Federal Register

Thursday
January 5, 1989

Part II

Department of the Interior

Minerals Management Service

30 CFR Parts 202, 206, 210, and 212
Revision of Geothermal Resources Valuation Regulations and Related Topics; Proposed Rulemaking

DEPARTMENT OF THE INTERIOR

Minerals Management Service

30 CFR Parts 202, 206, 210, and 212

Revision of Geothermal Resources Valuation Regulations and Related Topics

AGENCY: Minerals Management Service (MMS), Interior.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Minerals Management Service (MMS) is proposing to amend and clarify existing regulations to define the value, for royalty purposes, of geothermal resources produced from Federal lands administered by the Departments of the Interior and Agriculture. Geothermal resources on Indian (Tribal and allotted) lands are excluded from this proposed rulemaking. Existing regulations provide only general guidance for the valuation of geothermal production. The amended rule will provide industry and the public with a comprehensive and consistent geothermal valuation policy and standards for valuing geothermal resources and geothermal byproducts.

DATES: Written comments must be received on or before March 6, 1989.

ADDRESS: Written comments may be mailed to Minerals Management Service, Royalty Management Program Rules and Procedures Branch, Denver Federal Center, Building 85, P.O. Box 25165, Mail Stop 662, Denver, Colorado 80225, Attention: Dennis C. Whitcomb.

A public hearing may be held at a future date. The time and location will be announced in a future notice published in the Federal Register.

FOR FURTHER INFORMATION CONTACT: Dennis C. Whitcomb, Chief, Rules and Procedures Branch, (303) 231-3432, (FTS) 326-3432.

SUPPLEMENTARY INFORMATION: The principal authors of this proposed rulemaking are Charles Brook and Michael Throckmorton, Royalty Valuation and Standards Division, Royalty Management Program, MMS.

I. Introduction

The Geothermal Steam Act of 1970, 30 U.S.C. 1001-1025 (the Act), established the statutory framework for the leasing and management of geothermal resources on public, withdrawn, and acquired lands administered by the Departments of the Interior and Agriculture. The Act mandates that geothermal leases will provide for a royalty on the amount or value of steam, or any other form of heat or energy, and byproducts derived from production under the lease and sold or utilized by the lessee or reasonably susceptible to sale or utilization by the lessee. The Geothermal Resources Lease (the lease instrument) expands on the royalty provisions of the Act by adding that royalties must be paid on the amount or value of geothermal resources produced, processed, removed, sold, or utilized from the lease or reasonably susceptible to sale or utilization by the lessee. However, the lease instrument provides that unused geothermal resources may be reinjected into the subsurface without payment of royalties if such reinjection is approved by the proper authority.

The Act delegates to the Secretary of the Department of the Interior all authority for the administration of Federal geothermal leases, including issuance of rules and regulations as appropriate to implement the Act. The lease instrument expressly authorizes the Secretary to establish minimum values for the purpose of computing royalties in accordance with applicable regulations. Geothermal valuation regulations currently appear at 30 CFR 206.350 and 206.351, which were redesignated from §§ 206.300 and 206.301 in a Federal Register Notice published on January 15, 1988 (53 FR 1184).

The foremost use of geothermal resources is the generation of electricity. The development of the geothermal industry in the United States received a significant boost with passage of the Public Utilities Regulatory Policies Act of 1978, 16 U.S.C. 2601 (PURPA). The act provided both an avenue for the ownership of small power generation facilities by entities other than utilities and price incentives for the sale of electricity. The implementation of PURPA was particularly beneficial for geothermal development because lessees could commercially exploit more resources, particularly the smaller, moderate-temperature geothermal resources in remote areas.

As a primary source of thermal energy, or heat, geothermal resources have a variety of uses, which was recognized by the Act. However, unlike oil, gas, coal, and other energy commodities, geothermal resources can neither be transported long distances nor stored; they must be utilized immediately after production and in close proximity to the production well. The temperature of the resource by-and-large dictates the type of utilization of the resource. Higher-temperature geothermal resources are predominantly used to generate electricity, which, consistent with the First Law of Thermodynamics, is essentially a form of energy converted from the thermal energy of the resource. Lower-temperature geothermal resources are suitable for direct utilization processes; that is, space heating and agricultural and manufacturing operations requiring process heat. The recovery of byproducts (sulfur, lead, zinc, potassium compounds, etc.) and demineralized water is feasible, but has not yet been accomplished on a commercial scale.

The existing regulations provide only general guidance for the valuation of geothermal production. This is particularly true with respect to those resources that are utilized by the lessee and are not involved in a sales transaction. This proposed rulemaking is designed to provide greater clarity to geothermal valuation regulations. Currently, this greater clarity is provided by policy interpretation.

To take advantage of electricity price incentives offered under PURPA, an increasing number of lessees are utilizing geothermal resources directly in their own powerplants for the generation and sale of electricity. In these situations, there are no sales of the resource on which to base value. Consequently, MMS established a geothermal netback procedure to value these "no sales" resources, relying primarily on the existing regulations at 30 CFR 206.350(a)(2) and (b)(2). The netback valuation procedure was first applied in 1985. In addition, MMS developed guidelines for the valuation of geothermal resources that were sold prior to power generation, also relying on the existing regulations at 30 CFR 206.350. The netback procedure and other guidelines for valuing Federal geothermal resources used to generate electricity were made available to the public in October 1987 with the issuance of a report entitled "Valuation of Federal Geothermal Resources—Electrical Generation." The netback procedure was revised in June 1988 to reflect changes effective March 1, 1988, regarding MMS's policy on computing transmission and generating deductions, including changes concerning the rates used to compute returns on investments.

The guidelines appearing in the June 1988 report "Valuation of Federal Geothermal Resources—Electrical Generation" (and its October 1987 predecessor) represent MMS's official valuation policy and are to remain in effect until new valuation regulations are published as a final rulemaking. Copies of the revised report may be obtained by contacting the person identified in the "Address" section of this preamble.

II. Purpose and Background

The MMS is proposing to revise the current regulations regarding the valuation of geothermal resources to accomplish the following:

(a) Clarify and expand on existing valuation policy and standards as they apply to geothermal resources used for electrical generation.

(b) Provide clear standards for valuing geothermal resources used in direct utilization processes.

(c) Provide clear standards for valuing geothermal byproducts.

(d) Place the geothermal royalty valuation in a format compatible with the valuation regulations for other leasable minerals.

(e) Provide industry and the public with a comprehensive and consistent geothermal valuation policy.

Structurally, these rules would modify the existing provisions and add new sections to Subpart H of 30 CFR Parts 202, 206, 210, and 212. These proposed rules would be applied prospectively and would supersede all currently effective geothermal resource valuation directives issued by MMS or its predecessor agency, the U.S. Geological Survey. The MMS anticipates that specific guidelines governing reporting requirements consistent with the geothermal valuation regulations will be incorporated into an MMS Geothermal Payor Handbook subsequent to the publication of the final rule in the Federal Register.

The purpose of the regulations is to define the value, for royalty purposes, of geothermal resources produced from Federal lands. Indian lands were excluded by the Geothermal Steam Act. Value can be determined in different ways, and these proposed rules explain how value would be established under various circumstances. Valuation standards are grouped according to how the geothermal resource is utilized: Electrical generation, direct utilization, and/or recovery of byproducts. Within each group, valuation standards are described according to the type of transaction: arm's-length or non-arm's-length and dispositions of the resource not subject to a sales transaction (the so-called "no sales" transactions). Valuation procedures are different for each group.

The term "gross proceeds" is introduced into the valuation standards to replace the "total consideration" language at paragraph (a)(2) of § 206.350. The concept, however, remains the same: Value cannot be less than the gross proceeds (total consideration) accruing to the lessee for any disposition of the geothermal resource.

Valuation standards for geothermal resources used to generate electricity follow the criteria and procedures, with certain modifications, established in the June 1988 report "Valuation of Federal Geothermal Resources—Electrical Generation." The proposed rulemaking codifies the netback procedure used for valuing geothermal resources under "no sales" situations. Valuation procedures for geothermal resources used in direct utilization processes follow the internal procedures and practice used by MMS.

The proposed rule is a departure from the existing regulations. The chief difference is the elimination of the list of factors given at existing 30 CFR 206.350(a) that were to be considered in establishing the value of geothermal resources. That list does not give priority to any particular factor. By contrast, the proposed rule establishes specific conditions and procedures for valuing the resource.

III. Requested Comments on Selected Issues

The public is invited to comment on all aspects of the proposed rulemaking. Comments on specific sections should identify the section number and paragraph being addressed. In addition, MMS is requesting comments on the specific issues described below.

Section 202.353 Measurement standards for reporting and paying royalties

This proposed section establishes for the first time consistent units of measurement for reporting geothermal production for royalty purposes. In the past, geothermal production has been reported in a multitude of units, including kilowatthours and megawatthours of electricity, pounds and thousands of pounds of steam, and gallons of water. The MMS proposes to standardize the reporting units by specifying that valuations in terms of electricity would be reported as kilowatthours, valuations in terms of weight would be reported as thousands of pounds, and valuations in terms of thermal energy would be reported as millions of Btu's.

The MMS is proposing that direct utilization resources and commercially demineralized water be reported in units of hundreds of gallons to the nearest hundred gallons. However, MMS is unsure whether such a requirement is appropriate, or whether the reporting units should be in gallons or thousands of gallons. Accordingly, MMS is requesting comments and recommendations on the proper reporting units when measurements are on a volume (gallonage) basis.

Section 206.352 Valuation standards for electrical generation

This proposed section establishes procedures for valuing geothermal resources (steam and hot water) used to generate electricity. Values are determined in accordance with the type of transaction under which the resource is disposed: Arm's-length sales, or non-arm's-length and "no sales" transactions.

For geothermal resources sold under an arm's-length contract, proposed § 206.352(b) would provide that the lessee's gross proceeds (revenue plus any other consideration directly or indirectly received for the disposition of the resource) accruing from the arm's-length sales transaction would establish the value of the resource for royalty purposes. This is a general rule that essentially follows the existing arm's-length valuation guidelines given in the June 1988 report "Valuation of Federal Geothermal Resources—Electrical Generation." However, MMS reserves the right under the proposed regulations to establish a different value if it determines that the contract does not reflect the total consideration passing between buyer and seller or discovers that the value is unreasonable owing to impropriety between the contracting parties.

For geothermal resources used to generate electricity and not sold under an arm's-length contract—that is, those resources sold to the lessee's power-generating affiliate under a non-arm's-length contract or resources utilized by the lessee in its own powerplant and thus not subject to a sales contract—proposed § 206.352(c) would provide a sequence of benchmarks to value the resource. The value would be established in accordance with the first applicable of the following procedures:

(1) The weighted average of the gross proceeds paid or received by the lessee under its own arm's-length contracts for the purchase or sale of similar quantities of like-quality resources in the same field;

(2) The value determined by the netback method taking into account the lessee's costs of generating and transmitting electricity; or any other reasonable valuation method approved by MMS.

(The word "lessee" also refers to the lessee's power-generating affiliate. See proposed definition of lessee in proposed section 206.351.) Under no circumstances, however, will MMS accept a value that is less than the gross

proceeds received by the lessee under its non-arm's-length contract for the sale of geothermal resources from the lease. Gross proceeds always establishes a minimum value against which other values are compared.

The MMS believes that the first valuation benchmark—the weighted average method—would be infrequently employed; there are likely few instances where the lessee, or the lessee's power-generating affiliate, will purchase additional geothermal resources to supply the powerplant or where the lessee will have excess production to sell to other operators. However, it introduces two concepts that depart from valuation criteria commonly used for other leasable minerals, notably oil and gas: (1) MMS is proposing that purchases or sales of geothermal resources in other fields (the "area" concept) would not be considered in establishing geothermal values, and (2) the prices established in the contracts of other lessees in the same field would not be considered in establishing geothermal values. The physical and chemical characteristics of geothermal resources vary widely from field to field, primarily because of differences in temperature, salinity, phase, and producibility of the geothermal fluid. Even in geothermal provinces, such as the Salton Trough of Southern California and adjacent Mexico, the physical and chemical characteristics of the geothermal fluids from each of the many fields are different. Geothermal fluid characteristics dictate the type of conversion technology and design of the powerplant for utilization of a particular geothermal resources. For these reasons, MMS believes that a valuation based on comparison to contract sales outside of any given field is inappropriate. Accordingly, the "area" concept no longer would be used for geothermal resource valuation. Comments are invited regarding this concept.

