

A New Geothermal Resource Map of Nicaragua

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ABSTRACT

A recently completed Geothermal Master Plan Study of Nicaragua assesses the geothermal resource potential of the identified fields and prospects in the country. During the course of the 18-month study, existing data were compiled and evaluated and new exploration work was conducted to determine, for each of ten geothermal resource areas studied: 1) the current level of knowledge about the resource; 2) its exploration or development status; 3) a conceptual model of the geothermal system or systems (incorporating geology, volcanology, geophysics, hydrology, fluid chemistry and geothermometry); 4) estimated recoverable energy reserves; 5) environmental, infrastructural and/or logistical constraints on development; and 6) options for further investigation and development. The Master Plan study represents the first comprehensive assessment of the geothermal resources of Nicaragua in two decades, and surpasses previous studies in its scope. Energy reserves were estimated using a combination of techniques that addresses the difficult problem of evaluating areas that have very different levels of exploration and development.

A large-format Geothermal Resources Map of Nicaragua supplements the comprehensive report of the Master Plan study, presenting the essential results of the detailed investigations of each resource area. The map includes elements of critical importance to potential developers: resource location, size, exploration/development status, geological/volcanological setting, indications of geothermal activity (including measured and geothermometer temperatures), estimated recoverable reserves, and infrastructural framework. The Government of Nicaragua will use the Geothermal Master Plan Study and the Geothermal Resource Map to assist in promoting and regulating the development and exploitation of the country's extensive geothermal resources for electricity generation, and to help plan its own role in geothermal resource development.

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