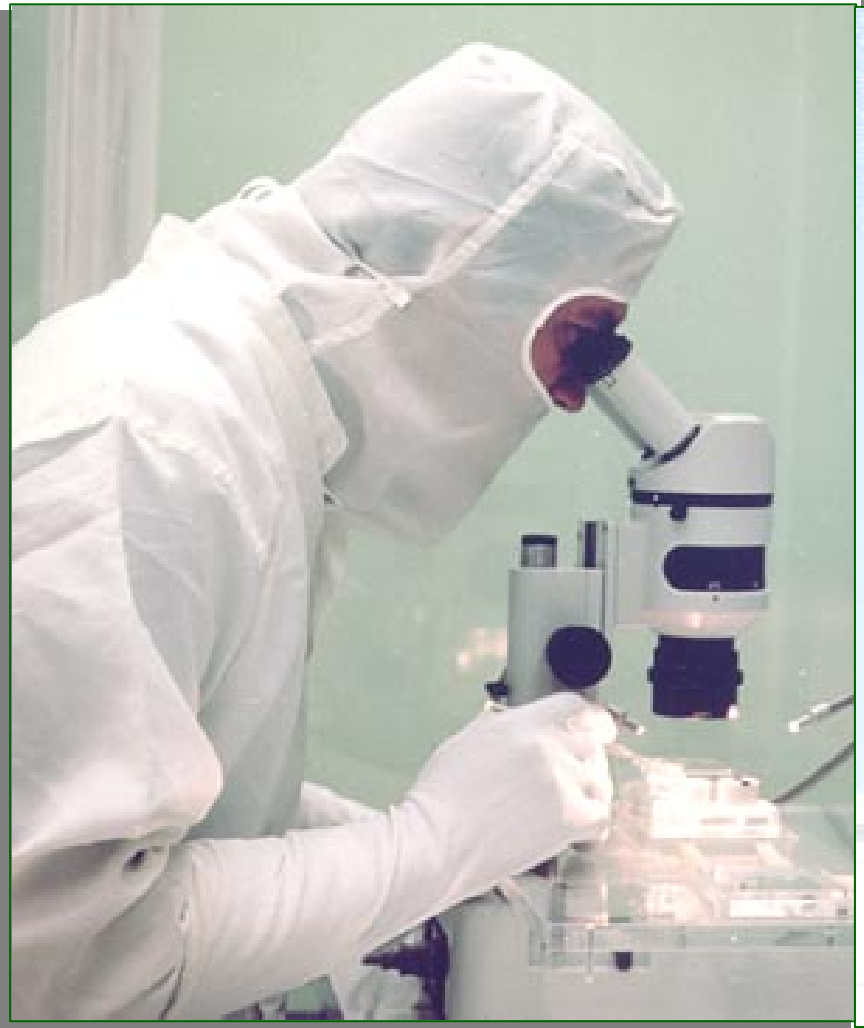
Recovery Act Project Priorities

- **Scope that can most readily be accelerated to take advantage of Recovery Act funds**
  - Soil and groundwater remediation
  - Radioactive waste disposition (e.g., TRU waste and Low Level Waste)
  - Facility decommissioning
- **Site closure and EM completion**
- **Reduce the EM footprint**
  - Across the country
  - Within a site

Recovery Act Status

- **Aggressive implementation—Recovery Act funding to be received by the EM sites in April 2009**
- **Opportunities identified at 17 sites in 12 states meeting Recovery Act principles (totaling $6B through FY 2011)**
  - Recovery Act proposals developed by sites with site priorities in mind
  - Flexibility in work scope, but first and foremost, Recovery Act funds are about job creation
- **Recovery Act proposals accelerate work activities that have compliance milestones associated with them**

The Challenge – Maintaining EM's Momentum



- Managing performance-based projects with life cycles over several decades
- Safely conducting work
- Producing results with robust project management practices
- Applying first-of-a-kind technologies
- Achieving footprint reduction and near-term completions
- Managing and maintaining an "able and stable" workforce

Energy Parks Initiative: Philosophy

- **Globalization amplifies and accelerates the effects of the interrelationship between energy, economy, and environment.**

- **Global developments and increasing expectations for effective governance provide us the opportunity to "push past the tipping point" of progress towards resolving several national concerns.**

Energy Parks Initiative: A bold and innovative concept

. . . to leverage assets and create opportunity to enable rapid development of large-scale energy-related facilities.

. . . particularly those with significant potential of sustained progress towards energy independence, regional economy, national security, environmental sustainability, and other national concerns.

Energy Parks Initiative: Kind of Assets

✓**Infrastructure** (roads, buildings, equipment, utilities, barge & rail access, transmission systems, and specialty features and capability)

✓**Natural Resources** (land, water, and renewable energy)

✓**Institutional Controls** (clear land title, physical control, security, water rights, NPDES and other permits, buffer area, environmental & seismic characterization, and security)

✓**Human and Economic Capital** (knowledge of regulatory environment, highly trained workforce, transition to succeeding missions, and return of valuable assets to the local tax base)

✓**Diversity, Size, and Remoteness** (allows consideration of many uses, and protection of critical infrastructure)

✓**Applied Tools** (technology, loan guarantees, purchasing power)

Energy Parks Initiative: Technology

Options include conventional & advanced energy technologies, such as:

- ✓ **Renewable energy: solar, wind, biomass, geothermal**
- ✓ **Fossil fuels: clean coal, gas turbines**
- ✓ **Electricity generation, transmission, distribution**
- ✓ **Hydrogen generation**
- ✓ **Emission controls, carbon sequestration**
- ✓ **Specialty manufacturing**
- ✓ **Nuclear: power, fuel cycle, waste management**

Reutilization of Assets/Energy Parks

- EPI will convert EM liabilities (contaminated sites, facilities, and materials) into assets to solve critical national energy issues
- EPI can demonstrate effective partnering of DOE, other Federal agencies, private industry, state and local governments, and local communities
- EPI can preserve and enhance economies of state and local host communities of DOE/EM sites with energy reindustrialization

EM's unique resources can be leveraged to address some of the Nation's energy security and climate change concerns