With respect to the second concept, several factors can influence the value or price of geothermal resources even within the same filed. A major factor is the variety of methods used to establish geothermal price in arm's-length contracts. For example, at the Geysers steam field in California, the sales prices of the steam resource vary by a factor of more than two, owing to the multiple methods of computing those prices. Some of the stem is priced in terms of net kilowatthours generated based on the purchaser's avoided costs of fossil and nuclear fuels used in conventional powerplants. Other steam is priced in terms of thousands of pounds delivered based on a variety of economic indexes. Another factor that can influence geothermal values is powerplant efficiencies. Because of design and age differences, each powerplant has a different efficiency for converting heat into electricity. As a general rule, operators of the more efficient powerplants are willing to pay higher prices for the geothermal resource because of cheaper conversion costs. Powerplant efficiencies thus can significantly affect the unit price of the resource. Considering the complexity of the factors involved, MMS believes that a geothermal valuation based on prices established in the contracts of other lessees in the field in not appropriate. This concept also would eliminate from consideration any valuation based on a majority price as currently provided for at 30 CFR 206.350(a)(1). The MMS has found that the establishment of a majority price is impracticable for geothermal resource valuation and is proposing to abandon this procedure. Comments are requested on this concept of not using prices established in other lessee's contracts to determine value.

The use of the first "other than arm's-length" valuation benchmark would be predicated on the lessee's sale, purchase, or other disposition of a "similar quantity" of like-quality resource. The intent of this limiting condition is to avoid a valuation based on sales or purchases of small volumes that would unduly affect the value of the majority of the lessee's production.

The MMS anticipates that the procedure prescribed in the second benchmark will be the predominant valuation method used to value geothermal resources that are used to generated electricity and disposed under non-arm's-length and no sales situations. When geothermal resources are used to generate electricity—that is, the thermal energy of the resource is converted into higher priced electical energy—MMS believes that the value of the resource is effectively enhanced by the conversion process. The netback procedure compensates for this enhancement of value by subtracting the costs of electrical generation and transmission—the transmission and generating deductions described in proposed §§ 206.343 and 206.354, respectively—from the sales price of the electricity. However, several in the geothermal industry believe that the netback procedure yields values that are unrealistically high and thus do not reflect a "market value" on which royalties should be based. Accordingly, MMS is seeking comments on whether the netback procedure should be modified and, if so, how.

One of industry's more serious concerns regarding the netback calculation is the rate of return allowed on invested capital used in the determinations of the transmission and generating deductions. A return on investment is provided to reimburse the lessee for the cost of capital necessary to fund construction of the powerplant and transmission facilities. The rate of return specified in the proposed regulations for determining transmission and generating deductions is 1.5 times the Standard and Poor's BBB industrial bond rate. The MMS is seeking comments on whether this rate of return is appropriate for geothermal power projects, or whether some other rate of return should be used. Respondents should explain the rationale for their proposed rates of return and include citations of publicly available references supporting or clarifying their proposal.

A "proportion-of-profits" method has been proposed as an alternative to the netback valuation procedure. Instead of a standard rate used to compute the return on invested capital under the netback procedure, the proportion-of-profits method provides for a return on invested capital by allowing each aspect of the project (resource development and production, power generation, and transmission) to earn the actual return earned by the project as a whole. The proportion-of-profits method is premised on the theory that each dollar of invested capital earns the same percentage of project profits. Accordingly, the value of the resource upon which royalty is based would be determined by the proportional share of the geothermal project's net operating income attributable to the geothermal field. The unit value of the geothermal resource (in dollars per kilowatthour) is determined by the equation

$$\text{Unit value} = \frac{GE + (NOI \times FI/TI)}{EO}$$

where GE is the geothermal field

operating expenses plus royalties, NOI is the net operating income of the entire project (electricity sales revenue less transmission, generating, and field expenses), FI is the investment in the field (acquisition and development costs), TI is the total investment in the geothermal project (field, powerplant, and transmission line investments), and EO is the amount of delivered electricity. The MMS is requesting comments on the applicability and feasibility of using the proportion-of-profits method for determining geothermal values.

An "alternative-fuels" approach has also been proposed as a substitute for to the netback procedure. The alternative-fuels approach is currently used to value geothermal resources used in direct utilization processes. Under this method, the value of the geothermal resource would be based on the Btu-equivalent value of conventional fossil fuels (coal, oil, or gas) used to generate electricity. (See discussion of proposed § 206.355, valuation standards for direct utilization, for suggested equation to compute thermal energy utilized.) This method would assign a value based on the price of fossil fuels compared to the amount of thermal energy consumed in the powerplant. Because powerplants using conventional fuels operate at much higher temperatures and pressures than do geothermal powerplants, other factors (such as combustion and boiler efficiencies) may have to be considered under this valuation method. The MMS requests comments and analyses on the feasibility of using the alternative-fuels method for valuing geothermal resources in all cases. The MMS also requests suggestions on how the Btu-equivalent value of alternative conventional fuels should be determined.

The MMS is contemplating whether the valuation of electricity should be addressed in connection with the netback procedure. Under most current situations, the powerplants that are owned and operated by geothermal lessees are certified as "small power production facilities" under PURPA. Accordingly, electric utilities are required to purchase the electricity from these powerplants at rates based on the purchasing utility's avoided costs, pursuant to rules implementing PURPA as delegated to State regulatory authorities. In these instances, the geothermal lessee/powerplant owner usually receives both an energy payment and a capacity payment for the delivery of electricity. The energy payment represents the purchasing utility's avoided costs of fuels used to operate conventional powerplants. The capacity payment represents the utility's avoided costs associated with capital investments in powerplants and transmission systems to meet customer delivery demands or utility loan requirements. Capacity payments are generally set amounts based on minimum delivery requirements. They are often made in equal monthly installments for making available to the utility a certain amount of electricity.

Under the netback procedure, the value of the electricity forms the basis for deriving the value of the geothermal resource. The MMS has historically considered the value of the electricity as including both the energy payment and the capacity payment, pursuant to the "total consideration" concept at existing 30 CFR 206.350(a)(2) and the "value of the end product" concept at existing § 206.350(b)(2). This philosophy has been carried over into the proposed regulations in the definition of "gross proceeds." However, some geothermal lessees have argued that the capacity payment should not be included as part of the value of electricity because the capacity payment reflects the powerplant's ability to deliver electricity and thus depends on the attributes of the powerplant itself and not on the geothermal resource. (This viewpoint can be argued from the opposite perspective in that a powerplant cannot operate, especially at peak efficiency, without a sufficient supply of quality fuel—that is, geothermal resource.) The MMS is aware that all or some portion of capacity payments may continue in certain cases, such as forced outages, without delivery of electricity. Although these instances of nondelivery are usually temporary, they do raise the possibility of the lessee receiving a payment when geothermal resources are not produced or utilized. However, MMS is also aware that geothermal production is seldom completely shut in during periods of powerplant downtime or outages. Rather, production is generally either vented or flowed through powerplant bypasses during downtime to maintain the working condition of wells and gathering lines, or continues to generate electricity to maintain internal powerplant operations during forced outages. On the premise that a capacity payment may trigger a royalty obligation without there being any geothermal production, MMS is requesting comments on whether capacity payments should be included as part of the value of electricity. The MMS would also like to know to what extent geothermal production is shut in when no electricity is delivered but capacity payments are still received. If capacity payments are not included as part of the value of electricity, MMS would likely consider them as reducing the lessee's powerplant operating costs; the generating deduction would then be reduced accordingly.

Another concern regarding the valuation of electricity for application of the netback procedure is when the geothermal lessee/powerplant operator is also an electric utility company; in other words, when there are no third-party sales of the electricity on which to base value. One possibility of establishing the value of the electricity at the powerplant tailgate would be a weighted average of the utility's customer rates less transmission costs. The MMS requests comments on this and on alternative electricity valuation methods when the geothermal lessee is also the power-generating utility company.

The MMS is also contemplating whether or not to address the valuation of the resource when the lessee has an arm's-length generating agreement with a third party but receives revenue from the sale of electricity. Such a situation would arise where a lessee has an electricity sales contract but, for whatever reason, has a third party generate the electricity. The MMS believes that the chances of this situation occurring are remote and, therefore, has not addressed this situation in the proposed regulations. Nevertheless, MMS is requesting comments on whether such a situation is likely, whether it should be addressed in the rulemaking, and, if so, what methods should be used to value the resource.

If MMS finds that value cannot be determined by either the weighted average method or the netback procedure, the second valuation benchmark would provide MMS with regulatory flexibility to develop or approve different valuation methods and procedures.

Sections 206.353 and 206.354 Determination of transmission and generating deductions

These sections establish the procedures for computing transmission and generating deductions used in the netback valuation method. In addition to the question of the appropriate rate of return on capital investment discussed above, MMS is requesting comments on the following issues common to the determination of both deductions.

(1) The proposed regulations provide that transmission-line costs and generating costs can be computed using either a straight-line depreciation with a return on undepreciated capital

investment, or a return on capital investment without depreciation. The return on capital investment method would be applicable only to those facilities first placed into service on or after March 1, 1988. March 1, 1988, is the effective date of new oil and gas valuation regulations that were published in the Federal Register on January 15, 1988 (53 FR 1184 and 1230), which first provided for the use of the return-on-capital investment method. This method, as well as the effective date, was adopted for geothermal resource valuation. The adoption of this method is not precluded by current regulations. The MMS requests comments on whether there should be a one-time election to use the return-on-capital investment method for those facilities placed into service before March 1, 1988.

(2) The proposed regulations limit depreciation to the life of the geothermal project, with the caveat that this usually means the term of the electricity sales contract unless the lessee can show otherwise. The MMS must be protected from situations in which an electricity sales contract may expire and the lessee is unable to negotiate a new contract, even though the lease is still capable of production and the powerplant remains operable. Accordingly, MMS requests comments on whether depreciation should be based on a fixed time period commensurate with the first sales agreement or some other reasonable period of time, and what conditions or considerations might extend or decrease a depreciation period.

(3) The proposed regulations prescribe that a powerplant or transmission line would be depreciated only once; that is, the depreciation schedule established by the original owner would not be altered with a change in ownership. Because the Government does not participate in the profit or losses that could result from a sale of a powerplant or transmission line, MMS takes the position that it should share in the depreciation of those facilities only once. Comments are invited on the issue of recapitalization and the justification of redepreciating a powerplant or transmission line with a change in ownership.

The proposed regulations also provide that if the transmission and/or generating deduction, as determined at the end of the annual reporting period, results in a netback value that is less than that on which the lessee paid royalties the lessee is due a credit. Refunds are not encouraged by the MMS because of undue administrative burdens. Rather, any credit for royalty overpayments would be taken against future royalty payments until the credit is depleted. Instructions on taking credits would be addressed in the Geothermal Payor Handbook to be prepared sometime after final rulemaking.

Section 206.355 Valuation standards for direct utilization

This proposed section establishes the procedures for valuing geothermal resources (hot water) that are used for purposes other than electrical generation (for example, space heating, greenhouse operations, and industrial processes). As with geothermal resources used to generate electricity, the proposed regulations for direct utilization resources prescribe that value will be based on either the lessee's gross proceeds received under an arm's-length sales contract, or the first applicable benchmark for dispositions under non-arm's-length or "no sales" situations. The benchmark valuation system for direct utilization resources differs from that for geothermal resources used to generate electricity in that the second benchmark prescribes a value based on the least expensive, reasonable alternative fuel source.

