



National Land Use Planning Conference  
March 4, 2009

## Integrating Implementation and Planning Decisions in One Programmatic Document: *The Geothermal Leasing PEIS*



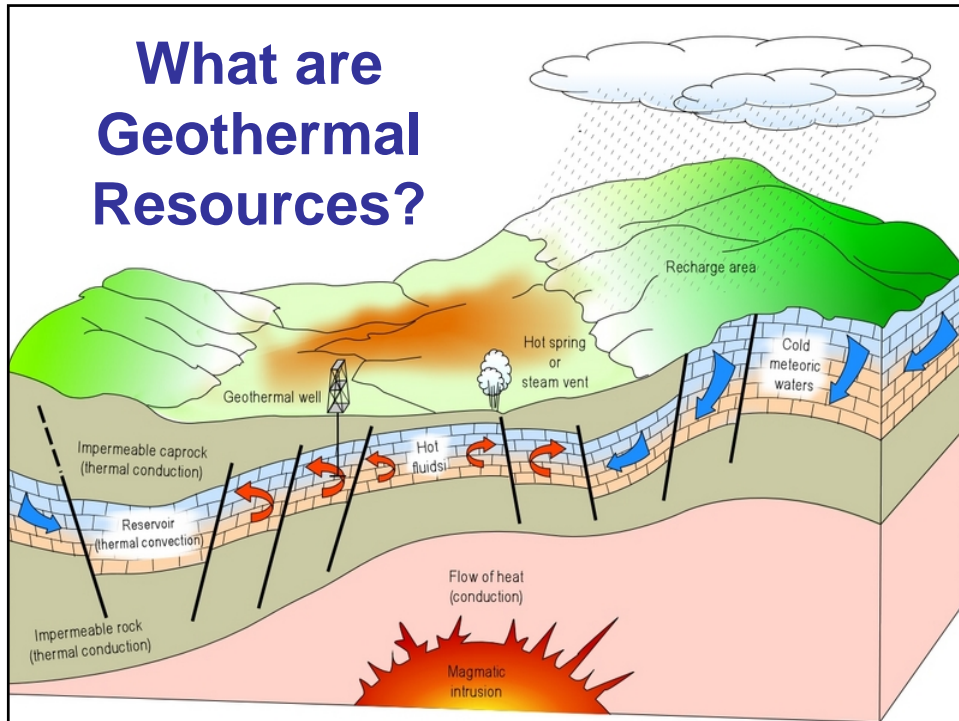
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Jack G. Peterson, National Project Manger, BLM  
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## Presentation

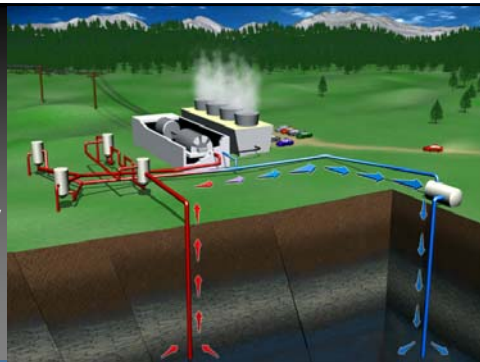
1. Overview: Geothermal Leasing PEIS
2. Combining implementation and planning in one document
3. Follow on workshops: April – June 2009
4. Expedited NEPA
5. BLM Perspective of the project





## Electrical Generation (indirect use):

- 3,000 MW per year in US
- Supplies <1% of US energy demand
- Generally requires a hotter temperature resource





## Four steps of geothermal development

1. Exploration
2. Drilling
3. Utilization and production
4. Reclamation and abandonment

A lease is need prior to conducting steps 2 -4



## Geothermal Leasing PEIS

1. ROD signed December 2008
2. Scope: 12 Western States and over 142 million acres BLM public land
3. Expedited process: 18 months NOI to ROD
4. Amended over 122 land use plans
5. Assessed 19 lease applications



## Why is federal action needed?

### Respond to requirements of the Energy Policy Act 2005 & Executive Order 13212

1. Reduce 90% of backlogged leases that existed prior to Jan 1, 2005
2. Improve the effectiveness of geothermal leasing in the 12 Western US, including Alaska



## Programmatic Analysis

- ✓ Identify and analyze the effects of public and NFS lands with geothermal potential as being opened or closed to leasing.
- ✓ Develop a comprehensive list of stipulations, BMPs and procedures to serve as consistent guidance for future geothermal leasing and development.
- ✓ Amend BLM land use plans to adopt land use allocations, stipulations, BMPs, and procedures.
- ✓ Provide analysis to facilitate consent determinations from the FS.



