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By providing a business investment credit for energy property in the Energy Tax Act of 1978, the Congress clearly intended to provide meaningful incentives for investment in alternate energy systems (including geothermal systems). In its proposed regulations for these credits, the Internal Revenue Service defines geothermal energy and geothermal equipment so narrowly as to exclude from the credit all but a small portion of geothermal investment. Thus, as presently interpreted by the IRS, the tax credits would have virtually no impact on the rate of geothermal energy development, and will be unlikely to achieve their intended purpose.

The IRS definition of geothermal energy excludes resources with wellhead temperatures below 50°C (122°F). Yet there are abundant U.S. geothermal resources below 50°C that could directly or indirectly replace substantial quantities of imported oil now used for space heating and industrial processes. Since there is no statutory or technical basis for a temperature limitation, we suggest the substitution of a functional definition of geothermal resources.

The proposed regulations exclude "exploration" and "development" equipment, while allowing "production" equipment. It is questionable whether Congress, in providing a tax credit for equipment used for "producing" geothermal energy, meant to restrict the application of the credit to "production" equipment. The latter term is defined by example as including wellhead equipment. In this form, the regulations are quite unclear as to whether any geothermal wells qualify for the credit. The point is important because the cost of wells represents the major fraction of the cost of most geothermal projects for direct heat applications.

Where heat is to be used directly, a single supply well often suffices. Because such wells may prove to be dry, they are exploratory in nature when first drilled. The proposed regulations are unclear as to whether a single successful geothermal supply well would be counted as "exploration", "development", or "production" equipment, and are equally uninformative about the tax status of a well drilled to reinject spent geothermal fluids into the earth. We recommend that all wells that produce or inject geothermal fluid be defined as production equipment.

Geothermal "wellhead equipment", which qualifies for the credit under the proposed regulations, normally represents a tiny fraction of project expense; often being limited to a valve and a pipe. Expensive downhole pumps, however, are required in many cases to produce geothermal fluid from a well. The regulations as proposed appear to leave considerable latitude for the IRS to exclude downhole equipment because it cannot be classified as "wellhead". We suggest the inclusion of all equipment used to produce and/or inject geothermal fluid as "geothermal production equipment".

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Some equipment that converts geothermal heat into electric power qualifies for the investment credit under the proposed rules, but much equipment for using geothermal heat directly does not. The IRS would include only that geothermal "use" equipment especially designed or adapted for geothermal service. An advantage of geothermal heat is that equipment needed to utilize it often is off-the-shelf hardware, although the size or configuration may differ from that used with conventional fuels. We believe that Congress recognized this in enacting the credit and intended the credit to apply to such equipment used in geothermal systems. By disallowing the credit for this type of equipment, the IRS discourages businesses from installing geothermal systems. We suggest the deletion of this requirement.

Additionally, the IRS excludes from the credit all "use" systems that employ both geothermal energy and other energy sources. Engineering and economic analyses of proposed geothermal direct heat projects show that the most efficient and economical design often includes other energy sources for "peaking" or "topping". We suggest modifying the proposed regulation to allow the credit if 25 percent or more of the energy requirement of such a system is provided by geothermal sources.

Finally, the proposed regulations fail to address the eligibility of certain small power producers for the business investment credit. These producers, in a class created by the Public Utility Regulatory Policy Act (PURPA) and the Energy Security Act, are exempted from Federal rate regulation. This exemption includes small geothermal power production properties owned by otherwise regulated utility companies. We strongly recommend that IRS specifically identify such facilities as eligible for business investment

credits under the Energy Tax Act of 1978, when they elect to exercise the exemptions allowed by the November 6, 1980 FERC proposed rulemaking for small power production and cogeneration facilities.