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OPENING BRIEF OF INTERVENOR COUNTY OF SAN BERNARDINO

Introduction

The County of San Bernardino (“County”) appreciates the opportunity to comment upon the evidence that has been presented in this proceeding before the Energy Resources Conservation and Development Commission (“Commission”) to certify the proposed Ivanpah Solar Project Power Plant (“Project”). The County also wishes to thank the Commission and the California Energy Commission staff (“Staff”) who have worked so tirelessly to accommodate a schedule that can only be described as daunting. However, the forced time-frames for the processing of this application have revealed what appears to be the manifest weakness of an enormous project that is being rushed through the approval process to meet an artificial funding deadline.

The County also wishes to thank the Commission for allowing the County to intervene in this process. Although the juxtaposition of Federal lands within the County makes for some interesting and challenging jurisdictional and legal issues, the fact that the Project is located completely within the boundaries of this County means that the

Project's impacts will be felt uniquely by residents of the County, while they will enjoy only tangentially its benefits.

At the outset, the Commission should understand that the County is not opposed to renewable energy projects. On the contrary, the County has demonstrated its commitment to environmentally friendly development in at least two notable regards. First, in March 2007, the County adopted its updated General Plan (Exhibit 1100)¹ and was promptly sued by the California Attorney General for the County's alleged failure to adequately analyze the General Plan's impacts on global warming. This lawsuit was resolved in August 2007, by a groundbreaking and well-publicized settlement agreement² that obligated the County to adopt a greenhouse gas emissions reduction plan ("GHG Plan"). The development of the County's GHG Plan and of the attendant environmental review is currently underway, with adoption and certification estimated for sometime in calendar year 2011. The County believes that its GHG Plan will provide a cutting edge approach to dealing with the interplay of local and regional land use issues and their impact upon the state-mandated reduction of greenhouse gases. Of necessity, renewable sources of energy will be a significant part of the County's GHG Plan.

¹ Also accessible at http://www.co.san-bernardino.ca.us/landuseservices/general_plan/Default.asp

² http://ag.ca.gov/cms_pdfs/press/2007-08-21_San_Bernardino_settlement_agreement.pdf#xml=http://search.doj.ca.gov:8004/AGSearch/isysquery/ff1eabe1-07b2-48f4-af12-ce4f1a1884b2/1/hilite/

The second indicator of the County's commitment to striking a balance between economic growth and responsible environmental stewardship, was the County's adoption of "Green County San Bernardino," also in August 2007³. This was designed to spur the use of "green" technologies and building practices among residents, business owners and developers in the County through support of "green" building practices, resource conservation, and notably for purposes of this discussion, renewable energy.

In addition, to help expedite the review of development on public lands within the County's boundaries, the County entered into a Memorandum of Understanding ("MOU") (Exhibit 1101)⁴ with the Bureau of Land Management ("BLM"), which MOU is referenced liberally at various locations in the Final Staff Assessment and Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan Amendment ("FSA"). This document sets forth a cooperative process but in no event should be construed as blanket County endorsement for any and all renewable energy projects within the BLM's jurisdiction, including the instant matter. The County has retained its full discretion in any involvement it may have in these projects.

³ <http://www.sbcounty.gov/sbco/cob/>

⁴ <http://www.sbcounty.gov/sbco/cob/AGo31808/agenda.pdf>

But in striking this balance, the plentiful open desert lands within the County's boundaries, be they within private ownership or within the public domain, should not be viewed as convenient repositories of hastily conceived, expediently reviewed, and rashly constructed renewable energy projects whose environmental impacts will be both significant and long-lasting, if not permanent. And the fact that these projects may qualify for this or that time-sensitive economic incentive should not be used as an excuse for short-cutting the design and analysis that large projects in environmentally sensitive areas warrant. No doubt, these financial incentives will come and go, depending upon prevailing economic conditions and political winds, but again, the impacts upon properties within this County and upon County residents will be enduring.

Moreover, these impacts will be intensified because of the significant number of renewable energy projects under application within the County's boundaries. The FSA identifies 66 solar projects and 63 wind project applications, with a total overall area of over one million acres within the California Desert Conservation Area, with many of those projected to be sited within the County's boundaries. (FSA 6.12-33)

With these introductory comments serving as a backdrop for the County's overarching concerns, we provide the following comments and arguments as to specific topics raised in the hearing, recognizing that

the analysis of many discrete areas necessarily crosses into others. The order of these concerns is not indicative of any relative importance attached by the County but generally follows the order of issues established in the FSA.

