

CALIFORNIA ENERGY COMMISSION

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SACRAMENTO, CA 95814-5512



November 4, 2011

Clay Jensen, Senior Director
BrightSource Energy, Inc.
1999 Harrison Street, Ste. 2150
Oakland, CA 94612

DOCKET**11-AFC-2**

DATE Nov 04 2011

RECD. Nov 04 2011

RE: HIDDEN HILLS SOLAR ELECTRIC GENERATING SYSTEM (11-AFC-2), DATA REQUESTS, SET 1B (#51-76)

Mr. Jensen:

Pursuant to Title 20, California Code of Regulations, Section 1716, the California Energy Commission staff seeks the information specified in the enclosed data requests. The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

This set of data requests (Set 1B, #51-76) is being made in the areas of Biological Resources (#'s 51-73), Land Use (#'s 74-75) and Socioeconomics (# 76). Written responses to the enclosed data requests are due to the Energy Commission staff on or before December 5, 2011, or at such a later date as may be mutually agreeable. Subsequent sets of Data Requests (Set 1C) will contain questions for other technical disciplines, including additional Biological Resource questions and Cultural Resources. Also, please take notice that Alternatives Data Requests Set 1A (#'s 15-16) will be supplanted by forthcoming data requests in Set 1C, and therefore no response is necessary.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, you must send a written notice to both the Committee and me within 20 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time, and the grounds for any objections (see Title 20, California Code of Regulations, Sec.1716 (f)). If you have any questions, please call me at (916) 654-4894 or email me at mike.monasmith@energy.state.ca.us.

Sincerely,

Mike Monasmith
Project Manager

cc: Docket (11-AFC-2)
Proof of Service List

Technical Area: Biological Resources

Authors: Amy Golden, Joy Nishida, Carol Watson

GOLDEN EAGLE

BACKGROUND: Due to recent changes in the U.S. Fish and Wildlife Service's (USFWS) survey protocols and management of golden eagle, staff needs additional information on the occurrence of golden eagle nests within the project area. The applicant's golden eagle surveys provided in Appendix 5.2D of the AFC did not completely follow the most recent survey protocol for this species, *Interim Golden Eagle Inventory and Monitoring Protocols and other Recommendations* (Pagel et al 2010). Staff contacted USFWS Migratory Bird Program staff (Heather Beeler) on September 6, 2011, and learned that helicopter surveys were highly recommended for this project and if there were conflicts with bighorn sheep lambing season, helicopter surveys could be flown prior to the lambing season to ensure all potential eagle nests are located. Staff also learned that upon completion of the helicopter survey, ground surveys could be conducted for the identified nest locations. Heather Beeler also indicated the applicant's golden eagle surveys included in Appendix 5.2D suffice as a preliminary, reconnaissance-level survey effort but are not thorough enough to draw any conclusions about eagle use of the project area during the breeding season or throughout the year. At staff's request, the applicant contacted Heather Beeler on September 7, 2011, to clarify aerial and ground survey needs and appropriate survey timing for golden eagles for this project.

Based on consultation with resource agencies, previous Energy Commission siting cases for large solar thermal projects in the Mojave Desert have considered a cumulative impact radius of 140 miles from the project site to golden eagle territories, since the local golden eagle population is defined as eagles that occur within the average natal dispersal distance of the nests under consideration (Pagel et al 2010). Heather Beeler also indicated that observational points are suggested for golden eagle migration data in which observers watch for golden eagle activity from fixed locations for a minimum of two hours to assess occurrence and habitat use of the project area by golden eagles; observational points are also useful to assess general raptor habitat use in the project area.

The following data requests are based on the preliminary agency conversations and guidance included in Records of Conversations provided by the applicant during Data Adequacy review (California Department Fish and Game (CDFG), Jeff Villepique; Sacramento USFWS, Heather Beeler; Ventura USFWS, Ashleigh Blackford; Nevada Department of Wildlife, Brad Hardenbrook)).

