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January 21, 2011

Mr. Craig Hoffman
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DOCKET	
09-AFC-3	
DATE	<u>JAN 21 2011</u>
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Subject: Mariposa Energy Project (09-AFC-03)
Applicant's Rebuttal Testimony

Dear Mr. Hoffman:

Attached are one (1) hard copy and one (1) electronic copy on CD-ROM of the Mariposa Energy Project Applicant's Rebuttal Testimony.

If you have any questions about this matter, please contact me at (916) 447-2166.

Sincerely,



Greggory L. Wheatland

Attachment

cc: C. Curry, Mariposa Energy, LLC.
B. Buchynsky, Mariposa Energy, LLC.

Mariposa Energy Project

(09-AFC-03)

Applicant's Rebuttal Testimony

Submitted to

California Energy Commission

Submitted by

Mariposa Energy, LLC

January 21, 2011

LAND USE
REBUTTAL TESTIMONY OF ADOLPH MARTINELLI

Q1: Please state your name and occupation.

A1: My name is Adolph Martinelli. I am an independent land use consultant, and I provide site assessment and development and permitting services to landowners, developers and governmental agencies.

Q2: Mr. Martinelli, you provided Direct Testimony in this proceeding and filed a declaration and a statement of your qualifications as part of that Direct Testimony, is that correct?

A2: Yes.

Q3: Please provide a summary of your qualifications.

A3: Prior to becoming an independent consultant, I worked for Alameda County for nearly 40 years, and have held positions at every level in the Alameda Planning Department. From 1996 to July 2003, I served as the Director of Alameda County's Community Development Agency. During that time, I also served as the Manager of Surplus Property Authority of Alameda County, and as Executive Director of the Alameda County Redevelopment Agency. Prior to that, from 1990 to 1996, I served as Planning Director for Alameda County.

Q4: What is the purpose of your rebuttal testimony?

A4: The purpose of my testimony is to provide rebuttal to the Opening Testimony of Dick Schneider on Land Use, sponsored by Intervenor Robert Sarvey, stating that the Mariposa Energy Project would violate Measure D.

Q5: Do you agree with Mr. Schneider's assertions that the Mariposa Energy Project would violate Measure D?

A5: No. Power plants such as the Mariposa Energy Project are a public/quasi-public use under the Large Parcel Agricultural Land Use Designation as amended by Measure D, and constitutes permitted "infrastructure" under Measure D and the East County Area Plan ("ECAP"). This corresponds with the position of the Alameda County Community Development Agency, and is consistent with the California Energy Commission's findings in the certification of other power plants in Alameda County.

Q6: What is Measure D?

A6: Measure D was a voter initiative passed on November 7, 2000 that amended the Alameda County General Plan. Measure D revised the Urban Growth boundary in eastern Alameda County, and was proposed to prevent excessive, badly located, and harmful development while preserving and enhancing agriculture and agricultural lands and

providing protection of natural resources. The initiative amended the East County Area Plan (“ECAP”), a portion of the Alameda County General Plan, in several ways. One aspect was to add Policies regarding phased development, including Policy 13, which requires Alameda County to not provide or authorize public facilities or other infrastructure “in excess of that needed for permissible development consistent with [Measure D]”¹, but which also specifically allows the development of new infrastructure where necessary to create adequate service for East County, as well as infrastructure that has no “excessive growth-inducing effect on the East County area” and is so conditioned.

Q7: What types of infrastructure does ECAP permit?

A7: In addition to pipelines, canals, and power transmission lines, Policy 13 of the ECAP provides that the term “infrastructure” includes “public facilities, community facilities, and all structures and development necessary to the provision of public services and utilities.”

Q8: How does the Mariposa Energy Project satisfy the definition of permitted “infrastructure” under Policy 13?

A8: The Mariposa Energy Project can be considered a public facility, as it serves the needs of the public at large, based upon having a long term Power Purchase Agreement with Pacific Gas & Electric (PG&E) the local electric and gas utility, and can also be considered a “structure and development necessary to the provision” of public utilities, as the facility is necessary to produce electricity, which is a public utility function. If PG&E did not contract for these specific power requirements, then it would build the facility itself to satisfy the requirements identified by the California Public Utilities Commission, California Independent System Operator and the California Energy Commission.

Q9: You stated above that it is the position of the Alameda County Community Development Agency that power plants constitute “infrastructure” under ECAP. How did you reach this conclusion?

A9: Alameda County has participated previously in two power plant certification proceedings before the Commission: the Tesla Power Project² and the East Altamont Energy Center.³ In both those proceedings, the Alameda County Community Development Agency found the proposed power plants to be consistent with ECAP. For example, in the East Altamont Energy Center proceeding, the Alameda County Community Development Agency stated:

¹ East County Area Plan, Urban and Rural Development, Policy 13, p. 10 (Revised by Initiative Nov. 2000). The Alameda County General Plan, is available at <http://www.acgov.org/cda/planning/generalplans/index.htm>. The ECAP is available at <http://www.acgov.org/cda/planning/generalplans/documents/EastCountyAreaPlancombined.pdf>.

² The Tesla Power Project (01-AFC-21) was approved by the Commission in June 2004.

³ The East Altamont Energy Center (01-AFC-4) was approved by the Commission in August 2003.

In Policy 14A [now Policy 13], the County defines infrastructure as “public facilities, community facilities, and all structures and development necessary to the provision of public services and utilities.” County Staff believes that the project is appropriately called a “public facility” as well as “structures and development necessary to the provision of...public utilities” because it would substantially serve a key need of the public at large. County staff have also explained in the past that the proposed EAEC fits within the reasonable definition of “infrastructure,” and that the reason for this position is transparent given the definition in the policy...

As explained above, uses that constitute a public facility or segment of the infrastructure necessary to provide adequate utility service to the East County and the rest of Alameda County are consistent with Measure D overall.⁴

Q10: With respect to the Mariposa Energy Project, what is the position of Alameda County?

A10: Alameda County has determined that the Mariposa Energy Project is consistent with ECAP, and thus the provisions of Measure D, as the Project is a public/quasi-public use under the Large Parcel Agricultural Land Use Designation as amended by Measure D, and it falls within the definition of “infrastructure” allowable under ECAP as it (1) constitutes a public facility and (2) constitutes a segment of infrastructure that will have no excessive growth-inducing effect on the East County area. The County’s determination is set forth in Exhibit 41.

Q11: In the two licensing proceedings that you identified above did Mr. Schneider or Mr. Sarvey participate in those proceedings?

A11: Yes. In both the Tesla Power Plant and East Altamont Energy Center licensing proceedings Mr. Sarvey sponsored the testimony of Mr. Schneider for the area of Land Use.

Q12: After careful consideration of the arguments presented by Mr. Schneider and the other parties, what did the Commission conclude regarding the application of Measure D to power plants?