Most direct utilization geothermal resources will likely to be used by lessees in their own facilities and thus not subject to either arm's-length or non-arm's-length sales. Accordingly, MMS anticipates that the second benchmark—the least expensive, reasonable alternative fuel approach—will be the predominant method used to value direct utilization resources. This is essentially the same method currently used by MMS, except for the proposed inclusion of an efficiency factor in the equation used to calculate the amount of thermal energy displaced by the geothermal resource. The efficiency factors corrects for the fact that not all of the heat derived from combustion of an alternative fuel can be converted to an equal amount of utilized geothermal heat. It takes more heat from the combustion of alternative fuels to create an equal amount of geothermal resource heat directly utilized because of boiler losses and stack emissions. The equations for determining the amount of fuel (in terms of Btu's) displaced by the geothermal resource under the proposed rule is

$$\text{Thermal energy displaced} = \frac{(h_{in} - h_{out}) \times \text{density} \times 0.133681 \times \text{volume},}{\text{efficiency factor}}$$

where h_{in} is the enthalpy in Btu's/lb at the utilization facility inlet (based on measured inlet temperature), h_{out} is the enthalpy in Btu's/lb at the facility outlet (based on measured outlet temperature), density is in lbs/cu ft based on inlet temperature, the factor 0.133681 (cu ft/gal) converts gallons to cubic feet, and volume is the quantity of geothermal fluid in gallons produced at the wellhead or measured at an approved point. "Thermal energy displaced" is then in Btu's. Assuming a geothermal efficiency factor of 1.0, MMS proposed to use an efficiency factor of 0.7 for coal and 0.8 for oil, natural gas, and related fuels (butane, propane, diesel, etc.). (Efficiency factors from Ball, Vic, 1983, Generating greenhouse heat: Grower Talks, v. 46, no. 12, p. 20–28.) The value of the geothermal resource is then determined by multiplying the amount of thermal energy displaced by the unit value (dollars per Btu) of the alternative energy source. The MMS requests comments on whether this method correctly reflects the value of geothermal resources used in direct utilization processes, on what alternative methods may be used, and on the applicability of using the efficiency factors.

In addition to the efficiency factor, the proposed alternative fuel approach differs from that currently used by specifying the least expensive, reasonable alternative fuel. This qualification essentially restricts the alternative fuel chosen to one that would normally be used in a given direct utilization process at the location of utilization. For example, coal may not be a reasonable alternative fuel for some processes or in some locations because of environmental considerations. The MMS would like comments on whether this qualification is warranted and, if so, what criteria should be used to determine the most reasonable alternative fuel.

The MMS has not addressed in the proposed rulemaking how the reasonable alternative fuel would be valued, preferring at this time to consider individual circumstances. Spot prices for oil and gas, as published in trade journals, local market prices for the alternative fuels, and average regional prices for coal as published by the U.S. Government's Energy Information Agency have been used or considered in the past. The MMS would like comments on whether the valuation of alternative fuels should be addressed in the final rulemaking and, if so, what criteria should be used to value the alternative fuel.

Section 206.356 Valuation standards for byproducts.

This proposed section describes the methods that would be used to value byproducts, including commercially demineralized water, recovered from geothermal production. As contemplated by the definition of "byproduct" in the Geothermal Steam Act, byproducts are recovered after a geothermal resource has been used in a geothermal utilization facility (a powerplant or direct utilization facility). Although byproducts are not being recovered on a commercial scale—to MMS's knowledge—at this time, some sulfur is currently being recovered by hydrogen sulfide abatement facilities in connection with power generation. However, the sulfur apparently is not being commercially sold. Other byproducts that could potentially be recovered include sodium and potassium compounds and, if economics should prove feasible, perhaps lead, zinc, and other metallic elements.

As with geothermal resources used to generate electricity or used in direct utilization processes, the value of the byproduct would be established either by the lessee's arms-length contract or by the first applicable criteria under a non-arm's-length or "no sales" benchmark system. Briefly summarized, the benchmark criteria are ordered as follows:

(1) The lessee's gross proceeds accruing under its non-arm's-length contract if those gross proceeds are equivalent to the gross proceeds derived under comparable arm's-length contracts for like-quality products *in* the field;

(2) The lessee's gross proceeds accruing under its non-arm's-length contract if those gross proceeds are equivalent to the gross proceeds derived under comparable arm's-length contracts for like-quality products *outside* the field;

(3) Other relevant matters, such as spot-market prices; or

(4) A netback method or other reasonable valuation method.

Unlike fluid geothermal resources used to generate electricty or used in direct utilization processes, byproducts can be stockpiled for future sales; thus, they can be considered more in terms of conventional marketable commodities. Accordingly, MMS is proposing to look at sales prices outside the field to establish value as necessary. The MMS is requesting comments on the proposed byproduct valuation procedure and whether there are any alternative methods of valuing byproducts.

The proposed regulations provide for a "byproduct transportation allowance," addressed at proposed §§ 206.357 and 206.358. The MMS considers transportation costs borne by the lessee as an added-value service that should be deducted from the sales price to determine value of the byproduct at the lease. The transportation allowance would be applicable only for movement of the byproduct to a point of sale or delivery off the lease, unit, or participating area. The determination of the allowance follows the same general principles as that for oil and gas transportation allowances. The MMS will not address specific transportation issues in this preamble, but invites comments on the procedure used to determine the allowance, including the costs allowed.

The MMS does not propose to provide a processing allowance for byproduct recovery at this time, owing to the lack of both byproduct recovery projects and experience regarding byproduct recovery technology. However, MMS is requesting comments on whether a processing allowance for byproducts should be included as a deduction in the valuation regulations. If so, how should it be computed, and what limitations or conditions should be placed on the allowance.

IV. Miscellaneous Issues

The MMS is requesting comments on three issues concerning geothermal resources used to generate electricity or used in direct utilization processes not addressed in previous discussions: (1) Should MMS grant transportation allowances for the lessee's costs of delivering the resource to a point of utilization (powerplant or direct utilization facility) off the lease, unit, or participating area; (2) should MMS allow costs associated with hydrogen sulfide abatement facilities (and other facilities to mitigate environmental hazards) as part of the determination for generating deductions under the netback procedure; and (3) should any processing allowances be granted for geothermal resources used in direct utilization processes.

With regard to transportation of geothermal production, MMS has taken the position that it is the lessee's responsibility under the lease and the operating regulations at 43 CFR 3260.5(c) to transport the resource from the wellhead to the point of utilization (powerplant or direct utilization facility) in an efficient manner. As a general rule, geothermal utilization facilities are located close to the production well, usually within a mile. However, it is possible to transport hot water several miles, or even tens of miles, for space-heating purposes. The MMS currently considers all pipelines connecting wellheads and powerplants or direct utilization facilities as a field gathering system, and all costs of gathering are regarded as production-related costs that are not shared by the Government. Nevertheless, to consider possible futher long distance transportation, MMS is requesting comments on whether transportation allowances are justified to transport the resource off the lease, unit, or participating area. If transportation allowances are granted, they would require that the lessee follow a strict reporting procedure; the reporting requirements would likely include the submittal of detailed documents supporting the lessee's allowance.

With regard to inclusion of the costs of hydrogen sulfide abatement facilities and other facilities to mitigate environmental hazards as part of the generating deduction under the netback procedure, MMS has taken the position that the lessee is solely responsible for all activities related to operation of the lease and management of the resource in an environmentally sound manner, pursuant to 43 CFR 3262.1(b). This is particularly appropriate when the powerplant or direct utilization facility is located on the lease. The MMS is aware that geothermal emissions, particularly hydrogen sulfide, are restricted in many areas by local environmental authorities, and thus the geothermal resource can only be utilized when the environmetal restrictions are mitigated. Accordingly, MMS is requesting comments on whether the costs of hydrogen sulfide abatement facilities and other facilities to mitigate environmental hazards can be justifiably included in the generating deduction.

With regard to the granting of processing allowances for geothermal resources used in direct utilization

processes, MMS at this time cannot conceive of any circumstances that would warrant a direct utilization processing allowance. Direct utilization normally involves the use of a heat exchanger, which would be required whether a geothermal resource is used as the heat source or whether some other fuel is used as a heat source. Nevertheless, MMS is requesting comments on what direct utilization technologies would justify a processing allowance and, accordingly, on whether a processing allowance should be provided in the valuation regulations.

V. Procedural Matters

Executive Order 12291

The Department of the Interior (Department) has determined that this document is not a major rule and does not require a regulatory analysis under Executive Order 12291. This proposed rulemaking will establish regulations to reflect current policy and practices with respect to the valuation of geothermal resources used for electrical generation and provide standards for valuing geothermal byproducts and resources used in direct utilization processes.

Regulatory Flexibilty Act

Because this rule primarily clarifies existing regulations, there are no significant additional requirements or burdens placed upon small business entities as a result of implementation of this rule. Therefore, the Department has determined that this rulemaking will not have a significant economic effect on a substantial number of small entities and does not require a regulatory flexibility analysis under the Regulatory Flexibility Act (5. U.S.C. 601 et seq.)

Paperwork Reduction Act

The information collection and recordkeeping requirements located at §§ 202.353, 210.352, and 210.354 of this rule have been approved by the Office of Management and Budget under 44 U.S.C. 3501 et seq. and assigned clearance numbers 1010–0033 and 1010–0022.

The public reporting burden for this collection of information is estimated to vary from ½ to 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Information Collection Clearance Officer, Mail Stop 632, Minerals Management Service, 12203 Sunrise Valley Drive, Reston, VA 22091; and the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

National Environmental Policy Act of 1969

It is hereby determined that this rulemaking does not constitute a major Federal action significantly affecting the quality of the human environment and a detailed statement pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969 (42 U.S.C. 4332(2)(C)) is not required.

List of Subjects

30 CFR Part 202

Coal, Continental shelf, Geothermal energy, Government contracts, Indian lands, Mineral royalties, Natural gas, Petroleum, Public lands-mineral resources, Reporting and recordkeeping requirements.

30 CFR Part 206

Coal, Continental shelf, Geothermal energy, Government contracts, Indian lands, Mineral royalties, Natural gas, Petroleum, Public lands-Mineral resources, Reporting and recordkeeping requirements.

30 CFR Part 210

Coal, Continental shelf, Geothermal energy, Government contracts, Indian lands, Mineral royalties, Natural gas, Petroleum, Public lands-mineral resources, Reporting and recordkeeping requirements.

30 CFR Part 212

Coal, Continental shelf, Geothermal energy, Government contracts, Indian lands, Mineral royalties, Natural gas, Petroleum, Public lands-mineral resources, Reporting and recordkeeping requirements.

Date: October 7, 1988.

James E. Cason,

Acting Assistant Secretary—Land and Minerals Management.

For the reasons set out in the preamble, 30 CFR Parts 202, 206, 210, and 212 are proposed to be amended as follows:

PART 202—ROYALTIES

1. The authority citation for Part 202 is revised to read as follows:

Authority: 25 U.S.C. 396 et seq.; 25 U.S.C. 369a et seq.; 25 U.S.C. 2101 et seq.; 30 U.S.C. 181 et seq.; 30 U.S.C. 351 et seq.; 30 U.S.C 1001 et seq.; 30 U.S.C. 1701 et seq.; 31 U.S.C. 9701; 43 U.S.C. 1301 et seq.; 43 U.S.C. 1331 et seq.; 43 U.S.C. 1801 et seq.

2. Subpart H consisting of §§ 202.350 through 202.353, is added to read as follows:

Subpart H—Geothermal Resources

Sec.
202.350 Scope and definitions.
202.351 Royalties on geothermal resources.
202.352 Minimum royalty.
202.353 Measurement standards for reporting and paying royalties.

Subpart H—Geothermal Resources

§ 202.350 Scope and definitions.

(a) This subpart is applicable to all geothermal resources produced from Federal geothermal leases issued pursuant to the Geothermal Steam Act of 1970, as amended (30 U.S.C. 1001 et seq.).

