

**MINUTE ITEM**  
This Calendar Item No. C58 was approved as  
Minute Item No. 58 by the California State Lands  
Commission by a vote of 3 to 0 at its  
06/28/07 meeting.

**CALENDAR ITEM  
C58**

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06/28/07  
PRC 5206.2  
D. Dudak

**CONSIDER APPROVAL OF THE AMENDMENT OF  
STATE GEOTHERMAL RESOURCES LEASE NO. PRC 5206.2  
TO ESTABLISH A METHOD TO VALUE GEOTHERMAL RESOURCES,  
REPLACE THE NET PROFITS CALCULATION WITH A SUPPLEMENTAL  
ROYALTY, AND UPDATE THE RENEGOTIATION PROVISION,  
THE GEYSERS GEOTHERMAL FIELD,  
LAKE COUNTY**

**LESSEE:**

Geysers Power Company, LLC  
Attn: Mr. Kevin Talkington  
10350 Socrates Mine Road  
Middletown, CA 95461

**AREA, LAND TYPE, AND LOCATION:**

Approximately 130 acres of State 100 percent (100%) reserved mineral interest school lands at The Geysers Geothermal Field, Lake County.

**BACKGROUND:**

State Geothermal Resources Lease No. PRC 5206.2 (Lease) was issued December 14, 1976, to Davies Estate Trusts, owner of the surface estate. Through subsequent assignments approved by the California State Lands Commission (Commission), the Lease is now held by Geysers Power Company, LLC (Lessee), a wholly-owned subsidiary of Calpine Corporation.

The Lease has been productive since 1988 and is now fully developed. The four wells completed on the Lease have produced a total of more than 22 billion pounds of geothermal steam and have provided approximately \$5.4 million in royalty revenue and more than \$7.5 million in net profit revenue to the State during the past 18 years. The Lessee currently produces 1.2 billion pounds of geothermal steam per year from the Lease, which is combined with an equal amount of steam from an adjacent private lease to supply its 20-megawatt Bear Canyon power plant.

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The Lessee currently holds all seven of the State's geothermal leases at The Geysers Geothermal Field. Those leases cover 6,862 acres. The Lessee also controls a private 360-acre parcel in which the State retained a 1/16<sup>th</sup> mineral interest. The State's seven leases and 1/16<sup>th</sup> parcel currently yield more than \$5.0 million per year in revenue to the State. Pursuant to Public Resources Code section 6217.5, revenue derived from State school lands benefits the State Teachers' Retirement Fund.

The Lessee currently produces more than 30 billion pounds per year from its seven State leases, and combines that steam with steam from its federal and private leaseholds to generate approximately 1,000 megawatts of electricity at its 19 geothermal power plants at The Geysers. California leads the nation in using geothermal resources to generate electricity. Along with solar, wind, hydro and biomass, geothermal is considered a renewable source of electrical generation.

**GEOHERMAL RESOURCE VALUATION AND RENEGOTIATION:**

Each of the State's geothermal leases provides that geothermal resources shall not be sold, utilized or otherwise disposed of except in accordance with sales contracts or other methods which have been approved by the State. In 1972, the Commission approved use of a sales contract negotiated between Union Oil Company (Union) and Pacific Gas and Electric (PG&E) to value steam for royalty calculations on the State's earliest leases at The Geysers. Union produced and sold steam to PG&E which used that steam at its geothermal power plants. PG&E paid Union based on the amount of electricity generated from the steam, not on the amount of steam actually consumed or on the value of the generation itself.

In 1999, the Union-PG&E contract ended because the Lessee acquired all of Union's leaseholds and all of PG&E's power plants. As a result, a new method for valuing steam had to be established. In April 1999, the Commission approved a method that values the steam as a percentage of the value of electricity generated from the steam. That valuation method has since become the standard at The Geysers, being adopted for use on nearly all federal and private leases. The method ties the value of steam directly to the value of electricity generated from it, thus promoting the most efficient use of the steam. However, neither the Union-PG&E contract nor the later valuation method applied to this Lease.

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Each of the State's geothermal leases provides opportunities for periodic renegotiation of economic terms such as royalty, rent, net profits and other monetary considerations, including the valuation of steam. The first opportunity for renegotiation is typically 20 years after a lease is issued, and at ten-year intervals thereafter. The renegotiation provision included in this Lease relies on a governmental board created by the Legislature – the "Geothermal Resources Board" – to approve or disapprove the terms proposed by the State whenever the State and the Lessee are unable to reach a negotiated agreement. The Legislature later decided that the Geothermal Resources Board was unnecessary and repealed the law creating it. Language in more current State geothermal leases provides that if agreement cannot be reached on renegotiated terms, the State shall establish terms consistent with the provisions of Public Resources Code section 6913(e).