A12: In both the East Altamont Energy Center and the Tesla Power Plant proceedings, giving due deference to Alameda County, the Commission accepted Alameda County’s interpretation of ECAP.

⁴ Letter from Adolph Martinelli to Bob Haussler, Subject: East Altamont Energy Center LLC (EAEC), (01-AFC-4), County of Alameda County Development Agency (CDA) response to California Energy Commission (CEC) letter of March 7, 2002 (April 26, 2002).

Specifically, in the East Altamont proceeding, the Commission deferred to Alameda County's finding that the East Altamont Energy Center complied with Measure D, and was permissible infrastructure development under Policy 13.⁵

In a subsequent decision in the Tesla proceeding, the Commission again deferred to Alameda County's interpretation of ECAP, and found:

Although the [Tesla Power Plant] is obviously an industrial use requiring agricultural conversion, Alameda County's interpretation is credible since the Project can be viewed as infrastructure necessary to meet electricity needs in the County. We typically give due deference to a public agency's interpretation of its own land use LORS unless that interpretation conflicts with the Commission's siting authority or would cause the Commission to rely on factual error. (Ex. 51, p. 4.5-13; *See* Cal. Code Regs., tit. 20, § 1714.5(b).) We have neither jurisdiction nor good cause to second guess the official action of the County Board of Supervisors in this case. The Board of Supervisors is the land use agency that represents County voters. Given the Board's action, we conclude that the Project is consistent with the overall policy intent of ECAP/Measure D Policy 86.⁶

Additionally, the Commission made the following Findings of Fact in its Final Decision approving the Application for Certification for the Tesla Project:

6. The TPP can be considered "infrastructure" under ECAP Policy 13.
11. The Project is consistent with applicable land use LORS in Alameda County.
12. The Project is compatible with Alameda County's existing and planned uses and zoning designations for the site and surrounding area.⁷

Q13: Are the arguments presented by Mr. Schneider in this proceeding the same as the arguments that were presented and rejected in the Tesla and East Altamont cases?

A13: Nearly so.

⁵ East Altamont Energy Center, Final Commission Decision, 01-AFC-4, p. 369 (August 2003).

⁶ Tesla Power Project, Final Commission Decision, 01-AFC-21, pp. 381-382 (June 2004).

⁷ Tesla Power Project, Final Commission Decision, 01-AFC-21, pp. 388 (June 2004).

For example, in arguing that the Mariposa Energy Project is not a permissible use in the Large Parcel Agriculture designation, on page 4 of his Opening Testimony, Mr. Schneider states that:

We chose to retain the provision that permits “public and quasi-public uses” and to delete the provision permitting “other industrial uses appropriate for remote areas and [that could be] determined to be compatible with agriculture.”⁸

Mr. Schneider unsuccessfully raised this same argument in the Tesla proceeding.⁹ Similarly, on page 6 of his Opening Testimony, Mr. Schneider states that Measure D “prohibits County approval of infrastructure in excess of that needed to serve current and future East County residents.”¹⁰ This same argument was raised in the East Altamont proceeding, where Mr. Schneider stated:

The idea was not to allow larger capacity for infrastructure than what is needed to serve the development in eastern Alameda County, allowed by the initiative...In other words, it’s an order of magnitude larger than is necessary to serve growth in eastern Alameda County.¹¹

Again, this argument was unsuccessful.

Q14: On page 7 of his Opening Testimony, Mr. Schneider states that “the applicant has not met his burden of proof that the Mariposa Energy Project is needed to meet permissible growth in Eastern Alameda County.” Do you agree with this statement?

A14: No. To the extent that a burden of proof applies in this context, as noted in the Application of Certification for the Mariposa Energy Project, the Eastern Alameda County area was identified by the California Independent System Operator and Pacific Gas and Electric as an area where additional peak electric generation capacity was needed. The Mariposa Energy Project was developed in response to that need.

Q15: On page 7 of his Opening Testimony, Mr. Schneider also states that “the East Altamont Energy Center, another 1100 MW power plant, was “recently approved” for eastern Alameda County and it would more [sic] power than is needed for Eastern Alameda County,” and that this must factor into the Commission’s determination of whether the

⁸ Dick Schneider’s Opening Testimony Land Use Sponsored by Robert Sarvey, Docket No. 09-AFC-03, pp. 4-5 (Jan. 7, 2011).

⁹ Tesla Power Project, Final Commission Decision, 01-AFC-21, p. 389 (June 2004).

¹⁰ Dick Schneider’s Opening Testimony Land Use Sponsored by Robert Sarvey, Docket No. 09-AFC-03, p. 6 (Jan. 7, 2011).

¹¹ East Altamont Energy Center, 01-AFC-4, 10/21/02 Hearing Transcript, pp. 102-103.

Mariposa Energy Project is “needed to meet permissible growth in Eastern Alameda County.” Do you agree with this statement?

- A15: No. First, the license for the East Altamont Energy Center, which was granted in August 2003 and which was extended in 2008, is scheduled to expire in August 2011. Construction of the East Altamont Energy Center has not yet started. Second, even assuming that the East Altamont Energy Center will be built, Mr. Schneider fails to take into consideration a crucial distinction between the East Altamont Energy Center and the Mariposa Energy Project. The East Altamont Energy Center, if constructed, will be a merchant baseload facility. In contrast, the Mariposa Energy Project is designed to be a contracted peaking facility. Peaking facilities such as Mariposa provide highly flexible dispatchable energy and capacity and a fast-start capability that are needed to balance load, help integrate intermittent renewable resources such as wind and solar, and support baseload and highly variable renewable generation. Third, the Mariposa Energy Project is needed in Eastern Alameda County in light of the fact that Eastern Alameda County has little local generation, and in particular, no existing or proposed peaking facilities other than the Mariposa Energy Project. The Mariposa Energy Project will reduce Eastern Alameda County’s reliance on imports, and provide flexibility and support during peak demand periods, and during periods of decreasing or intermittent renewable generation.

SOCIOECONOMICS
REBUTTAL TESTIMONY OF DR. THOMAS PRIESTLEY

Q1: Please state your name and business affiliation.

A1: My name is Dr. Thomas Priestley, Ph.D., AICP/ASLA. I am a Senior Environmental Planner with CH2M-Hill.

Q2: Dr. Priestley, you provided Direct Testimony in this proceeding and filed a declaration and a statement of your qualifications as part of that Direct Testimony, is that correct?

A2: Yes.

Q3: What is the purpose of your rebuttal testimony?

A3: The purpose of my testimony is to provide rebuttal to the opening testimony of Mr. Rajesh Dighe on the Mariposa Energy Project.

Q4: Please summarize your rebuttal testimony.

A4: My testimony finds that the Commission should reject Mr. Dighe's arguments regarding a purported connection between the Mariposa Energy Project and property values in the Mountain House Community Services District ("Mountain House development"). The connections suggested by Mr. Dighe are incorrect and not supported by the sources he cites.