(b) The definitions in Subpart H of 30 CFR Part 206 are applicable to this subpart.

§ 202.351 Royalties on geothermal resources.

(a) Royalties on geothermal resources, including byproduct minerals and commercially demineralized water, shall be at the royalty rates specified in the lease, unless the Secretary temporarily waives, suspends, or reduces the royalty rate(s) set forth in the lease. Royalties shall be paid in value. The royalty due shall be the value determined pursuant to 30 CFR Part 206 multiplied by the royalty rate in the lease.

(b)(1) Royalties are due on all geothermal resources, except those specified in paragraph (b)(2) of this section, that are produced from a lease and are sold or utilized by the lessee or are reasonably susceptible to sale or utilization by the lessee.

(2) Geothermal resources that are unavoidably lost, as determined by BLM, and geothermal resources that are reinjected prior to use on or off the lease, as approved by BLM, are royalty free. The MMS will allow free of royalty a reasonable amount of geothermal energy necessary to generate electricity for internal powerplant operations or to generate electricity returned to the lease for lease operations. If a powerplant uses geothermal production from more than one lease, or uses unitized or communitized production, only that proportionate share of each lease's production (actual or allocated) necessary to operate the powerplant may be used royalty free. The MMS will also allow free of royalty a reasonable amount of commercially demineralized water necessary for powerplant operations or otherwise used on or for the benefit of the lease.

(3) Royalties on byproducts are due at the time the recovered byproduct is used, sold, or otherwise finally disposed of. Byproducts produced and added to stockpiles or inventory do not require payment of royalty until the byproducts are sold, utilized, or otherwise finally disposed of. The MMS may ask BLM to increase the lease bond to protect the lessor's interest when BLM determines that stockpiles or inventories become excessive.

(c) If BLM determines that geothermal resources (including byproducts) were avoidably lost or wasted from the lease, or that geothermal resources (including byproducts) were drained from the lease for which compensatory royalty is due, the value of those geothermal resources shall be determined in accordance with 30 CFR Part 206.

(d) If a lessee receives insurance or other compensation for unavoidably lost geothermal resources (including byproducts), royalties at the rates specified in the lease are due on the amount of that compensation. This paragraph shall not apply to compensation through self-insurance.

§ 202.352 Minimum royalty.

In no event shall the lessee's annual royalty payments for any producing lease be less than the minimum royalty established by the lease.

§ 202.353 Measurement standards for reporting and paying royalties.

(a) For geothermal resources used to generate electricity, the quantity on which royalty is due shall be reported on Form MMS–2014 in accordance with the following paragraphs:

(1) For geothermal resources valued under arm's-length or non-arm's-length contracts, quantities shall be reported in (i) kilowatthours to the nearest whole kilowatthour if the contract specifies payment in terms of generated electricity, (ii) thousands of pounds to the nearest whole thousand pounds if the contract specifies payment in terms of weight, or (iii) millions of Btu's to the nearest whole million Btu if the contract specifies payment in terms of heat or thermal energy.

(2) For geothermal resources valued by the netback procedure pursuant to 30 CFR 206.352(d), the quantities shall be reported in kilowatthours to the nearest whole kilowatthour.

(b) For geothermal resources used in direct utilization processes, the quantity on which royalty is due shall be reported on Form MMS–2014 in hundreds of gallons to the nearest hundred gallons of geothermal fluid produced.

(c) For byproduct minerals, the quantity on which royalty is due shall be reported on Form MMS–2014 consistent with reporting requirements standards established by MMS.

(d) For commercially demineralized water, the quantity on which royalty is due shall be reported on Form MMS–2014 in hundreds of gallons to the nearest hundred gallons.

(e) Lessees are not required to report the quality of geothermal resources, including byproducts, to MMS. The lessee must maintain quality measurements for audit and valuation purposes. Quality measurements include, but are not limited to, temperatures and chemical analyses for fluid geothermal resources and chemical analyses, weight percent, or other purity measurements for byproducts.

PART 206—PRODUCT VALUATION

1. The authority citation for Part 206 is revised to read as follows:

Authority: 25 U.S.C. 396 et seq.; 25 U.S.C. 396a et seq.; 25 U.S.C. 2101 et seq.; 30 U.S.C. 181 et seq.; 30 U.S.C. 351 et seq.; 30 U.S.C. 1001 et seq.; 30 U.S.C. 1701 et seq.; 31 U.S.C. 9701; 43 U.S.C. 1301 et seq.; 43 U.S.C. 1331 et seq.; and 43 U.S.C. 1801 et seq.

2. Subpart H, consisting of §§ 206.350 through 206.358, is revised to read as follows:

Subpart H—Geothermal Resources

Sec.
206.350 Purpose and scope.
206.351 Definitions.
206.352 Valuation standards for electrical generation.
206.353 Determination of transmission deductions.
206.354 Determination of generating deductions.
206.355 Valuation standards for direct utilization.
206.356 Valuation standards for byproducts.
206.357 Byproduct transportation allowances—general.
206.358 Determination of byproduct transportation allowances.

Subpart H—Geothermal Resources

§ 206.350 Purpose and scope.

(a) This subpart is applicable to all geothermal resources produced from Federal geothermal leases issued pursuant to the Geothermal Steam Act of 1970, as amended (30 U.S.C. 1001, et seq.). The purpose of this subpart is to establish the value of geothermal production for royalty purposes.

(b) All royalty payments made to MMS are subject to audit and adjustment.

§ 206.351 Definitions.

For purposes of this subpart:

"Arm's-length contract" means a contract or agreement that has been arrived at in the marketplace between independent, nonaffiliated persons with opposing economic interests regarding that contract. Notwithstanding any other provisions of this subpart, contracts between relatives, either by blood or by marriage, are not arm's-length contracts. The MMS may require the lessee to certify the claimed nature of ownership control. To be considered arm's-length for any production month, a contract must meet the requirements of this definition for the production month as well as when the contract was executed. For purposes of this subpart, two persons are affiliated if one person controls, is controlled by, or is under common control with, another person. For purposes of this subpart, based on the instruments of ownership of the voting securities of an entity, or based on other forms of ownership:

(1) Ownership in excess of 50 percent constitutes control;

(2) Ownership of 10 through 50 percent creates a rebuttable presumption of control; and

(3) Ownership of less than 10 percent creates a presumption of noncontrol which MMS may rebut if it demonstrates actual or legal control, including the existence of interlocking directorates.

"Audit" means a review, conducted in accordance with generally accepted accounting and auditing standards, of royalty payment compliance activities of lessees or other interest holders who pay royalties, rents, or bonuses on Federal geothermal leases.

"BLM" means the Bureau of Land Management of the Department of the Interior.

"Byproduct" means (1) any mineral or minerals (exclusive of oil, hydrocarbon gas, and helium) which are found in solution or developed in association with geothermal fluids and which have a value of less than 75 per centum of the value of the geothermal energy or are not, because of quantity, quality, or technical difficulties in extraction and production, of sufficient value to warrant extraction and production by themselves, and (2) commercially demineralized water.

"Byproduct recovery facility" means the facility or facilities at which byproducts are placed in marketable condition.

"Byproduct transportation allowance" means an approved allowance for the lessee's reasonable, actual costs, excluding gathering, incurred for moving byproducts, including commercially demineralized water, to a point of sale

or point of delivery off the lease, unit area, or communitized area.

"Contract" means any oral or written agreement, including amendments or revisions thereto, between two or more persons and enforceable by law that with due consideration creates an obligation.

"Deduction" means a subtraction used in the geothermal netback procedure for determining the value of geothermal resources utilized by the lessee to generate electricity. "Transmission deduction" means a deduction for the lessee's reasonable actual costs incurred to wheel or transmit the electricity from the lessee's powerplant to the purchaser's delivery point. "Generating deduction" means a deduction for the lessee's reasonable, actual costs of generating plant tailgate electricity.

"Delivered electricity" means the amount of electricity in kilowatthours delivered to the purchaser.

"Direct utilization" means any process other than electrical generation in which the thermal energy of the geothermal resource is utilized, including, but not limited to, space heating, greenhouse operations, and industrial or agricultural process heat.

"Field" means the land surface vertically projected over a subsurface geothermal reservoir encompassing at least the outermost boundaries of all geothermal accumulations know to be within that reservoir. Geothermal fields are usually given names and their official boundaries are often designated by oil and gas regulatory agencies in the respective States in which the fields are located.

"Gathering" means the efficient movement of lease production from the wellhead to the point of utilization.

"Generated electricity" means the total electricity—plant tailgate electricity, plant parasitic electricity, and electricity returned to the geothermal lease for lease operations—in kilowatthours generated by the powerplant and attributable to the geothermal resource. Generated electricity is measured at the generator(s).

"Geothermal netback procedure" means the method of determining the value of geothermal resources that are utilized in a lessee-owned powerplant for the generation and sale of electricity, for which there are no sales of the geothermal resource on which to base value. The method involves the deduction of the lessee's reasonable, actual transmission and generating costs from the sales price or value of the electricity to derive the value of the geothermal resource at the powerplant inlet; the inlet value is equivalent to the value of production.

"Geothermal resources" means (1) all products of geothermal processes, including indigenous steam, hot water, and hot brines; (2) steam and other gases, hot water, and hot brines resulting from water, gas, or other fluids artificially introduced into geothermal formations; (3) heat or other associated energy found in geothermal formations; and (4) any byproducts derived from them.

"Geothermal utilization facility" means a powerplant or direct utilization facility that utilizes the heat or other energy of the geothermal resource.

"Gross proceeds" (for royalty purposes) means the total monies and other consideration accruing to a geothermal lessee for any disposition of geothermal resources, including total payments for the sale of electricity generated by the lessee from lease-produced geothermal resources. Gross proceeds includes, but is not limited to, payments to the lessee for certain services such as wheeling, effluent injection, hydrogen sulfide abatement, field operation and maintenance, drilling or workover of wells, and/or field gathering to the extent that the lessee is obligated to perform them at no cost to the Federal Government. Gross proceeds also includes, but is not limited to, reimbursements for production taxes and other taxes. Tax reimbursements are part of the gross proceeds accruing to a lessee even though the Federal royalty interest may be exempt from taxation. Monies and other consideration, including the forms of consideration identified in this paragraph, to which a lessee is contractually or legally entitled but which it does not seek to collect through reasonable efforts are also part of gross proceeds.

"Lease" means a geothermal lease issued under authority of the Geothermal Steam Act of 1970, as amended (30 U.S.C. 1001 et seq.), unless the context indicates otherwise.

"Lessee" means any person to whom the United States issues a geothermal lease, and any person who has been assigned an obligation to make royalty or other payments required by the lease. This includes any person who has an interest in a geothermal lease as well as an operator or payor who has no interest in the lease but who has assumed the royalty payment responsibility. This also includes any affiliate of the lessee that utilizes the geothermal resource to generate electricity, in a direct utilization process, or to recover byproducts, or any affiliate that transports lease production.

"Like-quality lease products" means lease products that have similar chemical, physical, and legal characteristics.

"Marketable condition" means lease products that are sufficiently free from impurities and otherwise in a condition that they will be accepted by a purchaser under a sales contract typical for the field.

"Minimum royalty" means the minimum amount of annual royalty as specified in the lease or in applicable leasing regulations that the lessee must pay after commencement of geothermal production in commercial quantities.

"No sales" means the utilization or disposal of geothermal resources without the benefit of a sale.

"Person" means any individual, firm, corporation, association, partnership, consortium, or joint venture (when established as a separate entity).

"Plant tailgate electricity" means the amount of electricity in kilowatthours generated by the powerplant exclusive of plant parasitic electricity and electricity returned to the lease for lease operations. Plant tailgate electricity should be measured on, or calculated for, the high voltage side of the transformer in the plant switchyard.

"Point of utilization" means the powerplant or direct utilization facility in which the geothermal resource (steam or hot water) is utilized.

