

Energy - Docket Optical System

From: Bill Martin [willycliff@gmail.com]
Sent: Friday, October 25, 2013 12:12 PM
To: Energy - Docket Optical System
Subject: Comments on Prop. 39 Program Draft Guidelines
Attachments: to CEC docket on P.39 10-25-13.rtf

Categories: Ready to Docket

California Energy Commission

DOCKETED
13-CCEJA-1

TN # 72213

OCT 25 2013

Comments for Docket on Prop.39 Program Guidelines

Bill Martin, *Martin Energetics*, Quincy, CA

Thank you in advance for considering my comments on your Prop. 39 Program Implementation Draft Guidelines. I make these comments as an independent geothermal heat pump advocate who is affiliated with CaliforniaGeo. My history includes the following; a local energy action contract with the commission in '78-'79 that combined work with four local utilities in Lassen, Plumas, and Sierra Counties to promote residential energy conservation and weatherization, a schools & hospitals auditor, an RCS trainer, a residential design consultant and builder, a Title-24 res and non-res trainer for SMACNA, and an air-source and ground-source heat pump user. I was also witness to the transformation of my former employer's campus (Feather River College in Quincy) to their present 85% square footage utilization of geothermal heat pumps. And, if those units can work in this mountain climate (records 114° and -21° and ASHRAE design temps of 93° and +10°), they can work anywhere.

I will center my comments today around the table from page 36 of your Draft Report and the priority system you've shown. And I make these comments in recognition of the new, statutory intent of AB2339, where obvious barriers to the deployment of geothermal heat pumps in California should be overcome in the interests of our strategic energy and greenhouse gas goals. [This entire message is also attached to this email as a text file.]

Problem:

Page 36 lists five priority levels for projects in Prop. 39 eligible campuses. Replacing existing equipment has a much higher priority than the consideration of GSHPs.

Argument: While Prop. 39 funds will potentially be allocated with limits for various projects, these priorities (as listed) produce a devastating bias against GSHPs, in that they are the last on the list. Neither the facilities/financial authority considering a project (nor the mechanical engineers/consultants specifying them) are likely to have any former experience with GSHPs and are not likely to engage *other* engineering firms who *do* have that experience. When they view your priority list, it reinforces their own lack of GSHP experience or biases them to remain with the same old fossil-based, least up front cost technology. This makes little progress on the energy-greenhouse gas goals of California statutes.

Alternative: Your call for a "custom audit required" is a responsible attempt to see that Prop. 39 monies are strategically spent without waste. But if you do not include the GSHP option at every priority level, you are reinforcing the status quo explained in the argument (above). Some applicants would opt to spend more of their own funds (or borrow) to join with Prop. 39 funds for installing ground source if the financial metrics identified by geo-experienced engineers was given fair consideration. This pathway would also allow the applicant institution to "go slow" and see how this technology works at their own institution before committing more funds toward its expansion at a later date.

Summary: Weatherization and maintenance on any set of buildings is a no-brainer and is not contested here. But all steps beyond that (including equipment replacement projects) should apply the same analysis that would be common when a building is first being designed. The use of GSHPs lowers energy peaks, cuts air conditioning costs, eliminates GHGs (if replacing fossil heating), saves on-site water (if replacing cooling towers), and is the only technology that can pre-heat hot water whenever it runs. Without exception, GSHPs are the only technology that represent 8,760 hour, on-site accessible, renewable energy.

Beginning with page 36's Priority 2, consideration via engineering analysis for use of GSHPs at applicants' facilities should be considered. Without that, we are all complicit in ignoring AB 2339's intent. If, after analysis, the financial metrics don't favor GSHPs on a particular project, so be it. But at least the administrators of Prop.39 funds would have met AB 2339 accountability, and the applicants will have seen that GSHPs should merit serious consideration in most facilities upgrades.