To support the contention that development of the Mariposa Energy Project will reduce the value of residences in the Mountain House development, Mr. Dighe cites a paper by Lucas W. Davis titled "The Effect of Power Plants on Local Housing Values and Rents" (Davis, 2010) (the "Davis paper"). The Davis paper provides an analysis of census data from census blocks located within 2 miles of a set of 92 electric power plants brought on-line during the period between 1993 and 2000. Using regression analysis, the author sought to determine whether the opening of a power plant had any effect on property values and rents in the census blocks within 2 miles of these facilities and whether there was a change in demographic and housing characteristics in these areas. The author concludes that in census blocks that lie within 2 miles of power plants that went into operation between 1993 and 2000, between the 1990 and 2000 censuses, there was a 3 to 7 percent decrease in housing values and rents, and that demographic changes occurred, with small decreases in household income, educational attainment, and the proportion of owner-occupied homes.

Q5: Do you find the Davis paper to be credible?

A5: No, I do not. The research design used by Davis contains serious flaws. Because of these flaws in the research design, the conclusions are highly questionable, and thus do not provide a valid basis for making determinations about the potential effects, if any, of

power plants on housing values. I discuss these flaws in detail in my analysis entitled “Evaluation of the Potential Effect of the Mariposa Energy Project on the Sales Values of Homes in the Mountain House Community Services District,” which is attached to this rebuttal testimony as Appendix A, and is incorporated by reference.

Q6: What are the flaws in the Davis paper?

A6: The Davis paper has the following three major flaws:

1. Actual sales data were not used; instead, the Davis paper relies on self-reported estimates of property values, i.e., self-appraisals by homeowners.
2. The Davis paper uses census data or estimated values on an aggregated basis, and therefore is not able to take into account the individual factors that have the potential to affect the values of residences (e.g., size of the lot, age and size of the home, number of bedrooms, view). As a consequence, the modeling is not able to establish whether the changes it shows in the resident-reported values of the properties are directly related to the proximity to a power plant, or whether these changes are attributable to other variables.
3. The Davis paper relies on census data in a generalized two-mile radius rather than considering the actual distance between the residences and the power plants. Moreover, Davis interprets his analysis to indicate that any effects on perceived property values are most likely limited to an area that is less than 2 miles from the power plant. Because the Mariposa Energy Project is located 2.3 miles from the outer edge of the Mountain House development, the Davis paper confirms that the Mariposa Energy Project is not likely to impact property values within the Mountain House community.

Q7: Please explain the problems associated with the first major flaw, the Davis paper’s reliance on self-reported property values?

A7: The first major flaw of the Davis paper is that the data used to measure property values were not the actual sales price of properties, but responses to the census takers’ questions about how much the respondent thinks his or her property is worth. Self-reported estimates of property value are not a reliable measure of actual value. Self-reported appraisals are essentially guesses on the part of the homeowners and may bear little or no relationship to what a willing buyer would pay to a willing seller.

Even Davis cautions that homeowners’ self-appraisals are suspect: “With any self-reported information, one may be concerned about whether or not households are able to answer accurately. Housing values are self-reported in response to a question that prompts respondents to report how much their home would sell for if it were for sale. Particularly for owners who purchased their homes many years ago, this may be difficult for some households to answer.” (p.10)

Although Davis admits to the limitations of this variable, he reports no measures that were taken to account for the fact that this variable may not be an accurate measure of actual property sales prices. Rather than referring to this variable as property value, it would be more accurate to refer to it as “owners’ perceptions of the value of their property.”

The fact that the values of this variable, which is key to the analysis, are not a reflection of actual market pricing makes the Davis paper’s analyses highly unreliable. No efforts were made to account for the unreliability of self-appraisals, which raises fundamental questions about the reliability of the findings.

Because the Davis paper does not rely on the prices that buyers actually pay, this paper’s conclusions cannot be accepted as a valid predictor of how property values might actually be affected by the proximity of a power plant.

Q8: Turning to the second flaw you cite, does the Davis paper take into account the individual factors that have the potential to affect the values of residences (e.g., size of the lot, size of the home, number of bedrooms, view and alike)?

A8: No, it does not. Because the Davis paper relies on census data that were modeled in an aggregate way, it is not able to take into account each of the individual factors that have the potential to affect the values of residences.

The Davis report fails to disclose or take account of individual home factors that affect value such as, for example, lot size, the age of the house, the number of bedrooms, and the number of bathrooms, as well as contextual factors including distance from and visibility of points of interest or disinterest. Home values are driven by these and other individualized factors that are completely ignored in the methodology employed in the Davis paper. In short, the price signals associated with the real estate mantra “location, location, location” are muted.

As a consequence, the modeling is not able to establish whether the changes it shows in the resident-reported values of the properties are directly related to the proximity to a power plant, or whether these changes are attributable to other variables.

In addition, the modeling does not take into account the role that local and regional real estate market trends may have played in influencing changes in the self-reported property values. Review of the map presented in the Davis paper as Figure 2 indicates that a large percentage of the power plants included in the sample analyzed by Davis are located in non-metropolitan areas, particularly in the Appalachian Mountains and in rural areas of the Midwest and East Texas.

Only one of the power plants in the sample of 92 is located in California. It would be inappropriate to extrapolate impacts in the Appalachians, the Midwest, and East Texas to California where the real estate markets are vastly different, with a very different pricing structure.

Further, Notes on Table 3 of the Davis paper provide clues about the nature of the power plants included in the sample, indicating that 85 of the plants are natural gas fired, and that the median nameplate capacity is 380 MW. These clues suggest that the sample includes power plants that are much larger than the proposed 200 MW Mariposa Energy Project, and could also include a small number of coal-fired plants, whose physical characteristics would be quite different from those of the MEP.

Q9: Turning to the third major flaw in the Davis paper, does its failure to account for actual distances between residences and power plants call the Davis paper's conclusions into serious question?

A9: Yes. In the Davis research, treatment of the distance variable was not highly refined because it was based on the centroids of census blocks, rather than measurements of the distances from individual residences to the nearby power plant. In addition, the analysis was structured to analyze all residences within 2 miles of the power plants included in the sample. As a consequence, the Davis research is not able to provide a clear understanding of the extent to which any impacts on perceived property values would decrease with increasing distance from the power plant.

Davis concluded that impacts on perceived housing values are highest in the immediate vicinity of the power plant. (p. 15). Davis concludes that "...it is possible to rule out the null hypothesis of a zero effect for at least a part of the 0-2 mile range" (p. 15). This discussion suggests that Davis interprets his analysis to indicate that any effects on perceived property values are most likely limited to an area that is less than 2 miles from the power plant.

This conclusion of impacts in the 0-2 miles range is important in considering any applicability of the Davis findings to understanding the potential effects of the Mariposa Energy Project on Mountain House development. The Mountain House development lies 2.3 miles from the Mariposa Energy Project site at its closest point, well beyond the zone which the Davis research would suggest that there would be property value impacts.

