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Statement of
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Before the Subcommittee on Energy
Resources and Materials Production
Senate Committee on Energy
and Natural Resources

on
[Federal Geothermal Leasing Program]

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Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to be here this morning to discuss our current review of the Federal geothermal leasing program. At the request of the Chairman and other members of the Senate Energy Committee, including the Chairman of this Subcommittee, we have been looking at the manner in which Federal lands are leased for geothermal development. We are in the process of summarizing our work which was aimed at the Geothermal Steam Act of 1970; the methods used to carry it out; and whether its implementation has impeded development on Federal lands.

To date, there has been no commercial production from a Federal lease. We have concluded that leasing and permitting delays are not in themselves the only or even the primary reasons for the slow pace of geothermal development. There are exceptions which I will discuss later; however, in terms



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of the end result, the pace of geothermal leasing has resulted in considerable areas being offered and leased. For example, nearly two-thirds of all Federal "known geothermal resource areas" (KGRA) lands have been offered for lease, and about one-third of these lands have been leased. In addition, over two and one quarter million acres of non-competitive lands have been leased. On the other hand, economic and technical constraints, environmental requirements and the lack of new producible resource discoveries are considered to be the major impediments to geothermal development.

My testimony today will concentrate on the Committee request which deals with the Federal geothermal leasing process.

FEDERAL LEASING ACTIVITY

Although about four years passed before the initial lease was issued, there has been a considerable increase in leasing since 1974. The Geological Survey estimates that the Federal Government owns approximately 55 percent of the country's total geothermal resources. Results of our work show that about 63 percent of Federal lands (about 1.2 million acres) in KGRA's have been offered for lease since January 1974, of which about 440,000 acres (265 leases) are currently leased. Of these, Geological Survey has classified only ten Federal leases as "producible" and two as "producing".

Regarding the non-KGRA areas, Geological Survey roughly estimates that about 100 million acres of Federal, State, and private lands have prospective value for geothermal resources. Of these lands about 2 1/4 million acres have been leased. As of June 1, 1979, about 1,670,000 acres remain under lease (988 active leases). Geological Survey records show that in the past year there have been 17 applications for permits to drill holes, 79 notices of intent to drill temperature gradient holes, and 941 pre-lease temperature gradient hole applications. In addition, a well status summary shows that as of May 1979, there were 69 productive or usable holes and five new holes were being drilled.

THE GEOTHERMAL STEAM ACT OF 1970

The Geothermal Steam Act of 1970 contains some provisions which many feel are impediments to development. Most prominent are acreage limitations and KGRA designations.

Legislation has been introduced which would expand the current acreage limit from 20,480 acres. We have not been presented with any evidence which would discourage us from supporting these recommendations.

We have concluded that the methods used to identify and designate lands as KGRA's need improvement. The "competitive interest" requirement, although a sound idea, needs to be given more consideration and possibly revised. The way

in which this requirement has been worked out has resulted in some lands for which lease applications are received being designated as KGRA's simply because they overlap lands for which someone else has submitted an application. For example, 47 of the 108 existing KGRA's were designated as such solely on the basis of overlapping applications. This did not ensure competitive interest for the overlapping areas because many of those lease sales received no bids. Because these lands are still designated as KGRA's they are not available for non-competitive leasing. We believe that this can be changed by amendments to the Act allowing lands which were originally offered competitively and received no bids to be offered non-competitively. In addition, other lands on which leases have expired or have been relinquished are not being made available for non-competitive leases (over 1/2 million acres). This appears to be a management decision within the Interior Department.

FOREST SERVICE LANDS

Leasing rates of Federal lands under Forest Service jurisdiction, if continued, could become a matter of concern for future geothermal development (900,000 acres of Forest Lands are in KGRA's; yet only 43,500 acres have been leased). No leases have been issued for California Forest Service lands and the Forest Service has not provided the resources for the California office to deal with the geothermal activity in

recent years. The Chief of the Forest Service recently stated that development of the geothermal resources on National Forest Service lands is "generally" compatible with their overall management program. However, a Headquarters staff official stated that geothermal leasing held the lowest priority of their resource programs. We believe that the Secretary of Agriculture needs to set a higher priority for leasing of promising Forest Service geothermal lands.

WITHDRAWN AND ACQUIRED LANDS

We noted that there are some disagreements regarding the authority of Interior to issue leases on withdrawn and acquired lands, particularly lands acquired for the Department of Defense. ^{AGC00033} Interior initiated an environmental assessment of over 72,000 acres in the Coso KGRA located within the boundary of the China Lake Naval Weapons Center of which over 41,000 acres are Navy withdrawn lands. The assessment is scheduled to be completed next year and will cost about \$700,000. Interior officials now believe they do not have authority to lease these lands. We believe that Congress needs to clarify that Interior has the authority for leasing withdrawn and acquired lands for geothermal development.

Mr. Chairman, that concludes our specific comments, but I'd like to say in general that both the interagency Streamlining Task Force Report and the bills introduced by Senators Church and McClure (S. 1388 and S. 1330) propose recommendations and revisions of the Geothermal Steam Act of 1970 to remove unnecessary barriers to the development of geothermal resources. Although we have not fully reviewed these bills it seems that Title II (S. 1330) and Title III (S. 1388) for the most part were patterned after the Task Force recommendations which we believe should be implemented.

That concludes my prepared statement. We would be pleased to answer any questions.