



Geothermal Technology Program

Pre-Solicitation Meeting

Steve Chalk

**Deputy Assistant Secretary for Renewable Energy
Office of Energy Efficiency & Renewable Energy**

April 25, 2008



2008 Appropriations Language

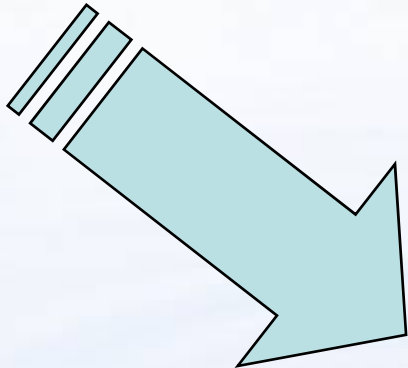
“Geothermal Technology. – Funding under this heading in the amended bill includes \$20,000,000, an increase of \$20,000,000 over the budget request, for deployment of large-scale enhanced geothermal systems, to include accelerating the development of subsurface technologies, including geological and geophysical data collection and synthesis.”



Challenges: Sustaining current industry momentum while developing advanced technology which has greater national impact

Portfolio

- Hydrothermal
- Oil and Gas/Geopressured
- EGS



Strategies

- R,D&D
- Tax Policies
- Loan Guarantees

DOE is trying maximize broad implementation of EISA (Sec.611) with less than full appropriation of authorized amounts.



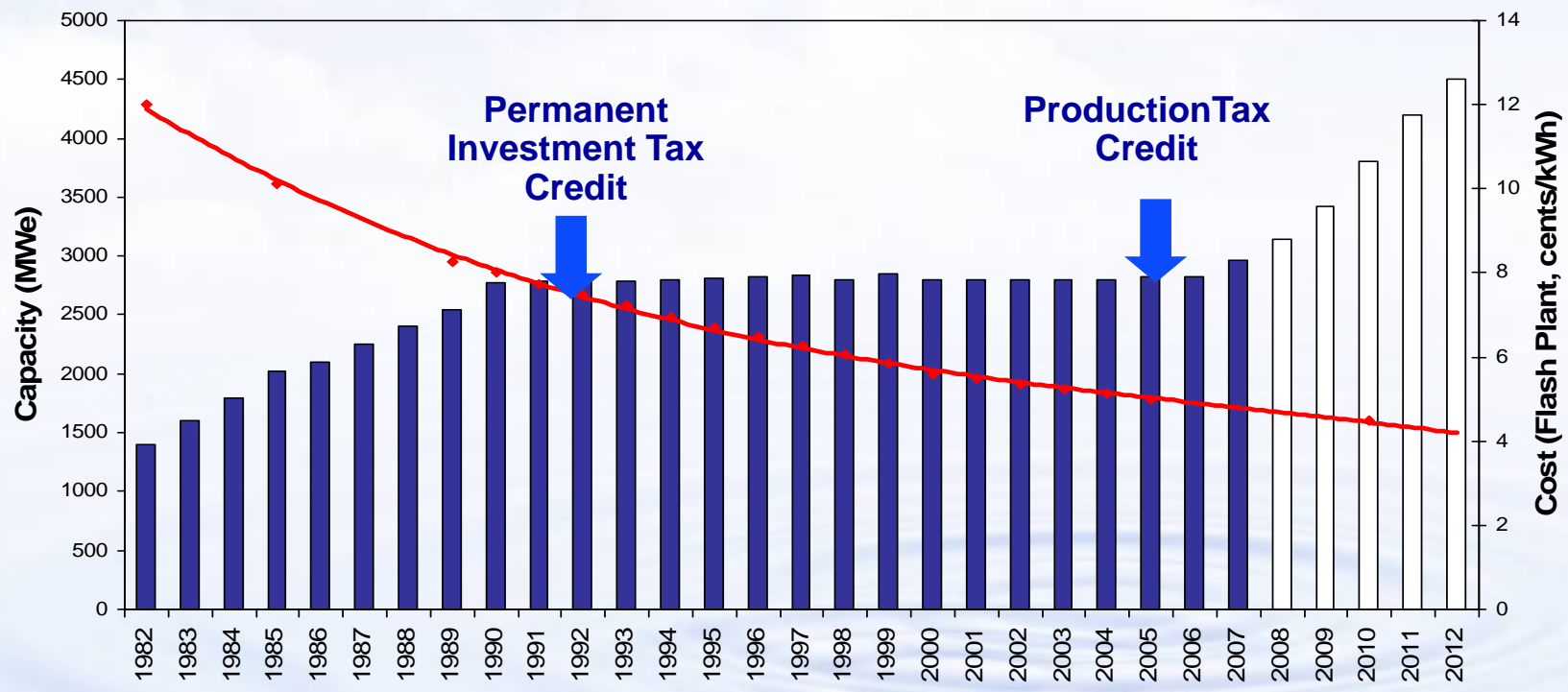
DOE Approach

- R&D – Emphasis on EGS while supporting hydrothermal
 - Focus is on EGS since it could provide ubiquitous, base-load renewable energy across the U.S.
- Field Demonstrations – EGS using marginal hydrothermal and oil & gas fields
- Institutional Barriers – All geothermal technologies
- Loan Guarantees – Advanced geothermal technologies



Installed Capacity vs. Cost of Power

Predictable, stable tax policies are critical to hydrothermal investment and industry growth



*Future market penetration estimates are derived from 2007 Geothermal Energy Association data on projects under various stages of development

Typical geothermal development project-cycle is 3-5 years



DOE Loan Guarantees

- 2007 Solicitation did not include a geothermal topic (innovation requirement)
- 2008 solicitation- geothermal will be eligible
- \$10B potentially available for efficiency and renewable technologies
- Pre-solicitation conference - April 23rd (industry input)
- Risk to geothermal development is in the upfront drilling and exploration investment



Funding Opportunity Announcement (FOA)

- FOA #1 – (Technology Evaluation Report)
 - Topic 1 - EGS Technologies R&D – EISA Sec. 613, 614 & 615
 - Topic 2- EGS Reservoir Stimulation – EISA Sec. 615
- FOA #2 – (Deloitte Risk Mitigation Report)
 - Institutional Barriers – EISA Sec. 618, 620 & 619



Institutional Barriers

- Data Availability
 - National Data Center
 - Classification System
- Trained Professionals
 - Educational Scholarship
- Transmission Access
 - Energy Corridor



Oil and Gas Activity

- Selected Chena Hot Springs Resort of Alaska from fiscal year 2007 solicitation
- Under Negotiation
- Demonstration of UTC – Pure Cycle technology (Jay Field in Florida/Alabama)
- Supports EISA Sec. 616