"Reasonable alternative fuel" means a conventional fuel (coal, oil, or gas) that would normally be used as a source of heat in direct utilization operations.

"Secretary" means the Secretary of the Department of the Interior or any person duly authorized to exercise the powers vested in that officer.

"Selling arrangement" means the individually contracted arrangements under which sales or disposition of geothermal resources, including byproducts and electricity sales where the lessee generates electricity from lease geothermal production, are made.

"Spot market price" means the price received under any sales transaction when planned or actual deliveries span a short period of time, usually not exceeding 1 year.

"Wheeling" means the transmission of electricity from a powerplant to the point of delivery.

§ 206.352 Valuation standards for electrical generation.

(a) The value of geothermal resources produced from leases subject to this subpart and used to generate electricity shall be determined pursuant to this section.

(b)(1)(i) The value of geothermal resources that are sold pursuant to an arm's-length contract shall be the gross proceeds accruing to the lessee, except as provided in paragraphs (b)(1)(ii) and (b)(1)(iii) of this section. The lessee shall have the burden of demonstrating that its contract is arm's-length. The value that the lessee reports for royalty purposes is subject to monitoring, review, and audit.

(ii) In conducting reviews and audits, MMS will examine whether the contract reflects the total consideration actually transferred, either directly or indirectly, from the buyer to the seller for the geothermal resource. If the contract does not reflect the total consideration, MMS may require that the geothermal resource sold pursuant to that contract be valued in accordance with paragraph (c) of this section. Value shall not be less than the gross proceeds accruing to the lessee, including any additional consideration received.

(iii) If MMS determines that the gross proceeds accruing to the lessee pursuant to an arm's-length contract do not reflect the reasonable value of the production because of misconduct by or between the contracting parties, or because the lessee otherwise has breached its duty to the lessor to market the production for the mutual benefit of the lessee and the lessor, MMS shall require the geothermal resource to be valued pursuant to paragraph (c) of this section, and notification provided to MMS in accordance with paragraph (d)(3) of this section. If MMS determines that the value may be unreasonable, MMS will notify the lessee and give the lessee an opportunity to provide written information justifying the lessee's value.

(2) The MMS may require a lessee to certify that the provisions in its arm's-length contract include all of the consideration to be paid by the buyer, either directly or indirectly, for the geothermal resource.

(c)(1) The value of geothermal resources subject to this section that are sold under a non-arm's-length contract or that are not subject to a sales transaction but are instead utilized directly by the lessee in its own powerplant for the generation and sale of electricity shall be determined in accordance with the first applicable paragraph of the following paragraphs.

(i) The weighted average of the gross proceeds paid or received by the lessee under its own arm's-length contracts for the purchase or sale of similar quantities of like-quality geothermal resources in the same field;

(ii) The value determined by the netback procedure described in paragraph (c)(2) of this section; or any other reasonable valuation method approved by MMS.

(2) Under the geothermal netback procedure, the lessee's reasonable actual costs for the generation and transmission of electricity shall be deducted from the lessee's gross proceeds received for the sale of electricity to determine the value of the geothermal resource. Transmission deductions shall be determined pursuant to § 206.353 of this subpart. Generating deductions shall be determined pursuant to § 206.354 of this subpart.

(3) Value determinations made pursuant to this paragraph are subject to the notification requirements of paragraph (d) of this section.

(d)(1) The lessee shall retain all data relevant to the determination of royalty value, particularly where the value is determined pursuant to paragraph (c) of this section and 30 CFR Part 212. Such data shall be subject to review and audit and MMS will direct a lessee to use a different value if it determines that the reported value is inconsistent with the requirements of these regulations.

(2) Upon request, lessees shall make available to authorized MMS or State representatives, to the Office of the Inspector General of the Department of the Interior, or to other authorized persons any and all contracts for the sale or other disposition of the lease production; contracts for the sale, generation, and/or transmission of electricity attributable to lease production; and arm's-length sales and volume data for like-quality production sold, purchased, or otherwise obtained by the lessee from the field as may be necessary to support a value determination.

(3) A lessee shall notify MMS if it has determined value pursuant to paragraph (c) of this section. The notification shall be by letter to the MMS Associate Director for Royalty Management or his/her designee. The letter shall identify the valuation method to be used and contain a brief description of the procedure to be followed. The notification required by this paragraph is a one-time notification due no later than the end of the month following the month the lessee first reports royalties on a Form MMS–2014 using a valuation method authorized by paragraph (c) of this section.

(e) If MMS determines that a lessee has not properly determined value, the lessee shall pay the difference, if any, between royalty payments made based upon the value it has used and the royalty payments that are due based upon the value established by MMS. The lessee shall also pay interest on that difference computed pursuant to 30 CFR 218.302. If the lessee is entitled to a credit, MMS will provide instructions for the taking of that credit.

(f) The lessee may request a value determination from MMS. In that event, the lessee shall propose to MMS a value determination method and may use that method in determining value, for royalty purposes, until MMS issues its decision. The lessee shall submit all available data relevant to its proposal. The MMS shall expeditiously determine the value based upon the lessee's proposal and any additional information MMS deems necessary. In making a value determination, MMS may use any of the valuation criteria consistent with this subpart. That determination shall remain effective for the period stated therein. After MMS issues its determination, the lessee shall make the adjustments in accordance with paragraph (e) of this section.

(g) Notwithstanding any other provision of this section, under no circumstances shall the value of production for royalty purposes be less than the gross proceeds accruing to the lessee where geothermal resources are sold pursuant to arm's-length or non-arm's-length contracts.

(h) The lessee is required to place geothermal resources in marketable condition and to deliver geothermal resources to the powerplant at no cost to the Federal lessor. Where the value established pursuant to this section is determined by a lessee's gross proceeds, that value shall be increased to the extent that the gross proceeds have been reduced because the purchaser, or any other person, is providing certain services the cost of which ordinarily is the responsibility of the lessee to place the geothermal resource in marketable condition or deliver it to the powerplant.

(i) Value shall be based on the highest price a prudent lessee can receive through legally enforceable claims under its contract. If there is no contract revision or amendment, and the lessee fails to take proper or timely action to receive prices or benefits to which it is entitled, it must pay royalty at a value based upon that obtainable price or benefit. Contract revisions or amendments shall be in writing and signed by all parties to the contract. If the lessee makes timely application for a price increase or benefit allowed under its contract but the purchaser refuses, and the lessee takes reasonable measures, which are documented, to force purchaser compliance, the lessee will owe no additional royalties unless or until monies or consideration resulting from the price increase or additional benefits are received. This

paragraph shall not be construed to permit a lessee to avoid its royalty payment obligation in situations where a purchaser fails to pay, in whole or in part or timely, for a quantity of geothermal resources.

(j) Notwithstanding any provision in these regulations to the contrary, no review, reconciliation, monitoring, or other like process that results in a redetermination by MMS of value under this section shall be considered final or binding as against the Federal Government or its beneficiaries until the audit period is formally closed.

(k) Certain information submitted to MMS to support value determinations is exempted from disclosure by the Freedom of Information Act, 5 U.S.C. 552, or other Federal law. Any data specified by law to be privileged, confidential, or otherwise exempt will be maintained in a confidential manner in accordance with applicable law and regulations. All requests for information about determinations made under this subpart are to be submitted in accordance with the Freedom of Information Act regulation of the Department of the Interior, 43 CFR Part 2.

§ 206.353 Determination of transmission deductions.

(a) Where the value of geothermal energy is determined by the geothermal netback procedure pursuant to § 206.352(c)(1)(ii) of this subpart, a transmission deduction shall be subtracted from the lessee's gross proceeds received for the sale of electricity to determine the plant tailgate value of the electricity. The transmission deduction consists of either or both of two components: Transmission-line costs as determined pursuant to paragraph (b) of this section and wheeling costs if the electricity is transmitted across a third-party's transmission line under an arm's-length wheeling agreement. Transmission deductions are subject to the limitation prescribed in paragraph (c) of this section.

(b)(1) Transmission-line costs are based on the lessee's actual costs associated with the construction and operation of a transmission line. The monthly transmission-line cost component of the transmission deduction is determined by multiplying the annual transmission-line cost rate (in dollars per kilowatthour) by the amount of electricity delivered for the reporting month. The transmission-line cost rate is redetermined annually at the beginning of the month marking the anniversary in which the transmission line was placed into service, or, at the lessee's option, at a time concurrent with the beginning of the lessee's annual corporate accounting period. After a deduction period is chosen, the lessee may not later elect to use a different deduction period without MMS approval; transmission deduction periods must coincide with generating deduction periods.

(2) Allowable transmission-line costs include operating and maintenance expenses, overhead, and either depreciation and a return on undepreciated capital investment in accordance with paragraph (b)(2)(iv)(A) of this section, or a cost equal to the capital investment in the transmission line multiplied by a rate of return in accordance with paragraph (b)(2)(iv)(B) of this section. Allowable capital costs are generally those costs for fixed assets, including costs of delivery and installation of capital equipment (but excluding real estate purchases) that are an integral part of the transmission line.

(i) Allowable operating expenses include: Operations supervision and engineering; operations labor; materials; ad valorem property taxes; rent; supplies; and any other directly allocable and attributable operating expenses that the lessee can document.

(ii) Allowable maintenance expenses include: Maintenance of the transmission line; maintenance of equipment; maintenance labor; and other directly allocable and attributable maintenance expenses that the lessee can document.

(iii) Overhead directly attributable and allocable to the operation and maintenance of the transmission line is an allowable expense. State and Federal income taxes and severance taxes and other fees, including royalties, are not allowable expenses.

(iv) To compute costs associated with capital investment, a lessee may use either depreciation with a return on undepreciated capital investment, or a return on capital investment. After a lessee has elected to use either method, the lessee may not later elect to change to the other alternative without approval of MMS.

(A) To compute depreciation, the lessee must use a straight-line depreciation method based on the expected life of the geothermal project, usually the term of the electricity sales contract unless the lessee can show otherwise. A change in ownership of a transmission line shall not alter the depreciation schedule established by the original lessee-owner for purposes of computing transmission-line costs. With or without a change in ownership, a transmission line shall be depreciated only once. Equipment shall not be depreciated below a reasonable salvage value. The rate of return used to compute the return on undepreciated capital investment shall be determined pursuant to paragraph (b)(2)(v) of this section.

(B) To compute a return on capital investment, the allowed cost shall be the amount equal to the allowable capital investment in the transmission line multiplied by the rate of return determined pursuant to paragraph (b)(2)(v) of this section. No allowance shall be provided for depreciation. This alternative shall apply only to transmission lines first placed in service on or after March 1, 1988.

(v) The rate of return shall be 1.5 times the industrial rate associated with Standard and Poor's BBB rating. The rate of return shall be 1.5 times the monthly average rate as published in *Standard and Poor's Bond Guide* for the first month of the annual operating period for which the deduction is applicable and shall be effective during the following operating year. The rate shall be redetermined annually at the beginning of the month marking the service anniversary of the transmission line or the beginning of the lessee's annual corporate accounting period, whichever is chosen for determination of the transmission deduction.

(3) Transmission-line cost rates, determined annually, are computed by dividing the sum of the operating, maintenance, overhead, and capital costs by the annual amount of delivered electricity.

(4) For new transmission lines, the lessee's costs for the first year of operation shall be based on estimated expenses (including overhead) for operating and maintaining the transmission line. For subsequent years of operations, the transmission-line costs shall be based on the lessee's actual operating and maintenance expenses for the previous year plus or minus any adjustments that are based on the lessee's knowledge of decreases or increases that will affect the deduction.

(c)(1) Except as provided in paragraph (c)(2) of this section, transmission deductions (transmission-line costs and/or wheeling costs) shall not exceed 50 percent of the lessee's gross proceeds received for the sale of electricity.