Q10: Does the Davis report include a list of power plant impacts presumed to impact property values?

A10: Yes, it does, at pages 5-7.

Q11: Considering the impacts the Davis paper presumes affect property values, do these presumed impacts apply to the Mariposa Energy Project?

A11: Davis suggests that the following five potential impacts may affect property values: (1) visibility of the power plant; (2) noise; (3) traffic from fuel deliveries; (4) air pollution; and (5) localized contamination by fugitive residues. In the case of the Mariposa Energy Project as it relates to Mountain House development, none of these impacts are present.

Regarding potential visibility, the Mariposa Energy Project is a relatively small, natural-gas-fired power plant, with power plant stacks only 80 feet high. The project will be sited in a way that is visually integrated into the landscape, and it will be 2.3 miles from the outer edge of the Mountain House development. The California Energy Commission (CEC) Staff Assessment (SA) (CEC, 2010) concludes that the visibility of the Mariposa Energy Project from Mountain House development will be very limited and that the visual impact on views from Mountain House CSD will be less than significant. I agree with this conclusion.

Regarding noise and vibration. CEC Staff concludes that if the Mariposa Energy Project is built and operates in conformance with the noise and vibration mitigation measures, it will conform with all noise and vibration laws and regulations and will not create significant noise impacts on people in the surrounding area. I agree with this conclusion.

Regarding traffic from fuel deliveries, this also is a non-issue for Mariposa. The Mariposa Energy Project is a natural-gas-fired facility. All fuel deliveries will occur by pipeline, so the Mariposa Energy Project will not generate traffic related to fuel delivery. This makes the Mariposa Energy Project quite different from coal fired plants, for example, that generate high volumes of train, barge or truck traffic required for coal delivery.

Further, as documented in the CEC SA, with implementation of the air quality mitigation measures, the Mariposa Energy Project would conform with all applicable air quality laws, ordinances, regulations, and standards, and would not create significant air quality impacts on Mountain House CSD or elsewhere.

Finally, because the Mariposa Energy Project is a gas-fired facility, it will not generate the kinds of residues associated with coal-fired plants that could be the source of potentially harmful fugitive dust.

Therefore, none of the five factors that Davis presumes to impact property prices are applicable to the Mariposa Energy Project as it relates to the Mountain House community.

Q12: Does the Staff of the Mountain House Community Services District share your view that the Davis paper is not applicable to the Mountain House development?

A12: Yes. The Staff of the MHCS D has independently reached conclusions regarding the Davis paper which are very similar to my analysis. These views are presented in "Staff Comments to the Mountain House Board of Directors in Response to Concerns of a Drop in Housing Values Due to the Mariposa Energy Project." The relevant portion of this analysis is attached to my rebuttal testimony as Appendix B, and is incorporated by reference.

The MHCS D Staff Analysis states:

- There is a 4% to 7% devaluation of property within two miles of a new power plant. The closer you are to the plant the greater is the drop in value. Mountain House is more than two miles from the Mariposa Power Plant site. The land value decrease diminishes rapidly beyond the two mile distance.
- Generally, the drop in value to property in the near proximity to a plant is due to things like the ugly view of the plant, the noise generated from the plant, the installation of additional power lines to the plant and the increased traffic of bringing fuel to the plant. None of those negative environmental characteristics will be involved with the Mariposa Energy Plant in relation to Mountain House. There is an existing natural gas pipeline that will supply fuel, there are existing power lines that the plant will plug into. The plant profile will be behind terrain to Mountain House and the noise of operation will not affect Mountain House.
 - Therefore, all of the negative environmental factors cited by the study that create a drop in property value within two miles of the plant will not exist in the case of the Mariposa Energy Project.
- The energy plants in the study were comprised of the 92 large power plants built nationally between 1993 and 2000. Only one of those plants was built in California. The majority of the plants were built on the east coast of the United States or the Mississippi River watershed. It should be assumed that California property values very rarely follow trends of property values east of the Mississippi.
- The housing values used in the study were those values offered to Census workers during the year 2000 Census and then compared to year 1990 Census reported values. The values were not actuarially collaborated. The housing values in the Census blocks in which new power plants were built were not compared to surrounding Census block housing values.
- The curves depicting the change in property values were not well enough defined to determine exact rates of change in values and the shape of the mathematical curves became much less reliable for determining land value changes at two miles and greater from the new plants.

Q13: Does this conclude your rebuttal testimony?

A13: Yes, it does.

APPENDIX A

Technical Memorandum

Evaluation of the Potential Effect of the Mariposa Energy Project
on the Sales Values of Homes in the Mountain House Community
Services District

(December 10, 2010)

Prepared by

Dr. Thomas Priestley

Evaluation of the Potential Effect of the Mariposa Energy Project on the Sales Values of Homes in the Mountain House Community Services District

PREPARED BY: Thomas Priestley, Ph.D., AICP/ASLA

DATE: December 10, 2010

Introduction

Mountain House Community Services District (Mountain House CSD) is an unincorporated community located in San Joaquin County, and at its nearest point is approximately 2.3 miles east of the Mariposa Energy Project (MEP) site. Until relatively recently, the area where Mountain House CSD is located was an expanse of agricultural land 5 miles from Tracy, the closest city. In 1994, San Joaquin County approved plans by a private developer to develop this expanse of open agricultural land into a planned community that would contain a mix of housing, employment, commercial uses, and community facilities. Development of the Mountain House CSD site did not begin until 2001, and the first homes were built in 2003. To date, the development in Mountain House CSD has primarily consisted of the development of single-family residential subdivisions, with some community facilities and commercial uses, and more limited development of economic activities providing employment. Mountain House CSD remains an unincorporated area within San Joaquin County, but services are provided by the Mountain House CSD.

At the time the Mountain House development was conceived, its developers envisioned a community that would ultimately have a population of 44,000. However, in recent years, development at Mountain House CSD has stalled, and at present, the community remains only partially built out, with a population of approximately 6,000 (<http://www.ci.mountainhouse.ca.us/community-profile.asp>). Some residents of Mountain House CSD have expressed concerns that the development of MEP will decrease the value of their homes. This paper takes a close look at these concerns to provide a context for evaluating the likelihood that development of MEP would result in decreases in the sales prices of homes in Mountain House CSD.

Review of the Davis Paper

To support their contention that development of MEP will reduce the value of their property, some Mountain House CSD residents cite a paper by Lucas W. Davis titled "The Effect of Power Plants on Local Housing Values and Rents" (Davis, 2010). In this paper, the author provides an analysis of census data from census blocks located within 2 miles of a set of 92 electric power plants brought on-line during the period between 1993 and 2000. Using regression analysis, the author sought to determine whether the opening of a power plant had any effect on property values and rents in the census blocks within 2 miles of these facilities and whether there was a change in demographic and housing characteristics in these areas. Based on the statistical analyses that he conducted, the author concludes that in

Evaluation of the Potential Impact of the Mariposa Energy Project on the
Sales Values of Homes in the Mountain House Community Services District

census blocks that lie within 2 miles of power plants that went into operation during the 1993 to 2000 period, between the 1990 and 2000 censuses, there was a 3 to 7 percent decrease in housing values and rents, and that demographic changes occurred, with small decreases in household income, educational attainment, and the proportion of owner-occupied homes.

