

Evaluation of Geothermal Utilization in the Eastern United States

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Analysis of geothermal resource potential based on geologic information including heat flow, bottom hole temperatures, in situ stresses, rock types and properties as a function of depth in the Northeast region for New York/ Pennsylvania/West Virginia region to evaluate end use potential for direct use, electric power, co- generation of heat and power. Will include (i) formulating a quantitative description of energy demand and as a function of utilization temperature for the US, (ii) evaluation of power cycle and district heating design options and opportunities for a range of scales from distributed use in buildings and communities to central station applications in the Northeast region, (iii) economic analysis with uncertainties and tradeoffs included for reservoir development and well drilling costs as a function of depth to increase production temperatures and plant performance.