(2) Upon request by the lessee, MMS may approve a transmission deduction in excess of the limit prescribed by paragraph (c)(1) of this section. The lessee must demonstrate that the transmission-line and/or wheeling costs in excess of the limit are reasonable, actual, and necessary. An application

for exception shall contain all relevant and supporting documentation necessary for MMS to make a determination. Under no circumstances shall the value of the geothermal resource be reduced to zero.

(d)(1) If the actual transmission deduction, as determined at the end of the annual reporting period, is less than the amount the lessee estimated and used in the netback procedure during the reporting period, the lessee shall be required to pay additional royalties retroactive to the first month of the reporting period, plus interest computed pursuant to 30 CFR 218.302. If the actual transmission deduction is greater than the amount applied in the netback calculation, the lessee shall be entitled to a credit.

(2) Lessees must submit corrected Forms MMS–2014 to reflect adjustments to royalty payments in accordance with instructions provided by MMS.

(e)(1) All transmission deductions are subject to review, audit, and adjustment. When necessary or appropriate, MMS may direct a lessee to modify its estimated or actual transmission deduction and adjust royalty values accordingly.

(2) The lessee must maintain all data and records, including wheeling and other transmission-related agreements, supporting its transmission deduction pursuant to 30 CFR Part 212. These data and records must be made available to MMS and other authorized personnel upon request, and shall be maintained in a confidential manner in accordance with applicable laws and regulations pursuant to § 206.352 of this subpart.

§ 206.354 Determination of generating deductions.

(a) Where the value of geothermal energy is determined by the geothermal netback procedure pursuant to § 206.352(c)(1)(ii) of this subpart, that value shall be determined by deducting the lessee's reasonable actual costs incurred to generate electricity from the plant tailgate value of the electricity (usually the transmission-reduced value of the delivered electricity). Generating deductions are subject to the limitation prescribed in paragraph (c) of this section.

(b)(1) Generating costs are based on the lessee's actual annual costs associated with the construction and operation of a geothermal powerplant. The monthly generating deduction is determined by multiplying the annual generating cost rate (in dollars per kilowatthour) by the amount of plant tailgate electricity measured (or computed) for the reporting month. The generating cost rate is determined from the annual amount of generated electricity and is redetermined annually at the beginning of the month marking the anniversary in which the powerplant was placed into service or, at the lessee's option, at a time concurrent with the beginning of the lessee's annual corporate accounting period. After a deduction period is chosen, the lessee may not later elect to use a different deduction period without MMS approval; generating deduction periods must coincide with transmission deduction periods.

(2) Allowable generating costs include operating and maintenance expenses, overhead, and either depreciation and a return on undepreciated capital investment in accordance with paragraph (b)(2)(iv)(A) of this section, or a cost equal to the capital investment in the powerplant multiplied by a rate of return in accordance with paragraph (b)(2)(iv)(B) of this section. Allowable capital costs are generally those costs for fixed assets, including costs of delivery and installation of capital equipment (but excluding real estate purchases) that are an integral part of the powerplant. The costs of hydrogen sulfide abatement facilities and other facilities to mitigate environmental hazards and the costs of gathering systems and other production-related facilities are not allowed.

(i) Allowable operating expenses include: Operations supervision and engineering; operations labor; materials; ad valorem property taxes; rent; supplies; auxiliary fuel and/or utilities used to operate the powerplant during down time; and any other directly allocable and attributable operating expense that the lessee can document.

(ii) Allowable maintenance expenses include: Maintenance of the powerplant: maintenance of equipment; maintenance labor; and other directly allocable and attributable maintenance expenses that the lessee can document.

(iii) Overhead directly attributable and allocable to the operation and maintenance of the powerplant is an allowable expense. State and Federal income taxes and severance taxes, including royalties, are not allowable expenses.

(iv) To compute costs associated with capital investment, a lessee may use either depreciation with a return on undepreciated capital investment, or a return on capital investment. After a lessee has elected to use either method, the lessee may not later elect to change to the other alternative without approval of MMS.

(A) To compute depreciation, the lessee must use a straight-line depreciation method based on the life of the geothermal project, usually the term of the electricity sales contract. A change in ownership of a powerplant shall not alter the depreciation schedule established by the original lessee-owner for computing the generating costs. With or without a change in ownership, a powerplant shall be depreciated only once. Equipment shall not be depreciated below a reasonable salvage value. The rate of return used to compute the return on undepreciated capital investment shall be determined pursuant to paragraph (b)(2)(v) of this section.

(B) To compute a return on capital investment, the allowed cost shall be the amount equal to the allowable capital investment in the powerplant multiplied by the rate of return determined pursuant to paragraph (b)(2)(v) of this section. No allowance shall be provided for depreciation. This alternative shall apply only to powerplants first placed in service on or after March 1, 1988.

(v) The rate of return shall be 1.5 times the industrial rate associated with Standard and Poor's BBB rating. The rate of return shall be 1.5 times the monthly average rate as published in *Standard and Poor's Bond Guide* for the first month of the annual operating period for which the deduction is applicable and shall be effective during the following operating year. The rate shall be redetermined annually at the beginning of the month marking the service anniversary of the powerplant or the beginning of the lessee's annual corporate accounting period, whichever is chosen for determination of the generating deduction.

(3) Generating cost rates, determined annually, are computed by dividing the sum of the operating, maintenance, overhead, and capital costs by the annual amount of generated electricity.

(4) For new powerplants, the lessee's generating costs for the first year of operation shall be based on estimated expenses (including overhead) for operating and maintaining the powerplant. For subsequent years of operations, the generating costs shall be based on the lessee's actual operating and maintenance expenses for the previous year plus or minus any adjustments that are based on the lessee's knowledge of decreases or increases that will affect the deduction.

(c)(1) Except as provided in paragraph (c)(2) of this section, generating deductions shall not exceed 66⅔ percent of the plant tailgate value of electricity.

(2) Upon request by the lessee, MMS may approve a generating deduction in excess of the limit prescribed by

paragraph (c)(1) of this section. The lessee must demonstrate that the generating costs in excess of the limit are reasonable, actual, and necessary. An application for exception shall contain all relevant and supporting documentation necessary for MMS to make a decision. Under no circumstances shall the value of the geothermal resource be reduced to zero.

(d)(1) If the actual generating deduction, as determined at the end of the annual reporting period, is less than the amount of the lessee estimated and used in the netback procedure during the reporting period, the lessee shall be required to pay additional royalties due, retroactive to the first month of the reporting period, plus interest computed pursuant to 30 CFR 218.302. If the actual generating deduction is greater than the amount applied in the netback calculation, the lessee shall be entitled to a credit.

(2) Lessees must submit corrected Forms MMS–2014 to reflect adjustments to royalty payments in accordance with instructions provided by MMS.

(e)(1) All generating deductions are subject to review, audit, and adjustment. When necessary or appropriate, MMS may direct a lessee to modify its estimated or actual generating deduction and adjust royalty values accordingly.

(2) The lessee must maintain all data and records supporting its generating deduction pursuant to 30 CFR Part 212. These data and records must be made available to MMS and other authorized personnel upon request, and shall be maintained in a confidential manner in accordance with applicable law and regulations, pursuant to § 206.352 of this subpart.

§ 206.355 Valuation standards for direct utilization.

(a) The value of geothermal resources produced from leases subject to this subpart and used in direct utilization processes shall be determined pursuant to this section.

(b)(1)(i) The value of geothermal resources that are sold pursuant to an arm's-length contract shall be the gross proceeds accruing to the lessee, except as provided in paragraphs (b)(1)(ii) and (b)(1)(iii) of this section. The lessee shall have the burden of demonstrating that its contract is arm's-length. The value that the lessee reports for royalty purposes is subject to monitoring, review, and audit.

(ii) In conducting these reviews and audits, MMS will examine whether or not the contract reflects the total consideration actually transferred either directly or indirectly from the buyer to the seller for the geothermal resource. If the contract does not reflect the total consideration, the MMS may require that the geothermal resource sold pursuant to that contract be valued in accordance with paragraph (c) of this section. Value shall not be less than the gross proceeds accruing to the lessee, including any additional consideration received.

(iii) If MMS determines that the gross proceeds accruing to the lessee pursuant to an arm's-length contract do not reflect the reasonable value of the geothermal resource because of misconduct by or between the contracting parties, or because the lessee otherwise has breached its duty to the lessor to market the production for the mutual benefit of the lessee and the lessor, MMS shall require the geothermal resource to be valued pursuant to paragraph (c)(ii) or (c)(iii) of this section and in accordance with the notification requirements of paragraph (d) of this section. When MMS determines that the value may be unreasonable, MMS will notify the lessee and give the lessee an opportunity to provide written information justifying the lessee's value.

(2) MMS may require a lessee to certify that its arm's-length contract provisions include all of the consideration to be paid by the buyer, either directly or indirectly, for the geothermal resource.

(c)(1) The value of geothermal resources subject to this section that are sold under a non-arm's-length contract or that are not subject to a sales transaction but are instead used directly by the lessee in its own utilization facility shall be determined in accordance with the first applicable paragraph of the following paragraphs:

(i) The weighted average of the gross proceeds paid or received by the lessee under its own arm's-length contracts for the purchase or sale of similar quantities of like-quality geothermal resources in the same field;

(ii) The equivalent value of the least expensive, reasonable alternative energy source (fuel) as determined pursuant to paragraph (c)(2) of this section; or

(iii) A value determined by any other reasonable valuation method approved by MMS.

(2) The equivalent value of the least expensive, reasonable alternative energy source shall be based on the amount of thermal energy that would otherwise be used by the direct utilization process in place of the geothermal resource. That amount of thermal energy (in Btu's) displaced by the geothermal resource shall be determined by the equation

$$\text{thermal energy displaced} = \frac{(h_{in} - h_{out}) \times \text{density} \times 0.133681 \times \text{volume,}}{\text{efficiency factor}}$$

where h_{in} shall be the enthalpy in Btu's/lb at the utilization facility inlet (based on measured inlet temperature), h_{out} shall be the enthalpy in Btu's/lb at the facility outlet (based on measured outlet temperature), density shall be in lbs/cu ft based on inlet temperature, the factor 0.133681 (cu ft/gal) converts gallons to cubic feet, and volume shall be the quantity of geothermal fluid in gallons produced at the wellhead or measured at an approved point. The efficiency of the alternative energy source shall be 0.7 for coal and 0.8 for oil, natural gas, and other fuels derived from oil and natural gas, or an efficiency factor proposed by the lessee and approved by MMS.

(3) Valuations made pursuant to this paragraph are subject to the notification requirements of paragraph (d) of this section.

(d)(1) The lessee shall retain all data relevant to the determination of royalty value, particularly where the value is determined pursuant to paragraph (c) of this section, pursuant to 30 CFR Part 212. Such data shall be subject to review and audit and MMS will direct a lessee to use a different value if it determines that the reported value is inconsistent with the requirements of these regulations.

(2) Upon request, lessees shall make available to authorized MMS or State representatives, to the Office of the Inspector General of the Department of the Interior, or to other authorized persons any and all contracts for the sale of other disposition of the lease production, and any arm's-length and/or non-arm's length sales and other data for like-quality production sold, purchased, or otherwise obtained by the lessee from the field as may be

necessary to support a value determination.

(3) A lessee shall notify MMS if it has determined value pursuant to paragraph (c) of this section. The notification shall be by letter to MMS Associate Director for Royalty Management or his/her designee. The letter shall identify the valuation method to be used and contain a brief description of the procedure to be followed. The notification required by this paragraph is a one-time notification due no later than the end of the month following the month the lessee first reports royalties on a Form MMS-2014 using a valuation method authorized by paragraph (c) of this section.

(e) If MMS determines that a lessee has not properly determined value, the lessee shall pay the difference, if any, between royalty payments made based upon the value it has used and the royalty payments that are due based upon the value established by MMS. The lessee shall also pay interest computed on that difference pursuant to 30 CFR 218.302. If the lessee is entitled to a credit, MMS will provide instructions for the taking of that credit.