DATA REQUESTS

51. Please provide staff and the resource agencies a draft Golden Eagle Study proposal that identifies the appropriate month(s) to conduct helicopter surveys for golden eagles during fall 2011 or winter 2012 so the surveys do not conflict with the start of Nelson's bighorn sheep (BHS) lambing season in the Nopah Range, Kingston Range, and surrounding ranges. Please also identify the appropriate time to conduct follow-up ground surveys of all potential golden

Please also include a list and the resumes and qualifications of surveyors/observers proposed to conduct these surveys. The surveyors/observers must meet the qualifications specified in Pagel et al 2010, see Observer Qualifications. Please provide the information to staff for review, with copies to USFWS.

52. Once the agencies have approved the study proposal and the fall 2011 helicopter survey(s) has been completed, please provide staff a fall 2011 helicopter survey report that will include the “minimum data collected at known golden eagle territories” identified in Pagel et al 2010 (See Section IX, Documentation and Accepted Notation). Once winter/spring 2012 ground surveys have been completed, please provide staff a complete Golden Eagle Study Report.
53. Pagel et al 2010 states that “prior to initiating inventory efforts, project proponents should first assess all existing and historical data available on eagles contained by and within 4 to 10+ miles of the areas slated for development...”. Please provide staff the results of a literature review search (museum records, consultation with resource agencies, local birding experts and organizations) of golden eagle nest territories (both historic and active) that may occur in the project area.

EFFECTS OF POWER TOWERS ON AVIAN SPECIES

BACKGROUND: The potential for large solar thermal projects to impact avian species protected under the Migratory Bird Treaty Act is a concern to the resource agencies. The USFWS Regional Migratory Bird Program staff has indicated there is concern about the effects of large power tower projects to birds, bats, and eagles due to the potential for direct take from the super-heated air surrounding the tower and indirect take due to loss of foraging habitat. The USFWS Region 8 has issued interim guidelines¹ on the development of Avian and Bat Protection Plans and indicate “...of concern are the cumulative effects of renewable energy projects in initiating or contributing to the decline of some bird and bat populations, as well as other affected species...”

The applicant performed fixed avian point count surveys utilizing three, east-west trending transects through the project site from March 23rd to April 14th 2011. In Data Adequacy Supplement A, the applicant indicated that the potential for effects to migrating birds is expected to be small (section 6 page 12) since birds typically migrate at night at an altitude above the ground structures. Appendix 5.2H, Avian Point County Survey Report, identified a few species that are likely migrant birds moving through the project area, including LeConte’s thrasher and dusky flycatcher. The AFC and supplements do not discuss the occurrence of migratory bird corridors, wintering bird

¹ USFWS, Region 8, Interim Guidelines for the Development of a Project-specific Avian and Bat Protection Plan for Solar Energy Plants and Related Transmission Facilities (USFWS Region 8 September 2010).

stopover sites, or Important Bird Areas in the project area. Supplement A (page 12) states that “bird strikes are expected to be rare due to the absence of migratory pathways, ridge tops, and concentrations of waterfowl” although provides no reference for such findings. Staff needs additional information on migratory bird species presence in the project area and habitat use of the project site in order to establish an adequate environmental baseline and to determine the project’s potential for impacts to migratory birds.

DATA REQUEST

54. Please provide staff information on the occurrence of Important Bird Areas, migratory bird flyways, and large open-water nesting or migratory stopover sites in the project area. Please consult with local or regional bird experts including the local Audubon group, and/or Point Reyes Bird Observatory staff on available passerine point count data for breeding birds or migrant bird species that occur in the project area and provide that data, if available.

EFFECTS OF POWER TOWERS ON BAT AND BIRD SPECIES

BACKGROUND: In the AFC and two supplements, the applicant addresses the potential for occurrence and project impacts to four bat species, two of which are BLM Sensitive and California Species of Concern, the pallid bat and Townsend’s big-eared bat. The applicant identifies the site as supporting potentially suitable night-time foraging habitat for these species, but indicates the likelihood for use of the site for foraging is low due to distance of the project site from roost site occurrences being greater than their known foraging distances. The applicant states that bats or their sign were not observed during field surveys and the site does not provide suitable bat roost habitat, but does not describe the types of bat surveys conducted or how the determination was made that roost habitat does not occur on the project site. The applicant relied primarily on CDFG’s California Natural Diversity DataBase (CNDDB) occurrence information although that bat occurrence information may not be very complete since bat survey information is not commonly reported to the CNDDB. Four other special-status bat species identified as occurring within the Northern Eastern Mojave (NEMO) plan area were not addressed by the applicant as potentially occurring and include the occult little brown bat, western mastiff bat, spotted bat, and California leaf-nosed bat which are also identified as California Species of Concern.

