

The Future of Geothermal Energy

Impact of Enhanced Geothermal
Systems (EGS) on the United States
in the 21st Century



Massachusetts
Institute of
Technology

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An assessment by an MIT-led interdisciplinary panel

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Preface

Recent national focus on the value of increasing our supply of indigenous, renewable energy underscores the need for reevaluating all alternatives, particularly those that are large and well-distributed nationally. This analysis will help determine how we can enlarge and diversify the portfolio of options we should be vigorously pursuing. One such option that is often ignored is geothermal energy, produced from both conventional hydrothermal and Enhanced (or engineered) Geothermal Systems (EGS). An 18-member assessment panel was assembled in September 2005 to evaluate the technical and economic feasibility of EGS becoming a major supplier of primary energy for U.S. base-load generation capacity by 2050. This report documents the work of the panel at three separate levels of detail. The first is a Synopsis, which provides a brief overview of the scope, motivation, approach, major findings, and recommendations of the panel. At the second level, an Executive Summary reviews each component of the study, providing major results and findings. The third level provides full documentation in eight chapters, with each detailing the scope, approach, and results of the analysis and modeling conducted in each area.

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