§ 1206.355 How do I calculate royalty due on geothermal resources I sell at arm’s length to a purchaser for direct use?

If you sell geothermal resources produced from Class I, II, or III leases at arm’s length to a purchaser for direct use, then the royalty on the geothermal resource is the gross proceeds accruing to you from the sale of the geothermal resource to the arm’s-length purchaser multiplied by the royalty rate in your lease or that BLM prescribes under 43 CFR 3211.18. See §1206.361 for additional provisions applicable to determining gross proceeds under arm’s-length sales.

§ 1206.356 How do I calculate royalty or fees due on geothermal resources I use for direct use purposes?

If you use the geothermal resource for direct use:

(a) For Class I leases, you must determine the royalty due on geothermal resources in accordance with the first applicable of the following three paragraphs.

(1) The weighted average of the gross proceeds established in arm’s-length contracts for the purchase of significant quantities of geothermal resources to operate the lessee’s same direct-use facility multiplied by the royalty rate in your lease. In evaluating the acceptability of arm’s-length contracts, the following factors will be considered: time of execution, duration, terms, volume, quality of resource, and such other factors as may be appropriate to reflect the value of the resource.

(2) The equivalent value of the least expensive, reasonable alternative energy source (fuel) multiplied by the royalty rate in your lease. The equivalent value of the least expensive, reasonable alternative energy source will be based on the amount of thermal energy that would otherwise be used by the direct use facility in place of the geothermal resource. That amount of thermal energy (in Btu) displaced by the geothermal resource will be determined by the equation:

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\text{thermal energy displaced} = \frac{(h_{in} - h_{out}) \times \text{density} \times 0.113681 \times \text{volume}}{\text{efficiency factor}}
\]

Where \(h_{in}\) is the enthalpy in Btu/lb at the direct use facility inlet (based on measured inlet temperature), \(h_{out}\) is the enthalpy in Btu/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. The efficiency factor of the alternative energy source will 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