(f) The lessee may request a value determination from MMS. In that event, the lessee shall propose to MMS a value determination method and may use that method in determining value, for royalty purposes, until MMS issues its decision. The lessee shall submit all available data relevant to its proposal. The MMS shall determine the value based upon the lessee's proposal and any additional information MMS deems necessary. In making a value determination, MMS may use any of the valuation criteria consistent with this subpart. That determination shall remain effective for the period stated therein. After MMS issues its determination, the lessee shall make adjustments in accordance with paragraph (e) of this section.

(g) Notwithstanding any other provision of this section, under no circumstances shall the value of production for royalty purposes be less than the gross proceeds accruing to the lessee where geothermal energy is sold pursuant to arm's-length or non-arm's-length contracts.

(h) The lessee is required to place geothermal resources in maketable condition and to deliver geothermal resources to the direct utilization facility at no cost to the Federal lessor. Where the value established pursuant to this section is determined by a lessee's gross proceeds, that value shall be increased to the extent that the gross proceeds have been reduced because the purchaser, or any other person, is providing certain services the cost of which ordinarily is the responsibility of the lessee to place the geothermal resource in marketable condition or to deliver it to the direct utilization facility.

(i) Value shall be based on the highest price a prudent lessee can receive through legally enforceable claims under its contract. Absent contract revision or amendment, if the lessee fails to take proper or timely action to receive prices or benefits to which it is entitled it must pay royalty at a value based upon that obtainable price or benefit. Contract revisions or amendments shall be in writing and signed by all parties to an arm's-length contract. If the lessee makes timely application for a price increase or benefit allowed under its contract but the purchaser refuses, and the lessee takes reasonable measures, which are documented, to force purchaser compliance, the lessee will owe no additional royalties unless or until monies or consideration resulting from the price increase or additional benefits are received. This paragraph shall not be construed to permit a lessee to avoid its royalty payment obligation in situations where a purchaser fails to pay, in whole or on part or timely, for a quantity of geothermal resources.

(j) Notwithstanding any provision in these regulations to the contrary, no review, reconciliation, monitoring, or other like process that results in a redetermination by MMS of value under this section shall be considered final or binding against the Federal Government or its beneficiaries until the audit period is formally closed.

(k) Certain information submitted to MMS to support value determinations is exempted from disclosure by the Freedom of Information Act, 5 U.S.C. 552, or other Federal law. Any data specified by law to be privileged, confidential, or otherwise exempt will be maintained in a confidential manner in accordance with applicable law and regulations. All requests for information about determinations made under this subpart are to be submitted in accordance with the Freedom of Information Act regulation of the Department of the Interior, 43 CFR Part 2.

§ 206.356 Valuation standards for byproducts.

(a) The value of geothermal byproducts, including commercially demineralized water, shall be determined pursuant to this section, less applicable byproducts transportation allowances determined pursuant to §§ 206.357 and 206.358 of this subpart.

(b)(1)(i) The value of byproducts that are sold pursuant to an arm's-length contract shall be the gross proceeds accruing to the lessee, except as provided in paragraphs (b)(1)(ii) and (b)(1)(iii) of this section. The lessee shall have the burden of demonstrating that its contract is arm's-length. The values which the lessee reports, for royalty purposes, are subject to monitoring, review, and audit.

(ii) In conducting reviews and audits, MMS will examine whether the contract reflects the total consideration actually transferred either directly or indirectly from the buyer to the seller for the byproducts. If the contract does not reflect the total consideration, MMS may require that the byproducts sold pursuant to that contract be valued in accordance with paragraph (c) of this section. Value may not be less than the gross proceeds accruing to the lessee, including any consideration additionally received.

(iii) If MMS determines that the gross proceeds accruing to the lessee pursuant to an arm's-length contract do not reflect the reasonable value of the production because of misconduct by or between the contracting parties, or because the lessee otherwise has breached its duty to the lessor to market the production for the mutual benefit of the lessee and the lessor, MMS shall require that the byproduct production be valued pursuant to paragraph (c)(2), (c)(3), or (c)(4) of this section, and in accordance with the notification requirements of paragraph (d) of this section. When MMS determines that the value may be unreasonable, MMS will notify the lessee and give the lessee an opportunity to provide written information justifying the lessee's reported byproduct value.

(2) The MMS may require a lessee to certify that its arm's-length contract provisions include all of the consideration to be paid by the buyer, either directly or indirectly, for the byproduct.

(c) The value of byproducts that are sold pursuant to a non-arm's-length contract or that are utilized by the lessee (no sales), except demineralized water used for the benefit of the lease pursuant to § 202.351(b)(2) of this subpart, shall be determined in accordance with the first applicable paragraph of the following paragraphs:

(1) The gross proceeds accruing to the lessee pursuant to a sale under its non-arm's-length contract (or other disposition by other than an arm's-length contract), provided that those gross proceeds are equivalent to the gross proceeds derived from, or paid under, comparable arm's-length contracts for sales, purchases, or other dispositions of like-quality byproducts

in the field. In evaluating the comparability of arm's-length contracts for the purposes of these regulations, the following factors shall be considered: Price, time of execution, duration, market or markets serviced, terms, quality of byproduct, quantity, and such other factors as may be appropriate to reflect the value of the byproduct;

(2) The gross proceeds accruing to the lessee pursuant to a sale under its non-arm's-length contract (or other disposition by other than an arm's-length contract), provided that those gross proceeds are equivalent to the gross proceeds derived from, or paid under, comparable arm's-length contracts for sale, purchases, or other dispositions of like-quality byproducts outside the field. In evaluating the comparability of arm's-length contracts for the purposes of these regulations, the following factors shall be considered: Price, time of execution, duration, market or markets serviced, terms, quality of byproduct, quantity, and such other factors as may be appropriate to reflect the value of the byproduct;

(3) Other relevant matters including, but not limited to, published or publicly available spot-market prices, or information submitted by the lessee concerning circumstances unique to a particular lease operation or the saleability of certain byproducts;

(4) A netback method or any other reasonable method used to determine value.

(d)(1) The lessee shall retain all data relevant to the determination of royalty value, particularly where the value is determined pursuant to paragraph (c) of this section and 30 CFR Part 212. Such data shall be subject to review and audit, and MMS will direct a lessee to use a different value if it determines that the reported value is inconsistent with the requirements of these regulations.

(2) Upon request, lessees shall make available to authorized MMS or State representatives, to the Office of the Inspector General of the Department of the Interior, or to other authorized persons any and all contracts and/or invoices for the sale or other disposition of the byproducts, and any arm's-length sales and volume data for like-quality production sold, purchased, or otherwise obtained by the lessee from the field or other area as may be necessary to support a value determination.

(3) A lessee shall notify MMS if it has determined value pursuant to paragraph (c) of this section. The notification shall be by letter to the MMS Associate Director for Royalty Management or his/her designee. The letter shall identify the valuation method to be used and contain a brief description of the procedure to be followed. The notification required by this paragraph is a one-time notification due no later than the end of the month following the month the lessee first reports royalties on a Form MMS-2014 using a valuation method authorized by paragraph (c) of this section, and each time there is a change in a method under paragraph (c) of this section.

(e) If MMS determines that a lessee has not properly determined value, the lessee shall pay the difference, if any, between royalty payments made based upon the value it has used and the royalty payments that are due based upon the value established by MMS. The lessee shall also pay interest computed pursuant to 30 CFR 218.302. If the lessee is entitled to a credit, MMS will provide instructions for the taking of that credit.

(f) The lessee may request a value determination from MMS. In that event, the lessee shall propose to MMS a value determination method and may use that method in determining value, for royalty purposes, until MMS issues its decision. The lessee shall submit all available data relevant to its proposal. The MMS shall determine the value based upon the lessee's proposal and any additional information MMS deems necessary. That determination shall remain effective for the period stated therein. After MMS issues its determination, the lessee shall make the adjustments in accordance with paragraph (e) of this section.

(g) Notwithstanding any other provisions of this section, under no circumstances shall the value, for royalty purposes, be less than the gross proceeds accruing to the lessee, less applicable byproduct transportation allowances determined pursuant to §§ 206.357 and 206.358 of this subpart.

(h) The lessee is required to place the byproducts in marketable condition at no cost to the Federal Government. Where the value established pursuant to this section is determined by a lessee's gross proceeds, that value shall be increased to the extent that the gross proceeds has been reduced because the purchaser, or any other person, is providing certain services, the cost of which ordinarily is the responsibility of the lessee to place the byproducts in marketable condition.

(i) Value shall be based on the highest price a prudent lessee can receive through legally enforceable claims under its contract. Absent contract revision or amendment, if the lessee fails to take proper or timely action to receive prices or benefits to which it is entitled it must pay royalty at a value based upon that obtainable price or benefit. Contract revisions or amendments shall be in writing and signed by all parties to an arm's-length contract, and may be retroactively applied to value byproducts, for royalty purposes, for a period not to exceed 2 years, unless MMS approves a longer period. If the lessee makes timely application for a price increase allowed under its contract but the purchaser refuses, and the lessee takes reasonable measures, which are documented, to force purchaser compliance, the lessee will owe no additional royalties unless or until monies or consideration resulting from the price increase are received. This paragraph shall not be construed to permit a lessee to avoid its royalty payment obligation in situations where a purchaser fails to pay, in whole or in part or timely, for a quantity of byproducts.

(j) Notwithstanding any provision in these regulations to the contrary, no review, reconciliation, monitoring, or other like process that results in a redetermination by the MMS of value under this section shall be considered final or binding as against the Federal Government or its beneficiaries until the audit period is formally closed.

(k) Certain information submitted to MMS to support valuation proposals, including byproduct transportation allowances pursuant to §§ 206.357 and 206.358 of this subpart, is exempted from disclosure by the Freedom of Information Act, 5 U.S.C. 552. Any data specified by the Act to be privileged, confidential, or otherwise exempt shall be maintained in a confidential manner in accordance with applicable law and regulations. All requests for information about determinations made under this subpart are to be submitted in accordance with the Freedom of Information Act regulation of the Department of the Interior, 43 CFR Part 2.

§ 206.357 Byproduct transportation allowances—general.

(a) Where the value of byproducts has been determined at a point off the geothermal lease, MMS shall allow a deduction in determining value, for royalty purposes, for the lessee's reasonable, actual costs incurred to:

(1) Transport the byproducts from a Federal lease to a sales point or point of delivery that is off the lease; or

(2) Transport the byproducts from a Federal lease or from a geothermal utilization facility to a recovery facility when that recovery facility is off the lease and, if applicable, from the recovery facility to a sales point or point of delivery off the lease. Costs for

transportation between the lease and the geothermal utilization facility, whether on or off the lease, shall not be included in the transportation allowance.

(b) Under no circumstances shall the byproduct transportation allowance authorized by paragraph (a) of this section reduce the value of the byproducts under any selling arrangement to zero.

(c)(1) When byproducts are transported from a lease or geothermal utilization facility to a byproduct recovery facility, the lessee is not required to allocate transportation costs between the quantity of marketable byproduct and the rejected waste material. The byproduct transportation allowance shall be authorized for the total production that is transported. Byproduct transportation allowances shall be expressed as a cost per unit of marketable byproduct transported.

(2) For byproducts that are extracted on lease or at the geothermal utilization facility, the byproduct transportation allowance shall be authorized for the total production that is transported to a point of sale off the lease. Byproduct transportation allowances shall be expressed as a cost per unit of byproduct transported.

(3) Transportation costs shall only be recognized as allowances when the transported byproduct is sold, delivered, or otherwise utilized by the lessee and royalties are reported and paid.

(d) Byproduct transportation allowances are subject to monitoring, review, and audit. If, after a review and/or audit, MMS determines that a lessee has improperly determined a byproduct transportation allowance authorized by this section, then the lessee shall pay any additional royalties, plus interest, determined in accordance with 30 CFR 218.302, or shall be entitled to a credit, without interest.

(e) If byproducts produced from Federal and non-Federal leases are commingled for transportation, lessees shall not disproportionately allocate transportation costs to Federal leases.