The research design used by Davis contains serious flaws. Because of these flaws in the research design, the conclusions are highly questionable, and thus do not provide a valid basis for making determinations about the potential effects of power plants on housing values. In addition, there are other reasons why the Davis research, even if it were valid, would not provide a basis for determining how the development of MEP might affect the sales values of properties in Mountain House CSD.

The Davis paper has the following three major flaws, which are discussed in greater detail below:

1. Actual sales data were not used; the analysis relies instead on self-reported estimates of property values.
2. The analysis uses census data or estimated values on an aggregated basis, and therefore is not able to take into account each of the individual factors that have the potential to affect the values of residences (e.g., size of home, view, number of bedrooms).
3. The analysis does not measure the distance of residences from the power plants, but uses census data in an unrefined form. However, even using unrefined data, Davis interprets his analysis to indicate that any effects on perceived property values are most likely limited to an area that is less than 2 miles from the power plant. We note that MEP is located 2.3 miles from the outer edge of the Mountain House CSD.

The first flaw of the Davis paper is that the data used to measure property value were not the actual sales price of properties, but responses to the census taker's questions about how much the respondent thinks his or her property is worth. Self-reported *estimates* of property value are not a reliable measure of actual value because they are essentially guesses on the part of the respondent and may bear little or no relationship to what a willing buyer would pay to a willing seller at the time the question was asked. Even Davis admits that: "With any self-reported information, one may be concerned about whether or not households are able to answer accurately. Housing values are self-reported in response to a question that prompts respondents to report how much their home would sell for if it were for sale. Particularly for owners who purchased their homes many years ago, this may be difficult for some households to answer." (p.10) Although Davis admits to the limitations of this variable, he reports no measures that were taken to account for the fact that this variable may not be an accurate measure of actual property sales prices. Rather than referring to this variable as property value, it would be more accurate to refer to it as "owners' perceptions of the value of their property." The fact that the values of this variable, which is key to the analysis, are not necessarily a reflection of market behavior and that no efforts were made to validate or correct them, make it highly unreliable, which raises fundamental questions about the reliability of the analysis' finding related to property values. Because the Davis paper does not rely on the prices that buyers actually pay, this paper's conclusions cannot be accepted as a valid predictor of how property values might actually be affected by the proximity of a power plant.

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Because the Davis paper relied on census data that were modeled in an aggregate way, the second flaw of the Davis analysis is that it is not able to take into account each of the individual factors that have the potential to affect the values of residences and to determine the role (if any) of proximity to or visibility of a power plant in relationship to the roles played by other characteristics of the property. As a consequence, the modeling is not able to establish whether the changes it shows in the resident-reported values of the properties are directly related to the proximity to a power plant, or whether these changes are attributable to other variables.¹² For example, because power plants are often located in industrial zones or in areas that have heavy concentrations of infrastructure facilities, the modeling may be measuring the effects of other facilities in the vicinity of the power plant rather than the effect of the power plant itself. The Davis analysis does not appear to have taken any measures to account for the context of the power plants included in its sample,

¹² The Davis paper lies outside the mainstream of the real estate research that seeks to document whether facilities like power plants, transmission lines, landfills, hazardous waste facilities, and heavy industrial facilities have an impact on the values of residential properties, and if so, what the magnitude of the effect might be, and how far those effects might extend. Like Davis, the mainstream property value research uses regression analysis, a statistical method by which the changes in a variable of interest, known as the dependent variable (which in a mainstream property value study would be the sales price of the properties in the study area) are explained as a function of changes in other factors known as explanatory variables or regressors. Regression analysis allows the relationship between the dependent variable and each of the explanatory variables to be displayed in a model and estimated, providing a numerical estimator for each relationship. However, unlike the author, mainstream property value studies control for other variables. The hedonic pricing model format that is used to structure the regression model assumes that the amount paid for the purchase of a property reflects the value placed on specific attributes of the home and property (for example, lot size, age of house, numbers of bedrooms and bathrooms), as well as contextual factors (including distance from and visibility of the facility of interest). Using this approach allows the relationship between property value and the variables that determine it to be statistically isolated, and the relative contribution to property value of each of the explanatory variables to be identified. The use of the multiple regression approach requires two large data sets of sales: (i) in the area of potential impact and (ii) in a separate control area. For each sale, the sales price is required, as well as data for variables related to the broad spectrum of factors potentially affecting the sales price, including variables that measure the distance from and visibility of the feature whose impacts are being studied. For a detailed review of the variables included in studies of this type, the efforts required to generate this data, and the strategies for analyzing it, see Igelzi and Priestley, 1989. Through use of multiple regression analysis in the hedonic pricing model format, it is possible to identify each of the variables that have a statistically significant effect on property sales value in the study area and to identify the percentage of the total sales value that can be attributed to each of the variables. The value of the multiple regression/hedonic modeling studies conducted within the mainstream property value impact research paradigm is that the analyses are based on empirical evidence. Because the analyses are based on the prices that buyers actually pay, and because they account for the relevant property-specific variables, they provide a sound basis for determining the role that factors like proximity to or visibility of a power plant or other facility of interest play in determining the actual sales price. At present, the multiple regression/hedonic modeling approach is favored by academic researchers and professionals as the means to identify the effects of proximity to transmission lines on property sales prices (Kinnard and Dickey, 1995) and the property value effects of other facility types and environmental and contextual variables. For example, a journal article by Boyle and Kiel (2001) reviews a large number of studies based on hedonic modeling that evaluate the property value effects of air quality; water quality; distance from undesirable land uses, including nuclear and fossil fuel electric power plants, hazardous waste sites, landfills, incinerators, and heavy industrial facilities; multiple environmental pollutants; and neighborhood factors, such as location relative to roads, public transportation, and airports, school quality, crime levels, and water amenities.

Evaluation of the Potential Impact of the Mariposa Energy Project on the
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and in particular, did not make an effort to identify other facilities that may have been developed in the vicinity of these power plants during the 1993 to 2000 period that may have had the potential to affect property values.