Cumulative Scenario

Under the California Environmental Quality Act (“CEQA”) Guidelines, “a cumulative impact consists of an impact which is created as a result of the combination of the Project evaluated in the EIR together with other projects causing related impacts” (14 California Code of Regulations (“Cal Code Regs”) §15130(a)(1)). Cumulative impacts must be addressed if the incremental effect of a project, combined with the effects of other projects is “cumulatively considerable” (14 Cal Code Regs §15130(a)). As further described, the incremental effects are to be “viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects” (14 Cal Code Regs §15165(a)(3)).

As previously noted, the FSA lists 66 solar energy projects covering over 600,000 acres and an additional 63 wind energy projects covering over 450,000 acres within the Barstow, El Centro, Needles, Palm

Springs, and Ridgecrest Field Offices of the BLM. (FSA, Table 1, page 5-11)

It is recognized that in reality, not all of these projects will be constructed. But, with the financial incentives being pursued by the applicant for this Project, which incentives or similar ones would arguably be available to other renewable energy proponents; it is likely that a significant number of them will be constructed, with each of such projects creating similar impacts to those reasonably expected of the Project.

In addition, the County concurs with Staff that the cumulative effect of the Project will be enhanced with the required transmission line upgrade, which Staff concludes could cause an adverse cumulative impact when combined with the Project and other potential energy projects. (FSA 5-23)

The cumulative impacts of the Project are also multiplied by the required mitigation which is an integral part of the Project. The 4,073 acres of the original Project converts to almost six and one half square miles, and even considering the reduction to 3,582 acres as proposed in the biological mitigation proposal referred to as Mitigated Ivanpah 3, the Project still covers nearly six square miles. Mitigating for biological impacts at a three to one ratio, the mitigation land required is an additional nearly 20 square miles. By any standard, the portion of the Mojave Desert within California is vast, but this is but one of numerous renewable energy

projects making its way through the approval process. Once these mitigation lands are set aside, they cannot be used to mitigate other projects. Also of significance to the County, they cannot be developed for any revenue producing enterprise. Thus, the revenue generation for the County and its citizens from thousands upon thousands of acres is forever impaired.

In addition, the set-aside of a tract of land of this dimension is unidentified, but should require its own CEQA (and National Environmental Policy Act (“NEPA”)) analysis.

In short, the Project, even as reduced as proposed in Mitigated Ivanpah 3, has significant and unavoidable cumulative impacts, as stated in the evidentiary hearing by William Kanemoto (“Kanemoto”):

Staff concluded that the Project, in combination with foreseeable future projects, would have significant, unavoidable, cumulative visual impacts of two kinds. Cumulative impacts within the immediate project viewshed essentially foreseeable future projects in the Ivanpah Valley. And cumulative impacts of foreseeable future solar and other renewable energy projects within the southern California desert and Mojave Deserts. (Transcript of Evidentiary Proceedings, Testimony of William Kanemoto, December 14,

Biological Resources

Judging solely on the time allotted during the evidentiary hearing, perhaps the most significant questions about the impacts of the Project are those raised with regard to biological resources. Except for mitigation, which will be discussed below, the County will leave to those Intervenors who presented biological evidence to engage in the full extent of argument. However, the County offers these observations/argument regarding this topic, largely grounded in the reality that the Project, if approved, will occupy an immense area of the Mojave Desert. The Project will also employ a relatively novel technology virtually untested in the Mojave Desert. For that matter, the technology is largely untested by this applicant whose apparent sole experience has been the construction of one “pilot plant” in Israel with 1600 heliostats, or less than 1% of the number of heliostats required for this Project (even as reduced for Mitigated Ivanpah 3). And, this pilot plant has been in operation for only one and a half years. (Gilon, 12/14/09, 108:25 -109:17).

⁵ References to the transcripts of the evidentiary hearing will hereafter be abbreviated by listing the last name of the witness whose testimony is being referenced, followed by, respectively, the date, page and line number(s) where the referenced testimony is located, in this fashion: [Witness], Date, Page:Line(s).

