

Timothy Reinhardt
Geothermal Technologies Program
Office of Energy Efficiency and Renewable Energy

Presentation Outline

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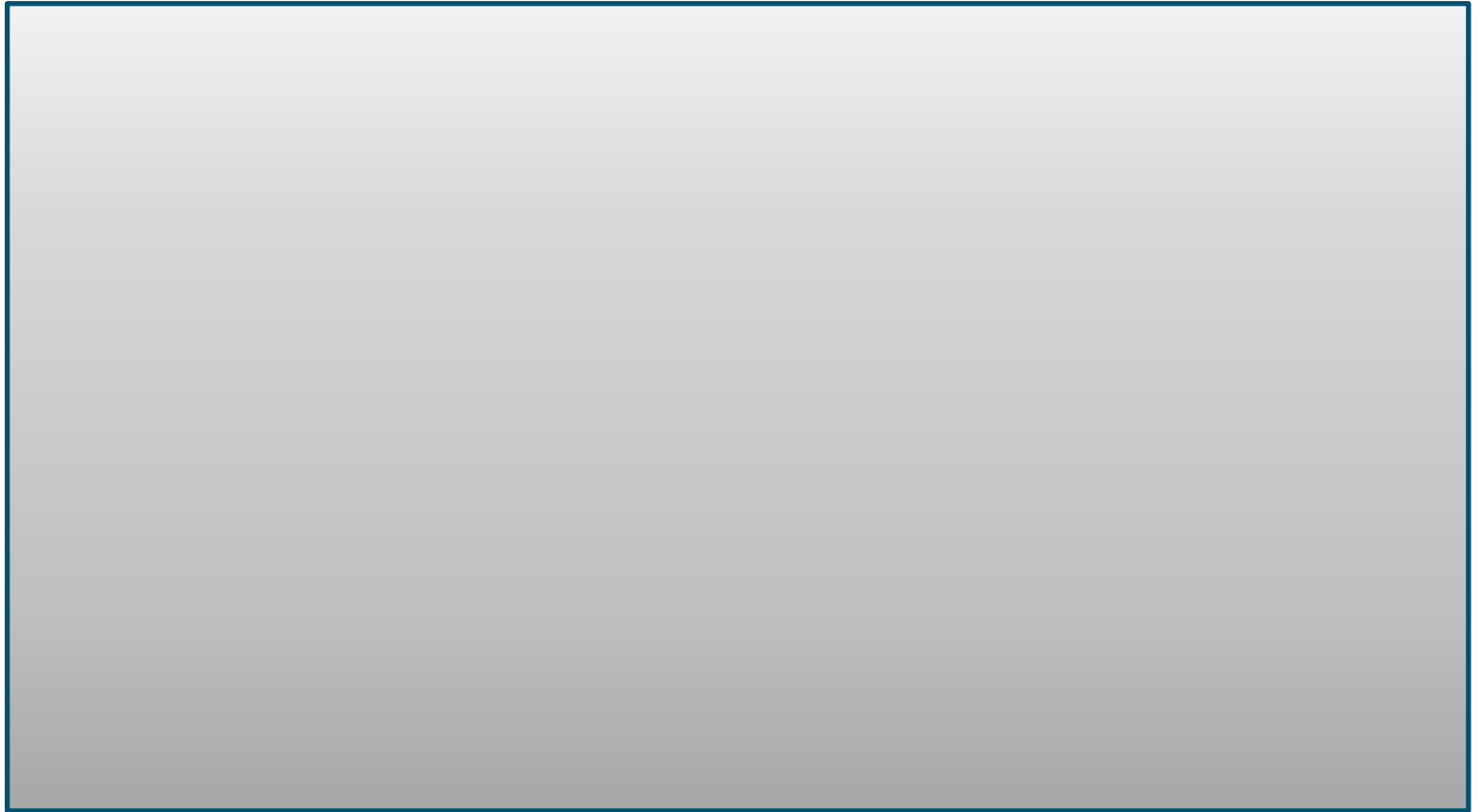
‡ Present status of ARRA projects

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Recovery Funding Enabled Expanded Geothermal Program Portfolio

The Program currently supports a diverse portfolio that spans near- to long-term resourctf 01



Low Temperature, Coproduced & Geopressured



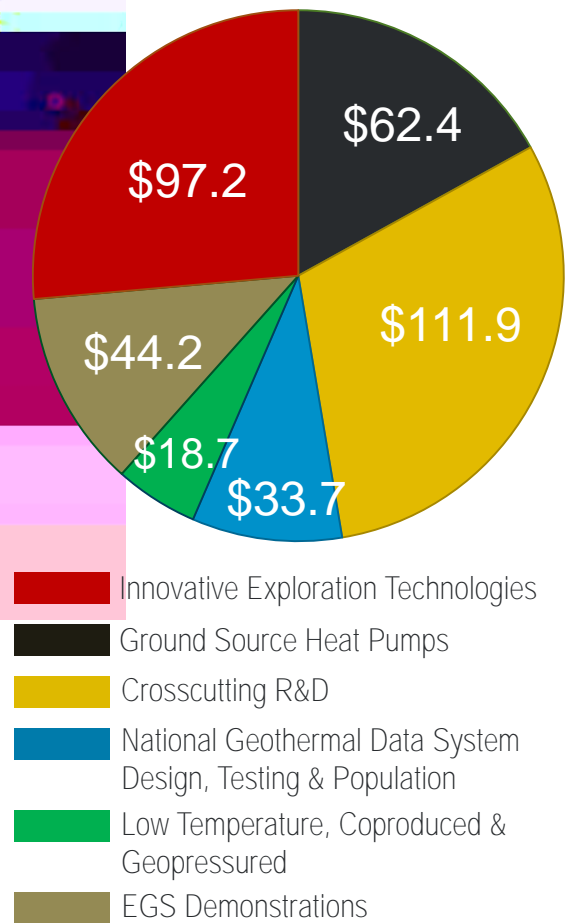
Blackwell and Richards, 2005

The Recovery Act has provided a much needed boost to geothermal RD&D

Under Recovery, DOE has invested \$368.2 million in geothermal projects in 39 states.