Staff needs to analyze the potential for project impacts to roosting and foraging habitat of special-status bats. The applicant has indicated due to lack of roost habitat and low likelihood to forage onsite, impacts are expected to be less than significant and no mitigation would be necessary for special-status bat species. Based on a reconnaissance-level site visit performed by staff in March 2011 and review of aerial photography, staff believes the orchard trees and abandoned home structures located along the southern portion of the project may provide potential bat roost habitat. Based on a conference call between staff and other resource agencies on October 20, 2011, BLM field staff recommends two years of acoustic collection data to provide baseline data for projects on bat species occurrence and habitat use within the project area. Staff believes the site and surrounding area may provide bat roost and foraging habitat and a

more in-depth field surveys and data are needed to determine an environmental baseline for determining the project's potential for impacts to special-status bats. While 2 years of data are requested, this will not impact the timeline of the staff's assessment documents. As mentioned previously, the USFWS Regional Migratory Bird Program has indicated there is concern about the effects of large power tower projects to birds, bats, and eagles due to the potential for direct take from the super-heated air surrounding the tower and indirect take due to loss of foraging habitat. The USFWS Region 8 has issued interim guidelines² on the development of Avian and Bat Protection Plans and indicate "...of concern are the cumulative effects of renewable energy projects in initiating or contributing to the decline of some bird and bat populations, as well as other affected species."

The applicant claims that since the power plant would operate during the day, the potential for impacts to bat species foraging at night over the site is low. Staff needs to analyze the potential for direct and indirect impacts to special-status bats (and migratory bird species) from the project's two 750-foot tall power towers and the heat that will be emitted from the towers; however, the applicant has not provided temperature data expected to be emitted by the towers and over the mirror field.

DATA REQUESTS

55. Please describe the bat surveys that have been conducted to date and how the determination was made that no roost habitat occurs within the site. Please perform an assessment of bat roost habitat within the site and immediate surrounding areas, specifically the abandoned orchards and residential structures, and provide an assessment of the likelihood for bats foraging on site.
56. Please conduct one year of acoustic bat surveys within the site beginning in November 2011. Please coordinate with the resource agencies on the appropriate placement of acoustic unit(s) within the site; report quarterly findings to staff and copy the BLM, CDFG, and UFWS with the information. Once quarterly results of the first year's acoustic survey data becomes available, staff may subsequently request additional seasonal data.
57. Please provide staff data (developed using Pro E, Solid Works or other equivalent 3D modeling package) showing ambient temperature data for heat emitted from each tower over a 24-hour period. The data should reflect the average temperature of each quarter day, and factoring in seasonal weather changes (4 Models) over a 24-hour period at specific heights and distances from the tower. Example: Q1 if average temperature is a high of 80 and a low of 34. Based on 1-hour intervals, state the temperature at the top of the tower, and extending outward at reasonable, regularly occurring heights and distances. Please provide staff both a model and to-scale renderings shown in top down and side view.

² USFWS, Region 8, Interim Guidelines for the Development of a Project-specific Avian and Bat Protection Plan for Solar Energy Plants and Related Transmission Facilities (USFWS Region 8 September 2010).

WESTERN BURROWING OWL

BACKGROUND: The applicant performed burrowing owl surveys concurrently with desert tortoise surveys and reported the results of field surveys for both of these species in one report, Appendix 5.2 F (Desert Tortoise Survey Report). Burrowing owls were identified during field surveys (at least 1 owl and 8 active owl burrows) and the applicant provided field survey forms for these surveys in Data Adequacy Supplement B. However, Appendix 5.2 F and the field data forms do not indicate that Phase II (burrow survey) or Phase III (burrowing owl surveys, census, and mapping) surveys were performed in accordance with the California Burrowing Owl Consortium survey protocol and mitigation guidelines (CBOC 1993). The applicant indicated in a biology workshop on October 21, 2011, that Phase I and Phase II surveys were performed for burrowing owl and the most appropriate time for conducting Phase III season surveys would be during the peak nesting season, April 15 to July 15, per CBOC 1993 survey guidelines.