In addition, the modeling does not take into account the role that local and regional real estate market trends may have played in influencing changes in the self-reported property values. Review of the map presented in the Davis paper as Figure 2 indicates that a large percentage of the power plants included in the sample analyzed by Davis are located in non-metropolitan areas, particularly in the Appalachian Mountains and in rural areas of the Midwest and East Texas. It is also important to note that only one of the power plants in the sample of 92 is located in California, and that plant is located in a non-metropolitan area. Even if the self-reported values on which the Davis analysis is based were valid, it would be inappropriate to extrapolate impacts in the Appalachians, the Midwest, and East Texas to metropolitan California where the real estate market is vastly different, with a very different pricing structure. A 3 percent decrease in value could equate to a \$3,000 price reduction in these other regions, but in California, \$3,000 would be a relatively minor change, perhaps representing a value decrease on the order of 0.3 to 1 percent. It is inappropriate to assume the same percentage of change in value would be applicable in different regional real estate markets.

Another problem with not controlling for differences in local and regional markets is that because many of the areas where the power plants in the sample are located are non-metropolitan areas that are not areas of high economic and population growth, there may be little development of new housing, and real estate values in general may be stagnant or even in decline. Therefore, it is possible that it is these regional trends, rather than proximity to a power plant that may be responsible for the small decreases in self-reported property values the study has identified.

Another fundamental issue of concern related to the design of the Davis analysis and the potential applicability of its findings to understanding the potential property value effects of MEP is that the facilities assessed in the Davis paper, for the most part, are likely different from MEP. Unfortunately, the Davis paper does not provide details on the characteristics of the 92 power plants included in the analysis; the only information provided is that the facilities were developed between 1993 and 2000, they have a minimum generating capacity of 100 megawatts (MW), and are not cogeneration plants. Notes on Table 3 of the Davis paper provide clues about the nature of the power plants included in the sample, indicating that 85 of the plants are natural gas fired, and that the median nameplate capacity is 380 MW. These clues suggest that the sample could include a small number of coal-fired plants, whose physical characteristics would be quite different from those of MEP, and that more than half of the facilities included in the sample are larger than MEP, which will have a generating capacity of 200 MW. It is possible that many of the power plants included in the sample are much larger than MEP, and thus would have a much greater physical presence and greater potential for creating impacts than MEP.

It is also important to note that in the Davis research, treatment of the distance variable was not highly refined because it was based on the centroids of census blocks, rather than measurements of the distances from individual residences to the nearby power plant. In addition, the analysis was structured to analyze all residences within 2 miles of the power plants included in the sample. As a consequence, the Davis research is not able to provide a

clear understanding of the extent to which any impacts on perceived property values would decrease with increasing distance from the power plant. However, applying a statistical procedure entailing the use of 1-mile band widths, Davis concluded that impacts on perceived housing values are highest in the immediate vicinity of the power plant and “then converge to zero within one and four miles” (p. 15). In reviewing the results of this analysis, Davis concludes that “...it is possible to rule out the null hypothesis of a zero effect for at least a part of the 0-2 mile range” (p. 15). This discussion suggests that Davis interprets his analysis to indicate that any effects on perceived property values are most likely limited to an area that is less than 2 miles from the power plant. This conclusion is important in considering any applicability of the Davis findings to understanding the potential effects of MEP on Mountain House CSD in that at its nearest point, the Mountain House CSD lies 2.3 miles from the MEP site, well beyond the zone within which the Davis research would suggest that there would be property value impacts.

Consideration of the Physical Relationships between MEP and Mountain House CSD

The Davis paper identifies the following set of power plant impacts that are presumed to impact property values (pp 5-7):

- Visibility of the power plant
- Noise pollution
- Traffic from fuel deliveries
- Air pollution
- Localized contamination by fugitive residues

In the case of MEP as it relates to Mountain House CSD, none of these impacts are present. MEP is a relatively small, natural-gas-fired power plant, with power plant stacks only 80 feet high. The project will be sited in a way that it is visually integrated into the landscape, and it will be 2.3 miles from the outer edge of the Mountain House CSD. The California Energy Commission (CEC) Staff Assessment (SA) (CEC, 2010) concludes that the visibility of MEP from Mountain House CSD will be very limited and that the visual impact on views from Mountain House CSD will be less than significant. KOP 5, a viewpoint located on Great Valley Parkway at the western edge of Mountain House CSD is the viewpoint Staff used to evaluate MEP’s potential visibility from and impacts on Mountain House CSD. Comparison of SA Figure 20, the existing condition view, and SA Figure 21, the simulation of the view as it would appear with the project in place, indicates that MEP will not be highly visible in the view and will have little to no effect on the overall character or quality of the view. This view is clearly a worst-case view toward MEP from Mountain House CSD because it is taken from a location on the community’s western fringes where there is an open view toward the west. Also, it should be noted that the picture was taken when the grasses in the adjacent field were freshly mown; as these grasses grow, they block more of the view to the west. From the interior of Mountain House CSD and from virtually every residence, MEP would not be visible because of the screening created by structures and trees in the foreground of the view. Even for travelers along Great Valley Parkway, views toward the west are substantially screened by the trees planted along the roadway, and in the future, further screening will be created by the commercial facilities planned for development along the west side of the road.

Evaluation of the Potential Impact of the Mariposa Energy Project on the Sales Values of Homes in the Mountain House Community Services District

It is also important to note that MEP will not represent a radically different new use in the area visible from Mountain House CSD. The area to the north and west of Mountain House CSD contains an unusual concentration of infrastructure facilities of statewide significance, including key elements of California's water transfer system, such as the Clifton Court Forebay, the Tracy Pumping Station, the Delta Pumping Plant, Bethany Reservoir, the Delta-Mendota Canal, and the California Aqueduct. Major energy infrastructure also exists in this area, including utility-scale wind farms located in the area to the west of the Delta-Mendota canal and extending into the hills to the west, two 500-kV transmission lines as well as a number of smaller voltage lines, three large electric substations (including the Modesto Irrigation Substation that serves Mountain House CSD), and the PG&E Kelso Compressor station that is associated with a major gas pipeline.

In the noise and vibration analysis presented in the SA, CEC Staff concludes that if MEP is built and operated in conformance with the noise and vibration mitigation measures, it will conform with all noise and vibration laws and regulations and will not create significant noise impacts on people in the surrounding area. Specifically, MEP will not be heard from Mountain House CSD, 2.3 miles away.

Because MEP is a natural-gas-fired facility, all fuel deliveries will occur by pipeline, so MEP will not generate traffic related to fuel delivery. This makes MEP quite different from coal fired plants, for example, that generate high volumes of train, barge or truck traffic required for coal delivery.

As documented in CEC SA, with implementation of the air quality mitigation measures, MEP would conform with all air quality laws, ordinances, regulations, and standards, and would not create significant air quality impacts on Mountain House CSD or elsewhere. More specifically, CEC Staff concluded that air quality impacts from MEP would not be significant at the location of maximum impact, nor would they be significant for residences within Mountain House CSD.

Because MEP is a gas-fired facility, it will not generate the kinds of residues associated with coal-fired plants that could be the source of potentially toxic fugitive dust.