‡ Total Investment: \$368.2
 ‡ Total Projects: 148
 ‡ States/Districts Represented (Prime Awardee) 39



ARRA Topic	Grantee	Project Title	Objective	Status
Geothermal Demo	Beowawe Power, LLC	Beowawe Bottoming Binary Project	Installed a new low temperature binary unit that is attached to an existing plant providing 10% additional power.	Operational
Geothermal Demo	City of Klamath Falls	Klamath Falls Geothermal Low Temperature Power Plant	Construct a low temperature power plant combined with a district heating system to help power the city of Klamath Falls, OR.	In process of returning federal funds
Geothermal Demo	J 6 257.6 316.18 Tm ET Co1 ET BT96 257.5 Tm [(De)Tm ujhc.(De)T8.18 Tm [() TJ ET 5C /P <</MCID 26>> BDC BT 1 0 0 1			

MEMORANDUM OF UNDERSTANDING BETWEEN

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REGARDING THE DEVELOPMENT OF GEOTHERMAL PROJECTS AT THE ROCKY MOUNTAIN OILFIELD
TESTING CENTER

Products and Deliverables;

RMOTC Site Visit: July 27-28, 2010

Draft MOU Agreement: August 6, 2010

Final MOU Agreement: August 31, 2010



Geothermal Blue Ribbon Panel Asked to Help Shape the Future

Fifteen geothermal experts identified the obstacles to geothermal energy growth, discussed the appropriate role of DOE, and recommended priority R&D areas for the Program.

Recommendation Narrow the focus of the Program and invest in critical need areas, targeting high-quality near-term resources to help the industry grow and long-term resources to tap the huge geothermal potential.

Accelerate Near-Term Market Growth **Hydrothermal**

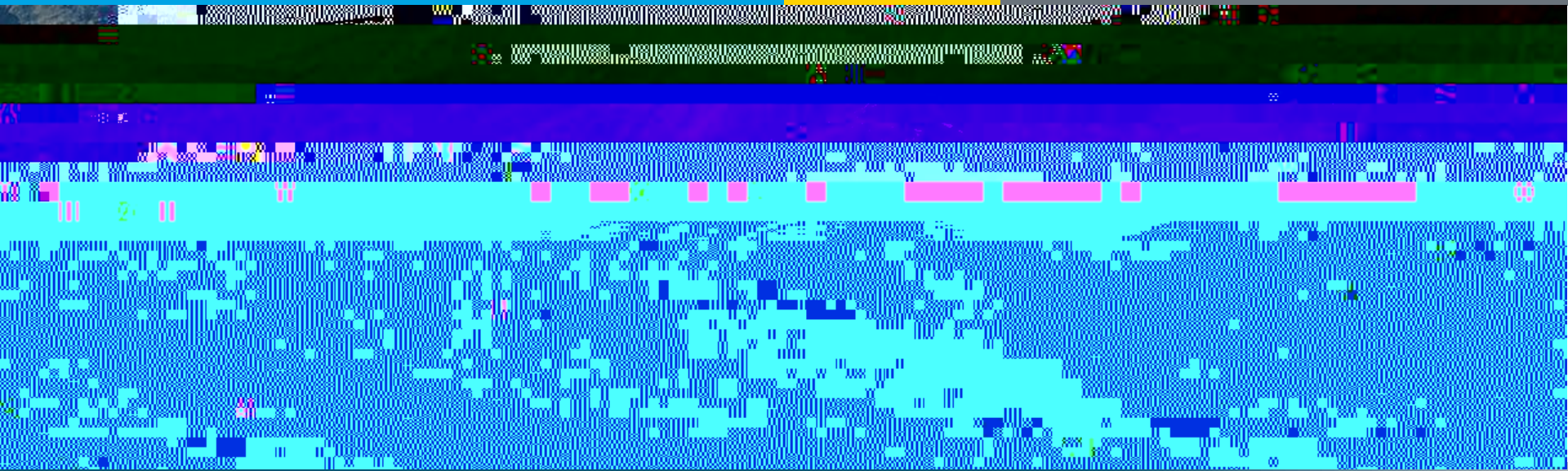
- ‡ Develop an inventory of high-quality prospects using existing technology
- ‡ Advance exploration technologies to reduce the cost and risk of drilling
- ‡ Develop technologies that reduce O&M cost

Secure the Future **Enhanced Geothermal Systems**

- ‡ Define the optimal conditions for EGS and identify the best prospects
- ‡ Model the feasibility of reservoir creation using existing technology
- ‡ Develop tools to optimize power production and reduce costs
- ‡ Demonstrate the ability to create and maintain a reservoir in multiple geologic conditions

Financing and permitting were identified as major challenges for the industry. Panel members noted that policy in the form of a cost-shared drilling program and streamlined permitting would help overcome those challenges.





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