**GEOHERMAL RESOURCE VALUATION FOR SUBJECT LEASE:**

In 1987, the State's lessee proposed operating its own power plant for the Lease. Without an arms-length sales contract to establish the value of steam for royalty calculations, Commission staff had to negotiate a price. The price agreed upon was specific to the amount of steam produced and unrelated to the amount or value of electricity generated from the steam. The price was higher than any price at The Geysers, and substantially higher than the price under the Union-PG&E contract. It consisted of a base price to be adjusted every six months according to changes in specified economic indexes. The Commission approved the price in January 1988.

In March 1994, the Commission approved an amendment to the Lease to resolve a dispute over the interpretation of language concerning the steam price. The amendment established a new lower base price, but increased the royalty rate for the Lease from 10 percent (10%) to 12.5 percent (12.5%), which essentially offset the reduction in price. The amendment provided that the price would remain in effect through December 14, 2006, the thirtieth anniversary of the Lease.

Because the price period established in the 1994 amendment recently expired, the parties must agree upon a new method for valuing steam produced from the Lease. The need for a new pricing method is also warranted by the economic circumstances related to the Lessee's operation of its Bear Canyon power plant, where steam from the Lease is used.

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The geothermal steam produced from the Lease is identical in nature to steam produced elsewhere at The Geysers, yet the price associated with that steam has escalated since 1994 to a level two to three times higher than the price applicable to all other leases. The disproportionately higher price, combined with high operating costs at the Bear Canyon plant, has in recent years threatened the economic viability of the entire project. Information provided by the Lessee reveals that it incurred a negative cash flow for two of the last three years. In the absence of a new steam pricing method, the Lessee might be forced to close the Bear Canyon plant. Plant closure could result in abandonment of State wells and steam. The Lessee could build a new pipeline to transport the steam to another power plant, but the economics of that alternative would be affected by the value of the steam.

Commission staff has negotiated with the Lessee and reached agreement to establish the value of steam from the Lease at 42 percent (42%) of the gross proceeds associated with the electricity generated from the steam. This is the valuation method now in effect at each of the State's other six leases, and is the highest price for steam among federal and private leases throughout The Geysers. Although the State's royalty revenue from the Lease will be less than what it was in prior years when the steam price had escalated to a level that was two to three times higher than elsewhere in the field, the proposed pricing method will help the Lessee achieve a positive cash flow for the Bear Canyon plant, and allow the Lessee to continue to produce steam from the Lease.

**NET PROFITS PROVISION:**

This Lease is unique among State leases at The Geysers because it provides that in addition to a royalty for steam produced from the Lease, the Lessee must also pay the State a percentage of the net profits associated with the development of the leased land. The net profits provision is a product of the Commission's decision in the mid 1970s to offer State lands for geothermal leasing through competitive public bidding that required a percentage of net profits as the bid factor rather than a cash bonus. When this Lease was offered for competitive bid in 1976, the winning bid was 28 percent (28%) of net profits. Although no other current lease at The Geysers has this provision, the State issued several other leases under the net profits bidding procedure in the late 1970s and early 1980s that were eventually quitclaimed without being developed.

Net profits represent the difference between the cumulative value of steam produced from the Lease and the cumulative costs to develop and operate the

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Lease. A detailed procedure for accounting for development and operating costs, and for calculating the State's 28 percent (28%) share of net profits, is included as an exhibit to the Lease. The development costs are typically the largest expenses because they include construction of roads and pipelines and drilling of wells. Because the Lease is fully developed and few additional development costs are anticipated, future net profits that would accrue to the State are mainly a function of on-going operating costs. These costs have been relatively stable over the past six years, so the State's share of net profits has been relatively stable. Nevertheless, the accounting procedure continues to be a time-consuming and costly exercise that the Lessee and the State must undertake each month. For the Lessee, it is an effort that is unique to this Lease and requires personnel resources that could be better utilized elsewhere. An alternative method for computing the State's share of net profits, such as a direct percentage of the value of electricity, would eliminate this cumbersome accounting effort and reduce the time and manpower expended by both parties to prepare and analyze the monthly net profit statements. It could also benefit the State. Expensive well repairs, well abandonment costs, and site restoration costs that would have to be incurred as the Lease reaches the end of its economic life would substantially reduce the magnitude of net profits and the State's 28 percent (28%) share of those profits.

