

Geothermal Royalty Committee
Results of brain storming session
January 25, 2005

Committee Goal

- Assistant Secretary Watson's Mandate
- Obtaining **value** for minerals on public land in the context of the steam act
- Encouraging renewable resources
- List Problems
- Timetable
- Our work should be based on regulation changes – no constraints
- Recommendations need to be concise
- Administer program in environmentally sensitive way
- Maximize ultimate recovery

Premise that our recommendation is administrable? MMS must check that our recommendation is administrable. For example, the MMS needs authority to accept fees.

List impediments (road blocks)

Pros and Cons

2)

Consensus on Generation Projects

- Existing projects can stay on Netback or negotiate a flat rate for each project with MMS.

Netback is costly, cumbersome and time consuming to administer for both Operators and government.

Netback has the advantage of recognizing different profitability for individual projects.

Financially uncertainty for netback

Difficult for project to get financial backing

Requires changes in regulations

- It is the intent of the Committee to encourage movement away from Netback. MMS regulations will need to be modified.
- Percentage method preferable to Netback to reduce administrative expenses.
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- Tiered rate for new projects. We will need to do more analysis to determine flat rate.

Allows for faster recovery of capital investment
 Establishing a fair capital recovery period will be difficult
 Incentive to encourage capital investment
 ___ years needed to encourage development

Problems changed through regulation - tweaking

- Netback needs to be eliminated
- MMS needs to provide guidelines to determine when Netback is not applicable
- Netback needs to be simplified, or modified
- Tweak netback to make it work
- Netback is fatally flawed
- Netback does not reward efficiency
- Netback has high administrative burden
- Need to move away from royalties to fees
- Agencies can keep more fees than royalties
- Expand BLM's royalty reduction authority to include mitigating impacts
- MMS needs discretion to end netback for other methods
- Modify regulations to allow percentage method
- MMS needs less discretion, more specifications
- Auditors need more guidelines to less disagreements
- New regulations process about 1 year.
- Some oil and gas regulations will soon be pushed forward.

Problems requiring changes to legislation- perfect world

- Any legislative changes should be for later consideration
- Flat percents recommendation for new development
- Multi-tiered rate for new development
- MMS and BLM need to develop programs to encourage geothermal development

- Cost of process to issue a permit has gone up 10 fold
- Biggest impediment is cost of NEPA requirements
- BLM need \$1.3 million to process new leases but received only \$93,000
- Let's not exclusively tie ourselves to Oil and Gas
- Need to move away from royalties to fees such as flat 3% rate for wind
- Moving away from royalties to fees will allow agencies to keep more fees
- Major factors for development of geothermal 1) leasing costs, 2) Contracts 3) royalty rate
- Delays biggest problems
- A flat % for new generation, existing generation should be revenue neutral, MMS will need to do more analysis, including tiered, for a number
- .5% seems low,
- BLM leasing needs to allow less than section parcels – hopefully this is in the new legislation.
- Qualified expansion or modification projects for electrical generation for multi-tiered approach to royalties.
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ACTION ITEMS

- MMS needs to provide Royalty rates for oil and gas
- Do other states such as Idaho have a minimum temp to define geothermal?
- What is the split between netback and percentage method in geothermal?
- Industry needs methodology to determine proper percentage (multi-tiered) for Gross Proceeds method to work, such as BLM's Rate of Return Method, or ratio of capitol costs
- New methods should be revenue neutral
- Don't get tied into the issue of fair market value.
- Calculate equivalent percent for each of the Netback geothermal sites.
- MMS to research lowest cost alternative fuel such as wood chips or mine mouth coal and/or best way to index for escalating cost.
- GEA needs to recommend period of reduced rate for the multi-tiered approach.
- Perhaps industry can recommend an objective basis for determination of reduced rate period for the multi-tiered approach.
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Direct Use

- No royalty on direct use if not sold
- There is currently no minimum temperature to define geothermal in California
- Perhaps a 250F max temp to define direct use should be implemented as in New Mexico
- No royalty if resource used on-site, (not sold)
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- Perhaps a 110F max temp to define direct use
- Small user exemption needed to help promote direct use
- If administrative burden is greater than the benefit then no royalty needed
- Biomass feedstock as alternative fuel
- Natural gas as alternative x factor of 50% to encourage direct use and account for hot water being used in-place
- Direct use has limited other values unlike alternative fuels (much lower demand)
- Tiered system
 - Direct use royalty of \$_.__ MMbtu (based on lowest cost alternative fuel such as wood chips) for commercial, indexed for inflation?, additional analysis is needed.
 - Avoid royalty for non-commercial, personal use
- Further clarification needed on non-arms length agreements.
- Natural Gas should not be used as an alternative fuel to determine value for direct use.

Consensus on Direct Use

For a no sale, direct use of a geothermal resource by commercial interest, of \$_.__ MMbtu . Conversion value to be based on lowest cost alternative fuel value based on MMS analysis. Fuel values such as mine mouth coal or wood chips will be used.

Do not need to amend the steam act

Some regulatory changes required.

Uncertain basis on how to best index: tied to commodity, or tied to inflation

Encourage direct use

In case of sale of resource under arms-length agreement, royalty should be based on % of gross proceeds.

Avoid royalty for non-commercial, personal use

By products

- Products play a minor role in geothermal
- MMS does receive some money from COSO
- De-mineralized water is a by-product that could be sold