The burrowing owl survey protocol for burrowing owl (CBOC 1993) calls for breeding season surveys and a census map (Phase III surveys) if burrows or burrowing owls are recorded during field surveys. Phase III burrow census surveys consist of four site visits on separate days to observe owl activity at burrows identified during the initial site visit. Staff needs Phase III burrow survey data to determine how burrowing owls are using the site, to perform an impact analysis, determine appropriate mitigation, and ultimately develop a condition of certification for this species.

DATA REQUESTS

58. As indicated by the applicant, please provide staff a summary report documenting the results of the Phase I and Phase II burrowing owl surveys that have already been conducted for the project, following Phase IV reporting guidelines (CBOC 1993).
59. Please perform focused burrowing owl Phase III surveys that would include at least four site visits to burrows with sign and provide a map of occupied burrows per the burrowing owl survey protocol (CBOC 1993). As indicated in this survey protocol, a nesting season survey can begin as early as February 1st of any year. Following the completion of the Phase III surveys, please provide staff a summary report following Phase IV reporting guidelines (CBOC 1993).

SPECIAL-STATUS PLANT SPECIES

BACKGROUND: Eight special-status plant species have been found on-site, some in very large numbers and densities throughout the project site; seven of these plants are identified by the California Native Plant Society as List 2 species and one is a List 1B species, Pahrump Valley buckwheat. An additional plant species, Nye milk-vetch (*Astragalus nyensis*), was previously not known to occur in California, was also found on-site. In addition to focused botanical surveys performed on-site, the applicant also performed off-site plant surveys in areas near Pahrump, Chicago, and Stewart valleys in

California and Nevada although those results have not been provided to staff, to date. The applicant stated in Data Adequacy Supplement A (Response 7, page 15) that no significant impacts would occur to special-status plant species since avoidance measures would be implemented and that no further mitigation would be required, but did not identify which impact avoidance and minimization measures would be implemented.

In Data Adequacy Supplement B (Response B7, page 12), the applicant claimed impacts to special-status plant species would not be significant but includes a “general discussion of impact avoidance and minimization measures.” The applicant also claims that the primary impact avoidance measure to special-status plant species is the project’s use of taller solar power towers, which reduces the project’s impact footprint (Response B5, page 7). Staff believes that since an adequate impact analysis of special-status plant species has not been provided by the applicant, in both a site-specific and regional context, it is premature to assume that impacts would not be significant. Staff needs all the field survey information in order to perform an analysis of the project’s impacts to special-status plants and to determine if impacts may be significant and if additional mitigation is necessary.

DATA REQUESTS

60. Please provide an on-site impact analysis of the project’s impacts during construction and operation for each of the nine plant species mentioned above that were found during focused botanical surveys. As part of this analysis, overlay the project’s site plan over the plant populations that were mapped within the site and provide staff the number of each of the nine plant species that would be directly lost due to project construction. Please provide staff a map(s) showing the special-status plant occurrences (including Nye milk-vetch) with the site plan overlay, identifying those occurrences that will be directly impacted by the project. Also, please identify any special-status plant avoidance areas that may be set aside as an on-site preserve/avoidance area for special-status plant species.
61. Please also identify herbicide and soil stabilizer drift control measures, erosion and sediment control measures, and monitoring and reporting requirements for any sensitive plant avoidance area to be implemented during construction. Please also explicitly identify design measures (other than the use of 750-foot tall power towers to minimize project footprint impacts) incorporated into project design and intended to minimize impacts to special-status plants.
62. For each of the nine plant species identified above, please provide staff a species-specific assessment of proposed mitigation options such as seed collection, transplantation, or payment into an in-lieu mitigation fee program.
63. As indicated in the AFC, please provide staff a survey report including maps for fall 2010 botanical surveys for off-site botanical surveys performed near Pahrump, Nevada, Chicago, and Stewart valleys in California and Nevada.

DESERT TORTOISE

BACKGROUND: The proposed project site contains desert tortoise detections and sign, as stated in the AFC and supplements A and B. The applicant and staff agree that the site provides suitable desert tortoise habitat.