Commission staff has negotiated with the Lessee and reached agreement to replace the State's existing share of net profits with a supplemental royalty of eight percent (8%) of the gross value of electricity. Commission staff estimates that the proposed supplemental royalty will equal or exceed the net profits share calculated under the accounting procedure currently spelled out in the Lease, but will benefit both the Lessee and the State by reducing the time and effort the parties would otherwise expend in preparing and analyzing net profits statements. And like the net profits share it replaces, the proposed supplemental royalty would be in addition to the State's regular royalty. The regular royalty is 12.5 percent (12.5%) of the value of the steam, where the value of the steam is 42 percent (42%) of the value of the electricity. These two percentages yield a combined percentage of 5.25 percent (5.25%) of the gross value for electricity. For comparison, the proposed supplemental royalty will be a direct eight percent (8%) of the gross value for electricity. As a result, the supplemental royalty will continue to exceed the regular royalty. This reflects the original intent of the net profits leasing concept, which is that the bulk of the State's compensation from the Lease be derived from its net profits share.

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**AMENDMENT TERMS:**

The proposed amendment to State Geothermal Resources Lease No. PRC 5206.2 will achieve the following objectives:

1. Establish the value of steam produced from the Lease as 42 percent (42%) of the gross value of the electricity, with the State's royalty remaining 12.5 percent (12.5%) of that steam value;
2. Replace the State's share of net profits under the Lease with a supplemental royalty that is in addition to the royalty provided above and is equal to eight percent (8%) of the gross value of the electricity;
3. Update the language of the renegotiation provision and eliminate references to a governmental board that no longer exists.

All other material terms and conditions of the Lease will be unchanged.

**STATUS OF LESSEE:**

In December 2005, Calpine Corporation and over 200 subsidiaries, including Lessee, filed for protection under Chapter 11 of the Bankruptcy Code. In May 2006, Calpine filed a motion authorizing the Lessee to assume all of its geothermal leases and related obligations. Although Calpine and its related subsidiaries are undergoing restructuring efforts, the Lessee has continued its geothermal operations without noticeable curtailment of steam production or electrical generation. The Lessee has continued to pay rentals and royalties due under the terms of all its State geothermal leases and remains in good standing with the State.

**STATUTORY AND OTHER REFERENCES:**

- A. Public Resources Code: Division 6, Parts 1 and 2; and Division 13.
- B. California Code of Regulations: Title 2, Division 3; and Title 14.

**OTHER PERTINENT INFORMATION:**

1. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines [Title 14, California Code of Regulations, section 15060(c)(3)], the staff has determined that this activity is exempt from the requirements of the CEQA because the activity is not a "project" as defined by the CEQA and the State CEQA Guidelines.

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**EXHIBIT:**

- A. Location Map

**PERMIT STREAMLINING ACT DEADLINE:**

N/A (not a "development project" subject to the Act)

**RECOMMENDED ACTION:**

IT IS RECOMMENDED THAT THE COMMISSION:

**CEQA FINDING:**

1. FIND THAT THE ACTIVITY IS EXEMPT FROM THE REQUIREMENTS OF THE CEQA PURSUANT TO TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15060(c)(3) BECAUSE THE ACTIVITY IS NOT A PROJECT AS DEFINED BY THE PUBLIC RESOURCES CODE SECTION 21065 AND TITLE 14, CALIFORNIA CODE OF REGULATIONS, SECTION 15378.

**AUTHORIZATION:**

1. AUTHORIZE THE AMENDMENT OF STATE GEOTHERMAL RESOURCES LEASE NO. PRC 5206.2 UPON THE TERMS AND CONDITIONS OUTLINED IN THIS CALENDAR ITEM AND IN FORM ON FILE IN THE OFFICES OF THE COMMISSION, THE AMENDMENT TO PROVIDE FOR: 1) A VALUE FOR STEAM THAT IS 42 PERCENT (42%) OF THE GROSS VALUE FOR ELECTRICITY; 2) REPLACEMENT OF THE STATE'S NET PROFIT SHARE WITH A SUPPLEMENTAL ROYALTY OF EIGHT PERCENT (8%) OF THE GROSS VALUE FOR ELECTRICITY; AND 3) AN UPDATED RENEGOTIATION PROVISION THAT ELIMINATES REFERENCE TO A GOVERNMENTAL BOARD THAT NO LONGER EXISTS.
2. AUTHORIZE THE EXECUTIVE OFFICER OR HIS DESIGNEE TO EXECUTE ANY DOCUMENTS NECESSARY TO IMPLEMENT THE COMMISSION'S ACTION.

