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*MASSACHUSETTS INSTITUTE OF TECHNOLOGY*

**Stanley L Milora & Jefferson W Tester**

**GEOHERMAL ENERGY  
as a source of  
ELECTRIC POWER**

**Thermodynamic and Economic Design Criteria**

This monograph examines the technological aspects of producing electricity from geothermal sources. It opens with an overview of the situation, including an assessment of the environmental impact; the cycle and resource utilization efficiencies follow, with semi-empirical equations. It then presents detailed cycle calculations performed with seven working fluids (including such nonaqueous fluids as several hydrocarbons and their halogenated derivatives) illustrating a range of molecular properties. Turbines and pumps are discussed in a separate chapter, as are the economic factors.

The authors develop an economic model that takes into consideration both direct and indirect factors and gives separate cost equations or correlations for each of the major components. They draw two conclusions: that generating costs can compete with the present escalated fossil-fuel and nuclear generating costs, and that geothermal resources are large enough potentially to effect an impact on the energy economy. Geothermal energy should thus be taken into serious account as an alternate energy source. June 1977 £10.50

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## NOTES FOR CONTRIBUTORS

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All contributions, whether articles, correspondence or reviews, must be typed in duplicate on one side of the paper, double spaced throughout, with a wide margin on the left of each page and a narrower margin on the right. Any minor corrections should be made neatly in the typescript, leaving the margins clear.

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