(f) Upon request, the lessee shall make available to authorized MMS and State representatives, to the Office of the Inspector General of the Department of the Interior, or to other authorized persons all transportation contracts and all other information as may be necessary to support a byproduct transportation allowance.

(g) Byproduct transportation allowances are to be reported as separate lines on Form MMS-2014.

§ 206.358 Determination of byproduct transportation allowances.

(a) *Arm's-length contracts.* (1) For transportation costs incurred by a lessee pursuant to an arm's-length contract, the transportation allowance shall be the reasonable, actual costs incurred by the lessee for transporting the byproducts under that contract, subject to monitoring, review, audit, and possible future adjustments. The MMS' prior approval is not required before a lessee may deduct costs incurred under an arm's-length transportation contract.

(2) In conducting reviews and audits, MMS will examine whether the contract reflects more than the consideration actually transferred either directly or indirectly from the lessee to the transporter for the transportation. If the contract reflects more than the total consideration paid, MMS may require that the byproduct transportation allowance be determined in accordance with paragraph (b) of this section.

(3) If MMS determines that the consideration paid pursuant to an arm's-length byproduct transportation contract does not reflect the reasonable value of the transportation because of misconduct by or between the contracting parties, or because the lessee otherwise has breached its duty to the lessor to market the production for the mutual benefit of the lessee and the lessor, MMS shall require that the byproduct transportation allowance be determined in accordance with paragraph (b) of this section. When MMS determines that the value of the transportation may be unreasonable, MMS will notify the lessee and give the lessee an opportunity to provide written information justifying the lessee's transportation costs.

(4) Where the lessee's payments for transportation under an arm's-length contract are not based on a dollar-per-unit, the lessee shall convert whatever consideration is paid to a dollar value equivalent for the purposes of this section.

(b) *Non-arm's-length or no contract.* (1) If a lessee has a non-arm's-length contract or has no contract, including those situations where the lessee performs transportation services for itself, the byproduct transportation allowance will be based upon the lessee's reasonable actual costs. All byproduct transportation allowances deducted under a non-arm's-length or no-contract situation are subject to monitoring, review, audit, and possible future adjustment. Prior MMS approval of byproduct transportation alowances is not required for non-arm's-length or no-contract situations.

(2) The byproduct transportation allowance for non-arm's-length or no-contract situations shall be based upon the lessee's actual costs for transportation during the reporting period, including operating and maintenance expenses, overhead, and either depreciation and a return on undepreciated capital investment in accordance with paragraph (b)(2)(iv)(A) of this section, or a cost equal to the capital investment in the transportation system multiplied by the rate of return in accordance with paragraph (b)(2)(iv)(B) of this section. Allowable capital costs are generally those for fixed assets, including costs of delivery and installation of capital equipment (but excluding real estate purchases), that are an integral part of the transportation system.

(i) Allowable operating expenses include: Operations supervision and engineering; operations labor; fuel; utilities; materials; ad valorem property taxes; rent; supplies; and any other directly allocable and attributable operating expenses that the lessee can document.

(ii) Allowable maintenance expenses include: Maintenance of the transportation system; maintenance of equipment; maintenance labor; and other directly allocable and attributable maintenance expenses that the lessee can document.

(iii) Overhead attributable and allocable to the operation and maintenance of the transportation system is an allowable expense. State and Federal income taxes and severance taxes and other fees, including royalties, are not allowable expenses.

(iv) To compute costs associated with capital investment, a lessee may use either paragraph (b)(2)(iv)(A) or (B) of this section. After a lessee has elected to use either method for a transportation system, the lessee may not later elect to change to the other alternative.

(A) To compute depreciation, the lessee must use a straight-line depreciation method based on, as appropriate, either the life of equipment or the life of the geothermal project that the transportation system services. After an election is made, the lessee may not change methods. A change in ownership of a transportation system shall not alter the depreciation schedule established by the original transporter/lessee for purposes of the allowance calculation. With or without a change in ownership, a transportation system shall be depreciated only once. Equipment shall not be depreciated below a reasonable salvage value. The rate of return used to

compute the return on undepreciated capital investment shall be determined pursuant to paragraph (b)(2)(v) of this section.

(B) To compute a return on capital investment, the allowed cost shall be the amount equal to the allowable capital investment in the transportation system multiplied by the rate of return determined pursuant to paragraph (b)(2)(v) of this section. No allowance shall be provided for depreciation.

(v) The rate of return shall be 1.5 times the industrial rate associated with Standard and Poor's BBB rating. The rate of return shall be 1.5 times the monthly average as published in *Standard and Poor's Bond Guide* for the first month of the reporting period for which the allowance is applicable and shall be effective during the reporting period. The rate shall be redetermined at the beginning of each subsequent transportation allowance reporting period.

PART 210—FORMS AND REPORTS

1. The authority citation for Part 210 is revised to read as follows:

Authority: 25 U.S.C. 396 et seq.; 25 U.S.C. 396a et seq.; 25 U.S.C. 2101 et seq.; 30 U.S.C. 181 et seq.; 30 U.S.C. 351 et seq.; 30 U.S.C. 1001 et seq.; 30 U.S.C. 1701 et seq.; 31 U.S.C. 9701; 43 U.S.C. 1301 et seq.; 43 U.S.C. 1331 et seq.; and 43 U.S.C. 1801 et seq.

2. Subpart H, consisting of §§ 210.350 through 210.355, is revised to read as follows:

Subpart H—Geothermal Resources

Sec.
210.350 Definitions.
210.351 Required recordkeeping.
210.352 Payor information forms.
210.353 Special forms and reports.
210.354 Monthly report of sales and royalty.
210.355 Reporting instructions.

Subpart H—Geothermal Resources

§ 210.350 Definitions.

Terms used in this subpart shall have the same meaning as in 30 CFR 206.351.

§ 210.351 Required recordkeeping.

Information required by the MMS shall be filed using the forms prescribed in this subpart, which are available from MMS. Records may be maintained on microfilm, microfiche, or other recorded media that are easily reproducible and readable. See Subpart H of 30 CFR Part 212.

§ 210.352 Payor information forms.

The Payor Information Form (Form MMS–4025) must be filed for each Federal lease on which geothermal royalties (including byproduct royalties) are paid. Where specifically determined by MMS, Form MMS–4025 is also required for all Federal leases on which rent is due. The completed form must be filed by the party who is making the rent or royalty payment (payor) for each revenue source. Form MMS–4025 must be filed no later than 30 days after issuance of a new lease or a modification to an existing lease that changes the paying responsibility on the lease. The Form MMS–4025 shall identify the payor of production royalty, and identify revenue sources and selling arrangements for all leased geothermal resources (including byproducts). After filing the initial form, a new Form MMS–4025 must be filed no later than 30 days after the occurrence of any of the following:

(a) Assignment of all or any part of the lease;
(b) Production of a new product;
(c) A change in a selling arrangement;
(d) Change in royalty rate:
(e) Change of payor; or
(f) Abandonment of a lease.

§ 210.353 Special forms and reports.

The MMS may require submission of additional information on special forms or reports. When special forms or reports other than those referred to in this subpart are necessary, instructions for the filing of such forms or reports will be given by MMS. Requests for the submission of such forms will be made in conformity with the requirements of the Paperwork Reduction Act of 1980 and other applicable laws.

§ 210.354 Monthly report of sales and royalty.

A report of sales and royalty for each productive lease must be reported on Form MMS–2014, Report of Sales and Royalty Remittance, each month once sales or utilization of production occur, even though sales may be intermittent, unless otherwise authorized by the MMS. This report is due on or before the last day of the month following the month in which production was sold or utilized, together with the royalties due the United States.

§ 210.355 Reporting instructions.

(a) Specific guidance on how to prepare and submit required information collection reports and forms to MMS is contained in an *Auditing and Financial System (AFS) Oil and Gas Payor Handbook* which is available from: Minerals Management Service, Attention: Lessee Contact Branch, P.O. Box 5760, TA, Denver, CO 80217.

(b) Royalty payors should refer to this handbook for specific guidance with respect to geothermal resources reporting requirements. If additional information is required, the payor should contact the MMS Lessee Contact Branch at the above address. The appropriate telephone numbers are listed in the handbook.

PART 212—RECORDS AND FILES MAINTENANCE

1. The authority citation for Part 212 is revised to read as follows:

Authority: 25 U.S.C. 396 et seq.; 35 U.S.C. 396a et seq.; 25 U.S.C. 2101 et seq.; 30 U.S.C. 181 et seq.; 30 U.S.C. 351 et seq.; 30 U.S.C. 1001 et seq.; 30 U.S.C. 1701 et seq.; 31 U.S.C. 9701; 43 U.S.C. 1301 et seq.; 43 U.S.C. 1331 et seq.; and 43 U.S.C. 1801 et seq.

2. Part 212 is amended by revising the titles of Subparts B, C, D, F, and G to read as follows:

Subpart B—Oil, and OCS Sulfur—General

Subpart C—Federal and Indian Oil [Reserved]

Subpart D—Federal and Indian Gas [Reserved]

Subpart F—Coal [Reserved]

Subpart G—Other Solid Minerals [Reserved]

3. A new Subpart H consisting of §§ 212.350 through 212.352, is added to Part 212 to read as follows:

Subpart H—Geothermal Resources

Sec.
212.350 Definitions.
212.351 Required recordkeeping and reports.
212.352 Records and files maintenance.

Subpart H—Geothermal Resources

§ 212.350 Definitions.

Terms used in this subpart shall have the same meaning as in 30 CFR 206.351.

§ 212.351 Required recordkeeping and reports.

(a) All records pertaining to Federal geothermal leases shall be maintained by a lessee, operator, revenue payor, or other person for 6 years after the records are generated unless the recordholder is notified, in writing, that records must be maintained for a longer period. When an audit or investigation is underway, records shall be maintained until the recordholder is released by written notice of the obligation to maintain records.

(b) The Associate Director for Royalty Management shall have access to all records of the operator/lessee pertaining to compliance to Federal royalties, including, but not limited to:

(1) Qualities and quantities of all products extracted, processed, sold, delivered, or used by the operator/lessee.

(2) Prices received for products, prices paid for like or similar products, and internal transfer prices.

(3) Costs of extraction, power generation, electrical transmission, wheeling, and byproduct transportation.

§ 212.352 Records and files maintenance.

(a) *Records.* Each lessee, operator, revenue payor, or other person shall make and retain accurate and complete records necessary to demonstrate that payments of rentals, royalties, and other payments related to Federal geothermal leases are in compliance with lease terms, regulations, and orders. Records covered by this section include those specified by lease terms, notices and orders, and by the various parts of this Chapter. Records also include computer programs, automated files, and supporting systems documentation used to produce automated reports or magnetic tape submitted to MMS for use in its Auditing and Financial System (AFS), or in its Production Accounting and Auditing System (PAAS).

(b) *Period for keeping records.* Lessees, operators, revenue payors, or other persons required to keep records under this section shall maintain and preserve them for 6 years from the day on which the relevant transaction record occurred unless the Secretary notifies the recordholder of an audit or investigation involving the records and that they must be maintained for a longer period. When an audit or investigation is underway, records shall be maintained until MMS releases the recordholder, in writing, from the obligation to maintain the records. Lessees, operators, revenue payors, or other persons shall maintain the records (generated during the period for which they have paying or operating responsibility on the lease) for a period of 6 years.

(c) *Inspection of records.* The lessee, operator, revenue payor, or other person required to keep records shall be responsible for making the records available for inspection. Records shall be made available at a business location of the lessee, operator, revenue payor, or other person during normal business hours upon the request of any officer, employee or other party authorized by the Secretary. Lessees, operators, revenue payors, and other persons will be given a reasonable period of time to produce historical records.

4. A heading for Subpart I is added to Part 212 entitled:

Subpart I—OCS Sulfur [Reserved]

[FR Doc. 89-42 Filed 1-4-89; 8:45 am]
BILLING CODE 4310-MR-M