

April 22, 2010

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Billy Owens, Project Manager
Solar Millennium Ridgecrest

Eric Solorio, Project Manager
California Energy Commission

Comments Regarding Climate and Freeze Protection and Wind concerns for
Ridgecrest Solar Power Project, from Staff Assessment, Draft EIS

I am concerned about your estimation of the amount of propane you will need to use to keep the Therminol 55 heat transfer fluid flowing in the over 60+ miles of pipe exposed to the atmosphere in the collector troughs. This amount of propane use affects your bottom line for production costs, affects the "efficiency rating" of the plant, affects emissions of trucks delivering the propane, etc. Our desert is actually cold more than it is warm, in terms of degree heating days and degree cooling days.

From the Draft EIS, Page B.1-25 states under Freeze Protection, *that "for most of the year" no supplemental heat is required to keep the HTF flowing freely.* That statement is so far from reality! *It is expected the HTF heater will need to operate approximately 100 hours per year to keep the HTF from freezing.* Searching archived local climate records, I find that there are at least 30 weeks every year when the ambient air temperature is below 55°F, the point at which the HTF turns to wax. You will be needing to use a whole lot of propane to keep the fluids much warmer than that.

Please recalculate a realistic amount of propane that will be needed for the HTF. Then recalculate the Efficiency Table 1 so that we can all see what it takes to keep a solar plant going in the upper Mojave Desert (as opposed to the lower and warmer Colorado Desert.) The sun is "free", but propane is not, and its use offsets the advantages of the free sunshine. Perhaps solar trough systems are not wise/efficient enough to use in the upper Mojave Desert? Photovoltaic panels don't require any propane.

On the subject of wind, Pg. B.1-10 states that you are going to build *a 30-ft. tall wind fencing, composed of A-frames and wire mesh, will be installed along the east and west sides of each solar field.* I'm sure you've noticed that hardly anything is 30 feet tall in Ridgecrest - for good reasons! We get wind gusts of sometimes 70-80 mph (which blows down power lines!). When it gets really windy, gusts can be sustained above 40-50 mph for sometimes 24 hours. Rethink trying to make a 30 ft. tall fence and check out what Kramer Junction has done. Since a good part of their wind fencing has blown down, it might be wise ask them how successful it is in protecting the mirrors. Also be sure your 150 ft (120'?) cooling tower is designed to withstand huge gusts and anchored down very well.

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