As this review of MEP's physical characteristics and impacts indicate, because of the nature of its technology, its design and setting, and its distance from Mountain House CSD, MEP would not create impacts on Mountain House CSD that would have the potential to result in effects on property values.

The Commission's Ruling on Property Value Impacts in the Licensing of the Metcalf Energy Center

In 2001, the CEC licensed the Metcalf Energy Center, a 600-MW, natural-gas-fired, combined-cycle power plant proposed for a site in the Coyote Valley in the southern area of the San Jose. The Metcalf site lies within 0.6 mile of areas where single-family subdivisions already existed and where others were proposed to be built, and during the licensing proceedings, considerable concern was expressed about the effects that the Metcalf project might have on the values of residential properties. This issue was subjected to a substantial level of analysis on the part of the project applicant and CEC Staff. This analysis included both literature reviews and analysis data on property sales in the vicinity of the Metcalf Energy Center site. This analysis work is available for review in the records of the Metcalf

Evaluation of the Potential Impact of the Mariposa Energy Project on the
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Energy Center proceedings. In its final decision on the licensing of the Metcalf project, the CEC concluded that:

After reviewing the merits of the overall body of evidence on this matter, we recognize that the effect of a proposed project is ultimately one of subjective perception (1/30/01 RT 197; Ex. 73, p. 1), revolving around equally subjective “quality of life” issues.¹⁴⁵ There is simply no factual means by which we can address concerns of this nature within the present context. Objectively, the evidence (consisting of the variety of studies, reviews, and appraisal techniques used by Applicant and Staff) persuades us that property values are not likely to decrease because of the project. This conclusion is similar to that reached in the Crockett decision, of which we have taken official notice.¹⁴⁶ (1/30/01 RT 194-196, 215.) The countervailing evidence is simply insufficient in our minds to persuade otherwise.¹⁴⁷

- 145 These concerns are expressed by the RSTS&RC: “It is our contention that the Applicant has failed to demonstrate either that there is no impact to the quality of life to our local community or that there is an overriding benefit to the larger community...” from the siting of the MEC. (Ex. 73, p. 1.)
- 146 Commission Decision on the Crockett Cogeneration Project, Docket No. 92-AFC-1. (May 1993, Pub. No. P800-93-004.) Here, the Commission specifically found that the project, located virtually across the street from area residences, was not likely to have a significant adverse effect on local property values. (Finding 3, p. 153.)
- 147 Finally, it must be realized that CEQA and the implementing Guidelines focus on physical changes to the environment for purposes of determining the severity of impacts. [Pub. Resources Code, §§ 21100(d) and 21151(b).] “An economic or social change by itself shall not be considered a significant effect upon the environment.” [14 Cal. Code of Regs., § 15382; see also, § 15064(e).] Staff explains this in its Reply Brief on Group 1 and 2 issues (April 4, 2001), pp. 13- 15.)

MEP lies 2.3 miles from the outermost edge of the Mountain House CSD, nearly four times the distance of the much larger Metcalf Energy Center power plant from nearby residential areas. Given the greater distance of MEP from residential areas than the Metcalf power plant and the fact that MEP would not have impacts on the Mountain House CSD that would have the potential to translate into property value impacts, the Commission’s conclusion in the Metcalf decision that “property values are not likely to decrease because of the project” is equally applicable to MEP.

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Sales Values of Homes in the Mountain House Community Services District

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APPENDIX B

Excerpt from

**Mountain House Community Services District Staff
Comments to the Mountain House Board of Directors in
Response to Concerns of a Drop in Housing Values Due to
the Mariposa Energy Project
(January 12, 2011)**



DISCUSSION ITEM: 1

MOUNTAIN HOUSE[®]
COMMUNITY SERVICES DISTRICT

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January 12, 2011

Board of Directors
Mountain House Community Services District
230 S. Sterling Drive Suite, 100
Mountain House, CA 95391

Dear Board Members:

Subject: Mariposa Energy Project

Discussion

This item was requested by Director Lamb in response to ongoing community interest with the project. Two staff reports, the current schedule for the project, and a letter from Tracy Fire are attached as information for the Board.

The Board cannot take any action based on the discussions, since the public would not have been properly noticed of such potential actions. The Board may, however, direct the General Manager to bring back related items at a date to be determined.

Respectfully submitted,

Paul M. Sensibaugh
General Manager

c: District Counsel

STAFF COMMENTS TO THE MOUNTAIN HOUSE BOARD OF DIRECTORS IN RESPONSE TO CONCERNS OF A DROP IN HOUSING VALUES DUE TO THE MARIPOSA ENERGY PROJECT.

MHCS D Staff is aware that there have been oral statements of concerns within the community that Mountain House will lose millions of dollars in property values and thousands of dollars in property tax revenue due to the sighting of the Mariposa Energy Project in local proximity. It has been definitively stated that Mountain House property values will fall seven percent. The assumption is then made that there are three thousand homes in Mountain House with an average value of \$300,000, therefore Mountain House residents will lose:

$(3,000 \text{ homes} \times \$300,000) \times 0.07 = \underline{\$63,000,000}$ in housing value.

Similarly, the MHCS D will receive proportionally less property tax revenue. As Property Taxes are one percent of the value of the property and MHCS D receives sixteen percent of the Property Tax collected from our tax area, the theory is that revenue reductions to MHCS D based on reduced property values will amount to:

$(1\% \text{ of assessed value} \times \$63,000,000 \text{ reduced value}) \times 0.16 = \underline{\$100,800}$ per year revenue loss to MHCS D

The final community assumption is that if the MHCS D Board authorized a onetime \$50,000 budget item to fight and defeat the Mariposa Energy Project that MHCS D will save a yearly \$100,800 revenue loss.

MHCS D found, and reviewed, a study submitted to the California Energy Commission that appears to be the source of the above community assumption. The study is entitled, "The Effects of Power Plants on Local Values and Rents." The Study was prepared by Lucas W. Davis at the Haas School of Business, University of California, Berkeley. The paper has been peer reviewed and the reviewers are noted.

While MHCS D staff does not pretend to have a Phd level competence in market studies and housing value trends, it offers the following comments to the MHCS D Board on the community statements being made and the property values study placed into evidence with the CEC.

The first Staff comment refers the Board of Directors back to a previous comment made by Staff on this topic. If MHCS D wanted to review all of the data involved in the Mariposa Energy Project application in order to become competent to have a valid scientific opinion regarding the environmental fitness of the project, the MHCS D would have to expend from \$200,000 to \$400,000. After the expenditure of that amount, the MHCS D could then expend the assumed \$50,000 noted above to fight the Mariposa Project. There is, then, little guarantee that the MHCS D's efforts would be successful. Additionally, the time that it would take to perform the above task would not practically fit into the present Mariposa Energy Project sighting schedule.

