

## Energy - Docket Optical System

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**From:** Kent Penning [kent@greenequipmentoptions.com]  
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California Energy Commission

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**13-CCEJA-01**

TN 72182

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Docket 13-CCEJA-1: Green Equipment Options, Inc. comments on Proposition 39 Draft Implementation Guidelines

Green Equipment Options, Inc. appreciates the inclusion of geothermal heat pump systems (GHPs) in the HVAC section of the Proposition 39 Draft Guidelines but objects to the stated priority of “5” and the language used to describe GHPs.

The Proposition 39 Draft Guidelines place an unsupportable low priority on GHPs when compared to other HVAC options. This artificially low priority will undermine the State’s efforts to maximize the potential gains from providing Prop 39 funds to finance deep energy efficiency retrofits in our schools and community colleges.

This low priority is difficult to justify when one understands that GHPs are considerably more efficient than air source HVAC equipment. The U.S. Department of Energy and the U.S. Environmental Protection Agency identify geothermal systems the most efficient and environmentally friendly heating and cooling technology available.

Assigning such a low priority to GHPs conflicts directly with real world results from deploying GHPs within California and across North America. Furthermore, the priority 5 appears to be inconsistent with the Energy Commission’s Draft 2013 Integrated Energy Policy Report:

- “While purchase and installation costs can be higher than those of conventional heating or cooling systems, geothermal heat pump systems can use 25 percent to 50 percent less electricity.”
- “The Energy Commission supports the proper design and installation of geothermal heat pump technologies as a strategy for meeting California’s energy efficiency goals.”

Green Equipment Options, Inc. requests the priority be changed to a priority that is equal to or higher than conventional HVAC options.

GHPs systems should be given fair treatment alongside other heating and cooling systems without inhibiting language such as “when conditions allow”. The regions where conditions do not support installation of GHPs are those regions with hot-temperature resources typically used for power generation which typically have a very low population density. An acceptable description that is consistent with the approach taken when describing the other HVAC measures is “Replace existing conventional HVAC systems with geo heat pumps”.

Green Equipment Options, Inc. requests removal of language from the description of GHPs that suggests the technology is not widely applicable in all of California’s 16 climate zones.

Industry is very concerned the lack of inclusion of GHPs in the Commission’s T24 compliance protocols, procedures, options and software will place an unfair burden on schools and colleges seeking to deploy GHPs. The Draft 2013 IEPR states “Currently, residential and nonresidential compliance software does not adequately model geothermal heat pump systems.” and “... the existing compliance models make it difficult for installation in the planning phase to demonstrate compliance with the Building Energy Efficiency Standards as well as to what extent the geothermal heat pump (and the rest of the building) might exceed the standards.” The system design and the analysis from the required “Custom audit” will easily address any concerns as to the demonstrable gains in energy efficiency when compared to other HVAC alternatives.

Green Equipment Options, Inc. requests the Commission grant a T24 compliance waiver to the owners of all Proposition 39 funded projects until GHPs are fully included in T24 compliance protocols, procedures, options and software.

Respectfully submitted,

**K Penning**

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