Cumulative and connectivity impacts to the local and regional population of desert tortoises from the proposed project and other development in the region are concerns and need to be discussed more fully. Mitigation must address solutions to cumulative and habitat connectivity impacts. According to the AFC Appendix F, critical habitat for the tortoise is located approximately 24 miles away from the project. Staff would like additional information on the quality of the desert tortoise habitat adjacent to the project, including any potential habitat linkages or corridors, to analyze project impacts in a regional context.

DATA REQUESTS

64. Section 5.2.7.8 of the AFC dismisses the possibility of the project site to serve as a wildlife corridor. Please provide copies of reference materials and data used to develop this conclusion. Please identify which agencies were consulted for information, which data sets were used, and which local or state experts were consulted when drafting this section of the AFC.
65. Please provide wildlife movement and/or wildlife corridor maps and textual description for desert tortoise. Please provide an assessment of the effects the proposed project will have on wildlife movement and corridors.

BACKGROUND: A tortoise translocation plan is required by the USFWS when desert tortoise must be moved from the project site. The goals of this relocation/translocation effort should be to:

- relocate/translocate all desert tortoises from the project site to nearby suitable habitat;
- minimize impacts on resident desert tortoises outside the project site;
- minimize stress, disturbance, and injuries to relocated/translocated tortoises; and
- assess the success of the relocated/translocated effort through monitoring.

DATA REQUEST

66. Please provide a draft Desert Tortoise Translocation Plan that incorporates the most recent guidance from the Bureau of Land Management (BLM), United States Fish and Wildlife Service (USFWS), and California Department of Fish and Game (CDFG). Please discuss translocation procedures and guidance in the plan, including a description of clearance survey protocol and desert tortoise transportation and release procedures, and develop a post-translocation monitoring and reporting plan. All methods discussed in the plan should be consistent with the *Guidelines for Handling Desert Tortoises During Construction Projects* (Desert Tortoise Council 1999) or the most recent handling guidance provided by the USFWS.

Generally, the translocation plan should include the following information:

- a. Identification of potential translocation sites based on the presence of suitable soils, vegetation community, vegetation density and abundance, perennial plant cover, forage species, geomorphology, and slope;
- b. Surveys of resident populations at proposed translocation sites, including health assessment sampling and attaching transmitters to individuals;
- c. Description of measures that would be implemented to prevent translocated desert tortoise entering the site or other hazardous areas;
- d. Description of quarantine facilities to provide individual quarantine for all tortoises prior to translocation;
- e. Description of health assessments that would be performed by qualified biologist or veterinarian on each tortoise prior to translocation;
- f. A treatment/disposition plan for each tortoise, including those unfit for translocation;
- g. Description of translocation procedures, including timing (e.g., time of year, time of day);
- h. Description of post-translocation monitoring and adaptive management activities;
- i. Description of methods used to mark translocated tortoises and fit them with transmitters so that they can be located and identified during post-translocation monitoring;
- j. Description of methods used to mark existing tortoises in the receiving population and fit them with transmitters so that they can be located and identified during post-translocation monitoring; and
- k. Description of how data would be compiled, synthesized, and reported to USFWS, CDFG, BLM, and Energy Commission staff.

The translocation site(s) must at a minimum:

- a. be sited in accordance with all agency guidelines with respect to choice of land manager, land owner, and land manager;
- b. satisfy the requirements of the federal Endangered Species Act Section 7 lead (BLM) and USFWS; and
- c. have no proposed rights-of-way or other encumbrances at the time of its establishment.

BACKGROUND: As part of required project permitting, a federal Endangered Species Act Section 7 consultation must occur to address impacts to the Federally-listed desert tortoise. The Ventura Office of USFWS has been designated to handle the Section 7 consultation with the BLM Southern Nevada District Office, the designated federal lead agency. The federal lead agency will develop a Biological Assessment (BA) for the project and submit it to the USFWS as part of the consultation process.

DATA REQUEST

67. Please coordinate with BLM Southern Nevada District office to prepare and submit a BA to the USFWS per federal guidelines, available from Ray Bransfield at the USFWS Ventura Field Office. Please also provide a copy of

the BA to the Energy Commission staff when the BA is deemed complete by the USFWS.