The following statements are made in the referenced study:

1. The results indicate modest declines in housing values and rents within two miles of plants. In the preferred specification, housing values decrease by 4-7 percent. Results are similar for rents, consistent with commensurate changes in current and expected future amenities.
2. A key feature of this study is the use of a restricted version of the U.S. decennial census. These data, which must be accessed at a census research data center under authorization from the Census Bureau, include all of the demographic and housing characteristics in the decennial census and identify households at the census block, the smallest geographic unit tracked by the Census Bureau.
3. There are several local externalities from power plants that are likely to be important for households living in the immediate vicinity of plants. Power plants are large industrial facilities that can be seen from a distance because of their tall stacks. These visual disamenities are especially acute for the large 100+ megawatt plants that are the subject of this analysis. Another local externality from power plants is noise pollution. Fossil fuel plants produce electricity using giant engines which generate high levels of noise and vibration. Natural gas plants use turbine engines which can be particularly noisy. Air intake systems and cooling fans also generate noise. Although available technologies help mitigate these problems, it is not uncommon for noise from power plants to be heard far away, particularly during periods when plants are being tested or cleaned. Another potential source of negative externalities from power plants is traffic from fuel deliveries. Whereas natural gas is delivered by pipeline, coal typically arrives by train, truck, or barge. Coal plants in the United States use over one billion tons of coal annually (over 690,000 tons per generator).⁵ These deliveries require thousands of trips at all hours of the day, generating noise and traffic as well as fly ash from coal processing.
4. In short, power plants are the source of numerous local externalities. The baseline empirical specification examines neighborhoods within two miles of power plants. This will tend to include the entire area affected by visual disamenities, noise, traffic, "fugitive" emissions, and fuel residue. For some of these local externalities, the impact would typically be even more localized.
5. The sample of plants used for the main results includes all fossil fuel plants that began operation between 1993 and 2000. This choice of years is motivated by the use of the 1990 and 2000 decennial census data described in the following subsection.
6. Housing values and rents in the census data are self-reported. With any self-reported information one may be concerned about whether or not household-are able to answer accurately. Housing values are self-reported in response to a question that prompts respondents to report how much they think their home would sell for if it were for sale. Particularly for owners who purchased their homes many years ago, this may be difficult for some households to answer. In contrast, rent is presumably not subject to the same degree of misreporting as housing values because of the saliency of rent payments. Another potential problem with housing values is that they are reported for 20 different categories. In the empirical analysis housing value is treated as a continuous variable using the midpoint of the range. Again, rental rates are less problematic. In 1990 rent was categorical, but the number of categories was larger (26 categories), and in 2000 rent was a write-in response.
7. For housing values, the point estimates start between -.10 and -.05 at the plant and then converge to zero between one and four miles. Beyond four miles the estimates are consistently very close to zero. For rents, the estimates start near -.10 at the plant and reach zero near two miles. Further away from the plant the rent gradient is consistently close to zero except for a slight increase between 8 and 10 miles. The figures also plot 95th percentile confidence intervals estimated using block bootstrap by Census tract with 100 replications. The estimates are sufficiently imprecise, particularly for rents to make it impossible to make definitive statements about the exact shape of the gradient. Nonetheless, for both housing values and rents it is possible to rule out the null hypothesis of a zero effect for at least part of the 0-2 mile range.
8. Overall, the semiparametric estimates are consistent with the results in Table 2 and provide some support for the baseline empirical specification that focuses on Census blocks within two miles of a plant. The rent gradient suggests larger effects within one mile consistent with larger negative externalities. However,

the lack of statistical precision makes it difficult to make definitive statements about the exact shape of the gradient within two miles. Moreover, for both housing values and rents most of the total impact appears to occur within two miles. This is particularly the case for rents in which point estimates converge to zero almost exactly at two miles. For neither housing values nor rents is the gradient particularly steep at two miles, suggesting that minor changes in the specification used in Table 2 would be unlikely to substantially change the results.

A quick review (and not assumed to be comprehensive) of the above Study comments seem to indicate that:

- There is a 4% to 7% devaluation of property within two miles of a new power plant. The closer you are to the plant the greater is the drop in value. Mountain House is more than two miles from the Mariposa Power Plant site. The land value decrease diminishes rapidly beyond the two mile distance.
- Generally, the drop in value to property in the near proximity to a plant is due to things like the ugly view of the plant, the noise generated from the plant, the installation of additional power lines to the plant and the increased traffic of bringing fuel to the plant. None of those negative environmental characteristics will be involved with the Mariposa Energy Plant in relation to Mountain House. There is an existing natural gas pipeline that will supply fuel, there are existing power lines that the plant will plug into. The plant profile will be behind terrain to Mountain House and the noise of operation will not affect Mountain House.
 - ❖ Therefore, all of the negative environmental factors cited by the study that create a drop in property value within two miles of the plant will not exist in the case of the Mariposa Energy Project.
- The energy plants in the study were comprised of the 92 large power plants built nationally between 1993 and 2000. Only one of those plants was built in California. The majority of the plants were built on the east coast of the United States or the Mississippi River watershed. It should be assumed that California property values very rarely follow trends of property values east of the Mississippi.
- The housing values used in the study were those values offered to Census workers during the year 2000 Census and then compared to year 1990 Census reported values. The values were not actuarially collaborated. The housing values in the Census blocks in which new power plants were built were not compared to surrounding Census block housing values.
- The curves depicting the change in property values were not well enough defined to determine exact rates of change in values and the shape of the mathematical curves became much less reliable for determining land value changes at two miles and greater from the new plants.

Since the study itself states that the curves are not well enough defined to determine exact percentages of land value changes there are in the proximity of new power plants it would seem unreasonable for the local comments to assume that a seven percent change will occur in Mountain House. Since Mountain House is beyond the two mile radius of the proposed power plant site, it is equally unreasonable, according to the study, to assume a worst case drop in property values.

The study makes the assumptions that all of the decrease in property value in close proximity to a new power plant is due to negative factors that will not occur in Mountain House for the Mariposa Energy Project. Further, the majority of the study was on power plants on the eastern seaboard or the Mississippi River Valley which generally have different land value trends than does property in California.

Given the above quick review of the Land Value study, the cost of becoming an expert in the environmental factors associated with the Mariposa Energy Project, and the expected tax revenue streams associated with property value changes, Staff cannot recommend that the Board could fund an expert study of the Mariposa Energy Project environmental project, defeat the project utilizing expert scientific knowledge and recoup the funds expended in the process with a higher revenue stream.

STATE OF CALIFORNIA

Energy Resources Conservation
and Development Commission

Application for Certification for the)
MARIPOSA ENERGY PROJECT (MEP)) Docket No. 09-AFC-3
)
)
_____)

PROOF OF SERVICE

I, Karen A. Mitchell, declare that on January 21, 2011, I served the attached *Applicant's Rebuttal Testimony* via electronic and U.S. mail to all parties on the attached service list.

I declare under the penalty of perjury that the foregoing is true and correct.



Karen A. Mitchell

SERVICE LIST
09-AFC-3

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