## Scope: RFD Scenario and Location

1. **Electrical Generation (indirect use)**
  - 3,000 MW in US
  - 5,500 MW from 110 plants by 2015
  - An additional 6,600 MW from 132 plants by 2025
2. **Direct Use**
  - RFD: Over 270 communities near geothermal resources



# Collaborative Partners for Map

## Federal Agencies

- Joel Renner, Idaho National Engineering and Environmental Laboratory (INEEL)
- Marshall Reid, US Geological Survey
- Colin Williams, US Geological Survey
- Joe Moore, Department of Energy / University of Utah
- Steve Fechner, US Forest Service

## State Agencies

- State of Idaho
- State of Nevada
- Colorado Geologic Survey
- State of Montana, DEQ
- State of Utah Energy Program
- Alaska Energy Authority
- California: Energy Commission and Dept of Oil, Gas, and Geothermal

## Non-Profit

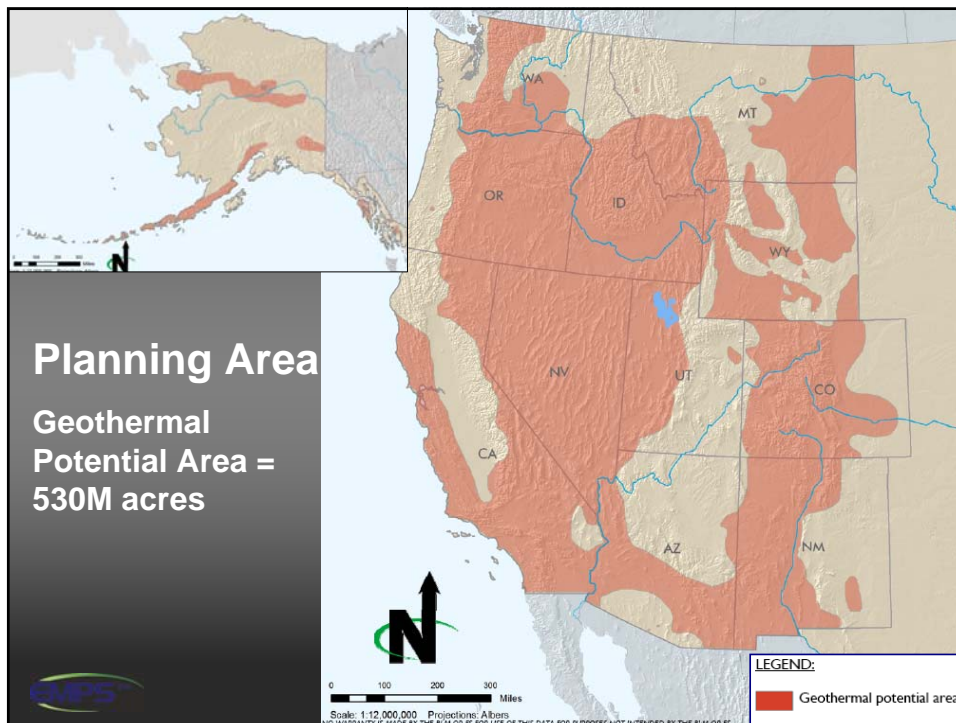
- Renewable Alaska Energy Project

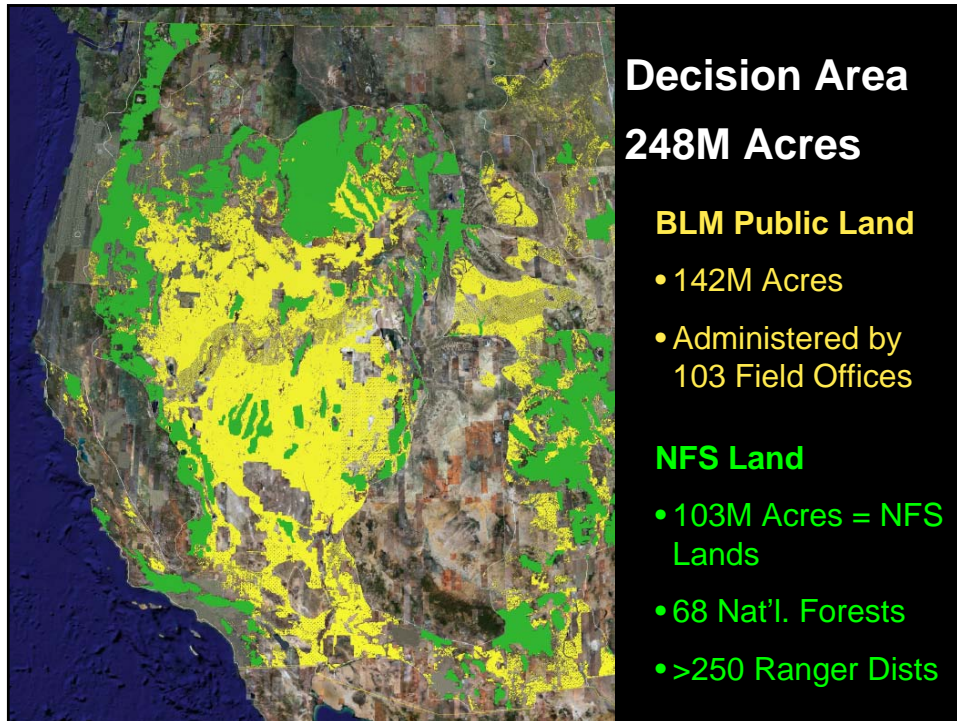