BACKGROUND: Surveys and mapping of desert tortoise sign are provided in the AFC and supplementary reports. As part of staff's analysis, the conformance of the survey to established federal protocol, as well as calculations applied to derive final projected tortoise density onsite, need to be validated by independent analysis. Additionally, the results of the surveys, which ultimately affect the tortoise translocation plan and mitigation measures, must all be reviewed and approved by the USFWS, BLM, CDFG, and Energy Commission staff.

DATA REQUESTS

68. Desert tortoise survey results, including tortoise sign information, are to be mapped at a scale of 1:100. Please provide a revised AFC Figure 2, page 17 at the recommended 1:100 scale.
69. Mapping of tortoise field survey results additionally must comply with USFWS guidance regarding burrow class number, a cross-reference to the corresponding transect forms, and population distribution information (sex ratios and age classes) if available. Please provide a revised Figure 2 of Appendix 5.2F (Desert Tortoise Survey Report) that includes this required information. Please also provide a copy of all desert tortoise transect forms to the Energy Commission staff for review and validation.
70. Table 1, Desert Tortoise Sign and Location (located within Appendix 5.2F), does not include burrow classification information. Please provide a revised Table 1 that includes burrow classifications.
71. The desert tortoise survey report, while presenting survey details, stops short of providing a full assessment of the number, age class, sex ratio, or other such analysis of the tortoise presence and usage of the site. Please apply the tortoise survey correction formula used to correct survey error, present a final estimate of the tortoise density for the project site, and note the probability (Pa) and variance (Pd) coefficients selected, and present the information in a table.
72. The table on page 5 of the desert tortoise survey report (Appendix 5.2F) begins this assessment. Please provide an updated table that identifies projected tortoise density, within both the upper and lower 95% confidence interval.

BACKGROUND: As part of its authority granted by the Warren-Alquist Act, the Energy Commission has in-lieu permitting authority for local and state agencies. This commonly includes the Section 2081 Incidental Take Permit issued by CDFG. As discussed in the September 2011 Supplement, the applicant intends to pursue a 2081 Incidental Take Permit through the Energy Commission's siting process. Energy Commission staff will coordinate with CDFG and the applicant to ensure that the Commission's Decision, as part of its in-lieu permit authority, contains all necessary requirements and meets all state standards and guidelines.

DATA REQUEST

73. Please prepare and submit an Incidental Take Permit application to the Energy Commission staff, and provide copies concurrently to the CDFG (Bishop Filed Office) for review.

Technical Area: Land Use

Author: Christina Snow

BACKGROUND

The Application for Certification (AFC) Land Use Section 5.6 refers to the Inyo County General Plan and Solar and Wind Renewable Energy General Plan Amendment (REGPA) as the primary planning document applicable to the project site. The REGPA provided the basis for approvals of solar or wind renewable energy facilities and established policies to encourage development of renewable energy in overlay zones in any zoning district under Title 18 of the Inyo County Code. The proposed project was identified by the REGPA as being within the Charleston View overlay zone. Projects that were within these overlay zones were subject to additional site-specific studies and appropriate environmental review according to Inyo County Code Title 21, Renewable Energy Development.

On September 6, 2011, the Inyo County Board of Supervisors rescinded the County's REGPA, effectively eliminating the overlay zone that was discussed in the AFC. As a consequence, the land use map in the AFC does not clearly identify the land use and zoning designations for the project site and surrounding area. Staff's review of the Inyo County website's general plan land use and zoning designations for the area appears to indicate a general plan designation of Open Space and Recreation, and a zoning of Open Space with a 40-acre minimum parcel size. However, staff was unable to clearly identify the zoning and general plan designations for the proposed project site. Also, as a result of the revocation of the REGPA, the proposed project would need to be analyzed for land use consistency and compatibility with the existing zoning and land use designations. In order for staff to prepare the land use analysis, additional information is needed as follows.

