

CALIFORNIA ENERGY COMMISSION
REPORT OF CONVERSATION Page 1 of 1

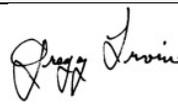
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11-AFC-4

DATE APR 09 2012

RECD. APR 13 2012



Siting, Transmission, and Environmental Protection Division		File: 11-AFC-04	
		Project Title: Rio Mesa Solar Electric Generating Facility	
<input checked="" type="checkbox"/> Telephone: 510-550-8900 Code: 18163#		<input type="checkbox"/> Meeting Location:	
Name(s): Gregg Irvin		Date: 04/09/12	Time 2:30 EST
With BrightSource Energy: Ophir Orr, Todd Stuart, Danny Frank			
Subject: Discussion of Traffic and Transportation Data Requests 143-147.			
<p>Dr. Irvin stated initially the main topic of concern from the Staff perspective is the lack of any luminance calculations that could provide the basis for determinations of apparent brightness. Dr. Irvin acknowledged that the Applicant's calculations and responses regarding retinal damage and safety were quite acceptable and that Staff concurs that there is no risk of retinal damage. However, Dr. Irvin pointed out that the statement in the response to Data Request 143 in the fifth full paragraph is not completely correct:</p> <p>"In this case, since the human eye is affected by the full light spectrum, Flux (W/m^2) is the appropriate measurement to use rather than luminance measurements. Luminance measurements calculate light radiant energy that differs from the natural spectrum (limited to the energy in the visual spectrum)."</p> <p>It is correct with respect to retinal damage, but not with respect to luminance and perceived brightness.</p> <p>BrightSource (BS) stated that their Maximum Permissible Exposure (MPE) calculations are based, appropriately, on dividing up the solar spectrum into 5 regions from the deep Ultra-Violet (UV) to the Near-Infrared (NIR). Further, BS stated that the reason they believed that irradiance (W/m^2) was sufficient and luminance calculations unnecessary was that the solar spectrum is essentially unaltered by the heliostat reflection spectrum and the tower absorption spectrum such that the emission spectrum of the tower is the same as the emission spectrum of the Sun. Thus, luminance would be directly proportional to irradiance.</p> <p>Dr. Irvin stated that even so, Staff has no calculations with respect to tower luminance and thus cannot compute estimates of perceived brightness.</p> <p>BS agreed to provide calculations of tower luminance and provide the results on 17 April. Further Dr. Irvin would review these results and inform BS whether or not these calculations are sufficient on 18 April. Further, since the aspects of the data responses which are considered as incomplete to the other data requests rely on knowledge of luminance information these were not discussed in the conversation. Rather, they will be re-evaluated once the luminance information becomes available.</p>			
cc:		Date: 04/09/12	 Signed: Name: Gregg Irvin