## Research Institutes

- Great Basin Center for Geothermal Energy, University of Nevada, Reno
- Oregon Institute of Technology, GeoHeat Center
- Energy and Geoscience Institute, University of Utah
- Intermountain West Geothermal Consortium
- David Blackwell, Southern Methodist University

## Private Industry

- Ormat Technologies, Inc.
- Iceland America Energy, Inc.
- Caithness Energy, LLC
- Enel North America, Inc.
- Calpine Corporation
- TG Power LLC

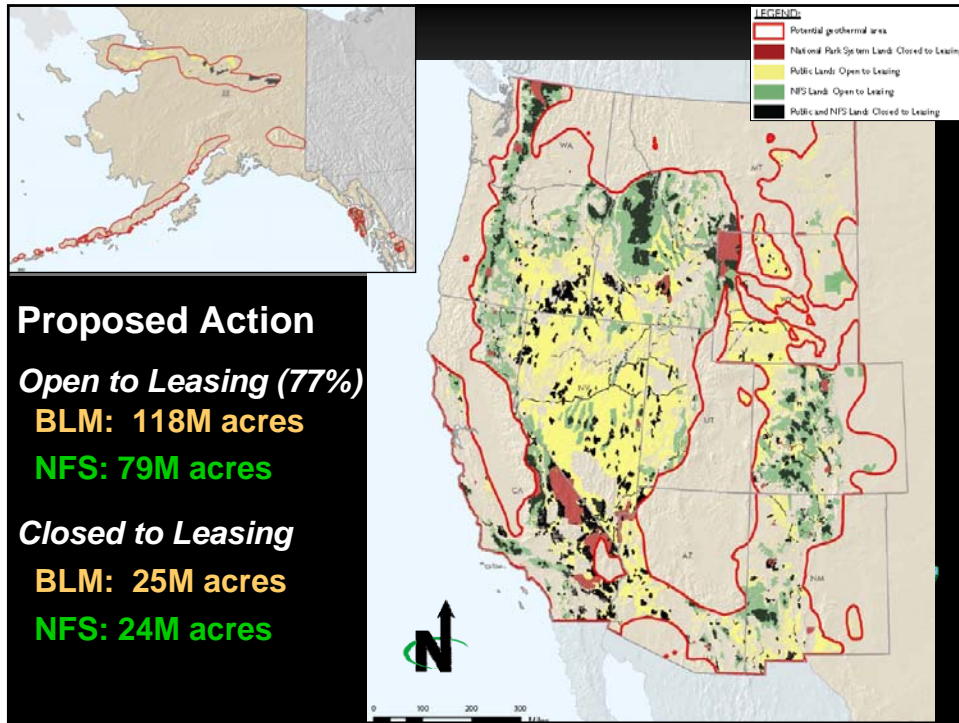




## Proposed Action

1. Identify and analyze the effects of public and NFS lands with geothermal potential as being opened or closed to leasing;
2. Develop a comprehensive list of stipulations, best management practices, and procedures to serve as consistent guidance for future geothermal leasing and development;
3. Amend BLM Resource Management Plans (RMPs) to adopt the land use allocations and list of stipulations, BMPs, and procedures; and