DATA REQUESTS

74. Please provide an updated legible map of the project site and surrounding land uses within one mile of the proposed site, on which existing land uses, jurisdictional boundaries, general plan designations, specific plan designations, and zoning have been clearly delineated (including the adjacent Charleston View area).
75. Please provide a discussion of the proposed project's compatibility with present and future general plan designation(s) and zoning, including conformity with any long-range land use plans adopted by any federal, state, regional, or local planning agencies.

Technical Area: Socioeconomics

Author: Lisa Worrall

IMPLAN INPUT-OUTPUT MODELING

BACKGROUND: The AFC discusses the impacts to the local economy and employment, specifically the direct, indirect and induced economic impacts from project construction and operation. Key factors used to assess potential project construction and operation economic impacts include the project's capital cost, cost for local materials and supply purchases, total construction and operation/maintenance payroll, and direct construction and operation employment. These key factors are the direct inputs used to calculate secondary economic impacts (induced and indirect impacts) using an IMPLAN input-output model. Two models were run, one specific to Inyo County in California and another specific to the two-county region of Clark and Nye counties in Nevada (pgs. 5.10-24 & 5.10-28 and 5.10-25 & 5.10-29, respectively).

The 2010 California Employment Development Department (CEDD) data, as presented in the AFC shows employment in Inyo County was highest in the government and services sectors, with an employment share of about 42 percent and 32 percent, respectively. The trade wholesale and retail sector follows with a 14 percent share of employment. Construction, manufacturing, and the transportation, warehousing and utilities sectors all have an employment share of about 2 to 3 percent.

Inyo County contains one incorporated city (Bishop) and 65 small unincorporated communities. Bishop has a population of 3,879 people; the county seat is located at Independence, which has a population of 669 people (2010 US Census). The towns of Bishop and Independence are about 248 and 208 miles driving distance respectively, northwest from the project site.

Inyo County staff has expressed concerns that the IMPLAN model results exaggerate the project's positive economic impacts in Inyo County. For example, Inyo County has little in the way of retail and manufacturing where project construction and operation dollars could be spent. Assumptions regarding this spending would be used by the applicant to indicate the project's direct economic impacts. Secondary employment effects would include indirect and induced employment from the purchase of goods and services by firms involved with construction, and induced employment from construction workers spending their income within the county. As shown using 2010 CEDD data, the lack of retail and manufacturing opportunities in Inyo County would support little in the way of the purchase of goods and services by firms involved with construction, and little in the way of induced employment.

Given Inyo County's concerns, Energy Commission staff contacted an economist in the Fuels and Transportation Division of the Energy Commission to review the discussion and model output results provided in pages 5.10-24 to 5.10-30 of the AFC. The economist concluded that the inputs used by the applicant seem reasonable, but suggested obtaining a breakdown of the operation and construction budgets for Inyo County to confirm the inputs used in the IMPLAN model. So that staff can more accurately assess the economic and employment impacts of the project, additional information is needed, as identified below.

DATA REQUEST

76. Please provide a breakdown of the HHSEGS construction and operation budgets for Inyo County. If a reassessment of the budgets indicates that new inputs would result, please re-run the IMPLAN model using the revised direct input assumptions and provide the revised indirect and induced impacts.



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV**

**APPLICATION FOR CERTIFICATION
FOR THE *HIDDEN HILLS SOLAR ELECTRIC
GENERATING SYSTEM 1 & 2 PROJECT***

**DOCKET NO. 11-AFC-2
PROOF OF SERVICE**

APPLICANT

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DECLARATION OF SERVICE

I, Mineka Foggie, declare that on, November 4, 2011, I served and filed copies of the attached Data Requests, Set 1B, dated November 4, 2011. The original document, filed with the Docket Unit or the Chief Counsel, as required by the applicable regulation, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [www.energy.ca.gov/sitingcases/hidden_hills/index.html].

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

(Check all that Apply)

For service to all other parties:

- ☒ Served electronically to all e-mail addresses on the Proof of Service list;
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AND

For filing with the Docket Unit at the Energy Commission:

- ☒ by sending an original paper copy and one electronic copy, mailed with the U.S. Postal Service with first class postage thereon fully prepaid and e-mailed respectively, to the address below (preferred method); **OR**
- ☐ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT

Attn: Docket No. 11-AFC-2
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

- ☐ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
mlevy@energy.state.ca.us

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.