

Geothermal Permitting Exploration to Power Generation



DECISION

NEPA



Geothermal Resources Council
Portland, Oregon
September 27, 2014

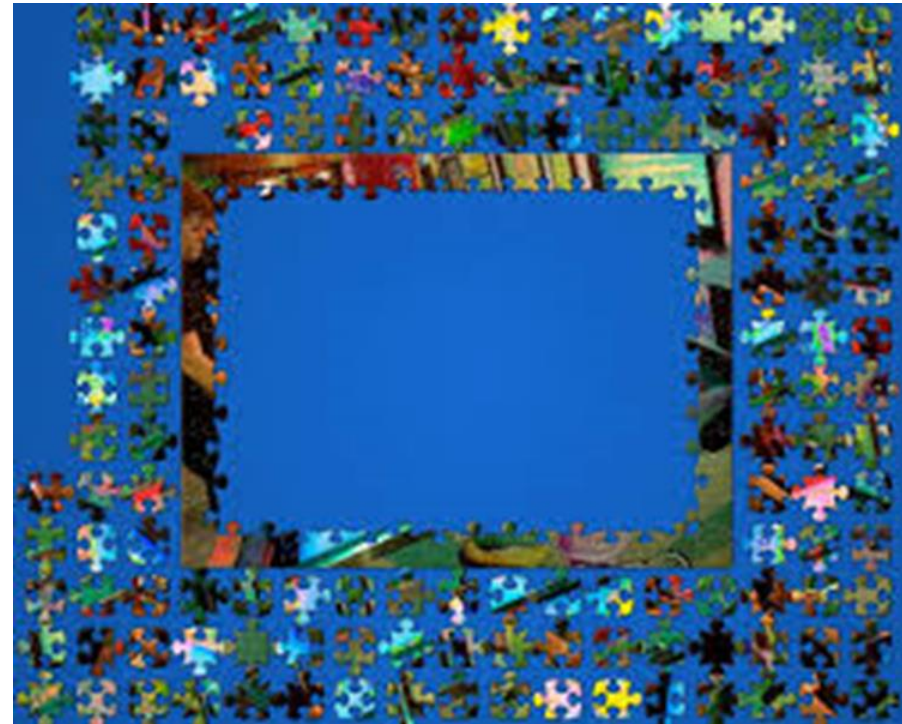
Presented by Scott Nichols, Manager of Permitting & Lands

Integrating Federal, State & Local Regulations

Permitting a geothermal project is like promising the final layout of a jigsaw puzzle when you can only see the border.

Primary Authorities

- ❖ National Environmental Policy Act
- ❖ BLM Regulations 43 CFR 3200
- ❖ State Geothermal Regulations
- ❖ County Conditional Use Permitting
- ❖ Agency Consultations
- ❖ Minor Permits



Regulatory Summary (Federal Lands)

- Property Control & Lease Agreements
- Resource Discovery and Continuing Evaluation
 - Well Permitting
- Interconnection Request
 - Interconnection Study; 18 – 36 months, \$20,000 - \$150,000
 - Transmission Right of Way (Applicant)
 - Interconnection Agreement
- Power Purchase Agreement
- County Conditional Use Permit & Building Permits
- State & Federal Permits
- Geothermal Injection Plans
- Utilization Plan

National Environmental Policy Act & Administrative Policy

1- National Environmental Policy Act (NEPA), 42 CFR § 4321

- Signed by President Richard Nixon, January 1, 1970.
- Planning and Decision making which may have an impact on man's environment.
- Systematic, interdisciplinary approach.
- Insure the integrated use of the natural and social sciences.
- Legislation and other major Federal actions significantly affecting the quality of the human environment require a detailed statement by the responsible official.

2- Legal Evolution of NEPA

- Abandoned key terms (Management Planning, Major Actions, Significant Effects).
- Required for all Agency Decisions and Management Actions.

3- Geothermal Regulations 43 CFR § 3200

4- Washington Office Memorandums

5- Administrative Interpretation

Summary of NEPA Evaluations

➤ **Pre-Lease Analysis**

- EIS for Programmatic Geothermal Development (completed)
- EIS for the Resource Management/Land Use Plan (completed)
- EA for Lease area (completed)
 - Will include stipulations for wildlife, cultural, & other resources.

➤ **Post Lease Analysis**

- EA for Drilling and Land Disturbance, Permit to the Perimeter

➤ **Continue NEPA Analysis**

- For approval of the Utilization Plan (Determination of NEPA Adequacy [DNA])
- For approval of the Commercial Use Permit (DNA)
- NEPA Decisions and Biological Evaluations Expire after 5 years.

Federal Regulations

➤ Data & References

- **E-CFR** (<http://www.ecfr.gov/>, 43 CFR 3200)
- **Washington Office Memorandums**
<http://www.blm.gov/wo/st/en/prog/energy/geothermal.html>
- **Forms** (<http://www.blm.gov/noc/st/en/business/eForms.html>)
- **Regulatory Road Map** (<http://en.openei.org/wiki/RAPID/Roadmap/Geo>)

➤ Title 43 Part 3200

- Leasing **Part 3200**
- Drilling **Part 3262**
- Utilization **Part 3270**

➤ Administrative Guidance Documents

- Geothermal Resource Orders
- Use of Determination of NEPA Adequacy



State Oversight



Permits Include

- Production Well Design
- Injection Well Design
- Storm Water Permitting
- Stream Alterations or Encroachments
- Land Application

Agency Staff

- ❖ Demonstrate good, practical, & technical experience.
- ❖ Focus on engineering design, & resource protection.
- ❖ Understand site specific issues and practical expectations.
- ❖ Ensure an Inter-Agency participation.

County Conditional Use Permitting

➤ Community Compatibility

➤ Local Revenues

➤ Employment

➤ Local Opposition/Support

➤ Rights of Way

➤ Visual/Noise



Baseline Clearances & Project Permits



Managing Change & Critical Paths

- **Communicate the Known and the Unknown.**
 - Geothermal exploration is high risk.
 - The design you permit will change.
 - Provide certainty about “the perimeter”, not the “pieces of the puzzle”.
- **Rules don’t change, staff interpretation can.**
 - Prepare agencies for change.
 - Communicate technical information and results on a continuous basis.
 - Continuous communication builds some resilience into the process.
 - Don’t debate agency requirements, don’t take it personal.
- **Every agency works at a different pace.**
 - Manage expectations at all levels.
 - Coordinated Processes.....may not be.

Geothermal Advantages

- ❖ Near Zero Emission Facilities.
- ❖ Small Footprint to Energy Produced.
- ❖ Can be Designed to Avoid Resource Conflicts.
- ❖ Provides Base Load Power.
- ❖ Limited Community Impact and No Mandatory Infrastructure Improvement.