## Stipulations and BMPs

- Stipulations
  - Stipulations developed from review of land use plans and from existing geothermal and oil and gas stipulations
  - Types: No Surface Occupancy (NSO) / Controlled Surface Use (CSU) / Timing Limitations (TL) / resource specific
  - Applied only if no other protection measures are available



## Stipulations and BMPs

- BMPs
  - Developed from comprehensive review of LUP and from existing geothermal and oil and gas guidance
  - Provided BMPs for all four phases of geothermal development (exploration, drilling, utilization, and reclamation)
  - Applied as part of permits for post leasing development



## Pending Lease Applications

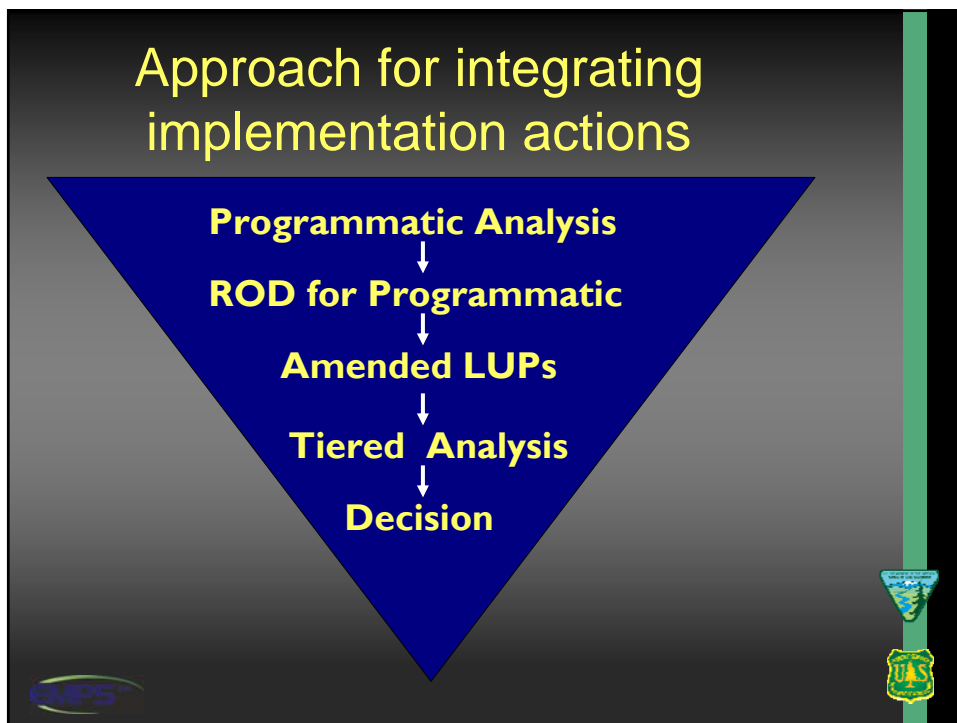
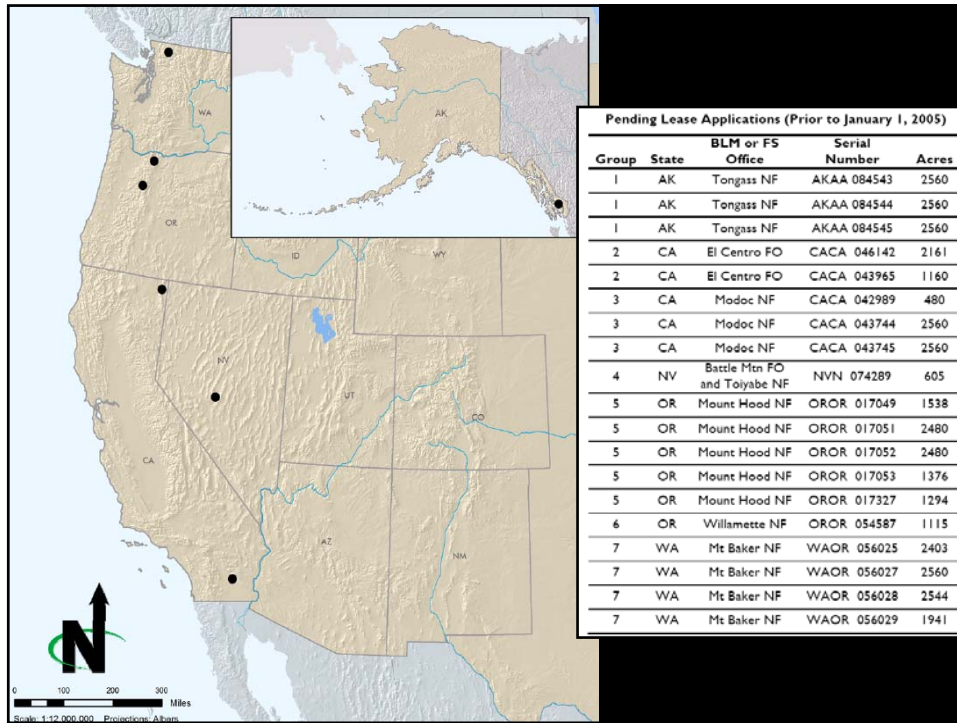
*submitted prior to 1/1/05*

