

loop and enhanced geothermal systems (EGS) can potentially supply many gigawatts more energy than previous technologies...

The new definition is modernized in two ways; first, by removing the half-mile restriction between exploratory and commercial wells for advanced systems, it acknowledges that newer tech has built-in safeguards to avoid disturbing neighboring wells. Second, the definition recognizes that all equipment and infrastructure necessary for modern development should be considered part of a project, not separate.

- 2) **Background.** Geothermal resources are reservoirs of hot water that are naturally occurring or are manufactured to operate at varying temperatures and depths below the earth's surface. Wells, ranging from a few feet to several miles deep, can be drilled into underground reservoirs to tap steam and hot water that can be brought to the surface for use in electricity generation, direct heating, and industrial processes. The United States is the world's largest producer of geothermal electricity and California has the highest geothermal capacity of all states.

Under current law, a geothermal project is divided into two discrete components for purposes of CEQA. The "exploration" phase involves drilling one or more exploration wells at a given site to map out the subsurface environment and assess exactly where a new geothermal power plant should be located. The subsequent "field development" phase involves drilling the necessary injector and producer wells and building the power plant, grid connections, and associated infrastructure.

This bill, sponsored by Sonoma Clean Power, expands the definition of "geothermal exploratory project," explicitly including temporary roads and power lines, while also relaxing the prohibition on exploratory wells within one-half mile of existing commercial wells. According to the Assembly Natural Resources Committee, though not explicit, these changes appear to be intended to accommodate more intensive exploration activities associated with "enhanced" geothermal systems, which may include hydraulic, thermal, chemical, or explosive well stimulation techniques not previously used in California for geothermal production.

- 3) **Related Legislation.** AB 527 (Papan) of the current legislative session, among other things, established a CEQA exemption for geothermal exploratory projects and included the same definition revisions as this bill. AB 527 was vetoed. The Governor's veto message stated:

In addition to delaying much-needed regulations that are already in process, [CalGEM] would need to substantially increase fees on geothermal operators to implement the new requirements imposed by the bill. While I support the expansion of the geothermal energy industry in California as a much-needed source of baseload clean power, the increased fees caused by this bill could disincentivize geothermal development in California beyond any incentive provided by a CEQA exemption for one part of a project's permitting process.

Additionally, I signed Assembly Bill 1359 (Papan) last year, which made a series of targeted reforms to the review and approval of

geothermal exploration projects. It is prudent that we understand the effects of these changes before granting wholesale CEQA exemptions with costly and complicated conditions.

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