As of Jan. 1, 2005: 194 lease applications  
– 134 BLM and 60 FS

Rigorous vetting process of pending lease applications

- As of June 5, 2008: 34 still pending
  - 19 pending applications in 7 groups are assessed in the PEIS (1 BLM and 18 FS)
  - 15 pending applications are being handled in separate decision processes by BLM and FS office





## Tiering

Tiering refers to the coverage of general matters in broader environmental impact states (such as national program or policy statements) with subsequent narrower statements or environmental analysis....” (42 CFR 1508.28)

Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (42 CFR 1502.20)



## Tiered Analysis in the PEIS

- Volume II of the PEIS contains supplemental environmental analysis of the 19 lease areas
- BLM and FS will issue separate RODs for each lease cluster
- Serves as a template for future tiering analysis to the PEIS



## Benefits of Geothermal PEIS

- Issue decisions on pending lease applications
- Enable future leasing decisions to be made on public lands
- Ensure consistency and transparency in the leasing process
- Minimize delays
- Reduce costs



## Benefits of Geothermal PEIS

### **Winner - Achievement Award**

Energy and Infrastructure  
Environmental Business Journal 2008

### **Finalist**

Sustainable Energy Initiative of the Year  
Platts Global Energy Awards 2008



## Implementation Workshops

April 7 – Grand Junction, CO  
April 14 – Cheyenne, WY  
April 16 – Helena, MT  
April 23 – Bend, OR  
April 28 – Boise, ID  
May 6 – Reno, NV  
May 12 – Cedar City, UT  
May 19 – El Centro, CA  
May 21 – Phoenix, AZ  
May 28 – Las Cruces, NM  
June 2 – Anchorage, AK

*Preliminary dates and locations*



## NEPA Scheduling EMPSi Survey Findings

- About 550 Draft and Final EISs are filed with EPA each year
- Takes between 18 to 48 months to complete EIS process
- BLM average is about 1,400 days
- Factors outside NEPA generally result in the delays

Batts, D. and J. King. 2004. Tools to Overcome Schedule Delays. Presented at the National Association of Environmental Professionals 29th Annual Conference. Portland, OR.  
EMPSi. 2006. Modifications and Attitudes on Recent Changes in Federal Laws to Expedite NEPA Compliance—Opportunities for Improvement?  
EMPSi. 2007. Time to Prepare NEPA Documents: A Comprehensive Review of EISs. Prepared by John King, Kate Wynant, David Batts, Leslie Bandy, and Mary Holkenbrink. Presented at the National Association of Environmental Professionals 32nd Annual Conference. Orlando, FL.



## **BLM Perspective** **NOI to ROD in 18 Months:**

### *Managing Complex Projects & Staying on Schedule*

- Assess dimensions of the challenge and time elements
- Anticipate pitfalls
- Develop a comprehensive project plan and SOW
- Hire the right contractor
- Build redundancy in your team
- Create & maintain solid relationships with partners



## **NOI to ROD in 18 Months:**

### *Managing Complex Projects & Staying on Schedule*

- Keep public informed throughout process
- Consider the use of “strike teams”
- Maintain leadership support and ownership of project
- Identify a “project manager” for the effort
- Be flexible, adaptable and creative
- Don’t move the goal line!



## For More Information

[www.blm.gov/geothermal\\_eis](http://www.blm.gov/geothermal_eis)

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