- The Project would have major impacts to the biological resources of the Ivanpah Valley, substantially affecting many sensitive plant and wildlife species and eliminating a broad expanse of relatively undisturbed Mojave Desert habitat. (FSA 6.2-1)
- Interstate 15 freeway itself is a linear project that bisects the valley (and the habitat), and the Project, angling from Interstate 15, provides another division to the habitat causing further amplified threat to the species. (Marlow, 1/11/10, 419:10 - 420:24)
- Approximately 4,073 acres of occupied desert tortoise habitat would be permanently lost. (FSA 6.2-1)
- In addition to direct loss of habitat, the Project would fragment and degrade adjacent habitat, and could promote the spread of invasive, non-native plants and desert tortoise predators such as ravens. (FSA 6.2-1)
- The mitigation for reflected light toward wildlife appears inadequate. While some effort is made in the Traffic and Transportation section to discuss the intensity of the light reflected from the power tower receivers and provide mitigation to protect human health and safety, Mitigation

Measure Bio-11 makes a lesser attempt: “Minimize Lighting Impacts. Facility lighting shall be designed, installed, and maintained to prevent side casting of light towards wildlife habitat. To minimize risk of avian collisions with the heliostat towers, only flashing or strobe lights shall be installed on these towers.” This measure appears inadequate as no follow-up monitoring is required to verify if this actually works. This is not consistent with the conservation concept of adaptive management.

As to mitigation for biological impacts, the fact that the Project is the first out of the gate should not absolve its proponents of proper analysis. The renewable energy projects for which applications have been submitted would occupy fully one million acres. Applying a similar mitigation ratio of three to one would result in the necessity to set aside an additional three million acres. As a point of reference, there are three million acres of private unincorporated lands within the West Mojave Plan area. Or put another way, a tract comprising 12,000 acres represents a full 12% of the 140,000 acres of potential desert tortoise habitat held in private unincorporated lands under County jurisdiction.

During testimony presented on January 11, 2010 (Exhibit

305), during Staff's rebuttal testimony, there ensued a discussion of an in-lieu fee mitigation program being developed by several of the resource agencies whereby a sponsor would hold the funds in various tracked accounts, which funds would then be used for acquisition, enhancement, or other actions taken to preserve the species. To the extent that the Commission can advocate for and influence the adoption of these alternative mitigation proposals, the County would be in concurrence.

Hazardous Materials Management

The County respectfully disagrees with Staff's conclusion that hazardous materials impacts would pose no significant threat. (FSA 6.4-1) It appears that not all State requirements were thoroughly researched and reviewed prior to the resultant conclusions. Although the document references the Federal Spill Prevention Containment and Countermeasures Plan, there is no reference to the State Above-Ground Petroleum Storage Act, Health & Safety Code §§ 25270 et seq. (FSA 6.4-4) Conclusions regarding air modeling need further study, particularly with regard to aqueous ammonia and sulfuric acid.

Further, there is not enough information to determine if a Risk Management Plan is required for the aqueous ammonia as per the

California Health and Safety Code. Appendix A is lacking supporting documentation for several of the chemicals that are referenced in the FSA. Further study on these and other issues are necessary before conclusions can be drawn.

Additionally, the FSA is lacking any references at all regarding the proper management of routinely generated hazardous wastes, either from a Federal or a State perspective. This needs to be addressed before conclusions can be drawn.

Land Use

CEQA requires a list of criteria that are used to determine the significance of identified land use impacts. A significant land use impact is defined by CEQA as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project.” (State CEQA Guidelines Section 15382)

The Project would be located within San Bernardino County’s Desert Region of the General Plan (Exhibit 1100). The so-called Desert Planning Region includes a significant portion of the Mojave Desert and contains 93 percent of the land in the County. As required under state law, the San Bernardino County General Plan identifies the community’s land

use, transportation, environmental, economic, and social goals and policies as they relate to land use and development, forms the basis for local government decision-making, provides residents with opportunities to participate in the planning and decision-making processes of their community, and informs residents, developers, decision-makers, and other cities and counties of the rules that guide development within the community. In short, the General Plan provides the “constitution” for development within the County.

Although cumulative impacts have been generally discussed above, the land use impacts of the Project would combine with impacts of present and reasonably foreseeable projects to result in a contribution to cumulative impacts in the Ivanpah Valley which would be significant with respect to CEQA. The County also concurs in Staff’s conclusion that the impacts of the Project would combine with the potential impacts of reasonably foreseeable renewable energy projects in the southern California Mojave desert to result in a significant and unmitigable regional cumulative impacts related to land use. (FSA 6.5-1)

The County concurs with the FSA conclusion (and Kanemoto’s supporting testimony (Kanemoto, 12/14/09, 166:16 – 167:6)) that the Project would not conform with some of the applicable goals and policies of the San Bernardino General Plan Conservation and Open Space Elements,

including: (1) Conservation Element Goal D/CO 1, which calls for preservation of scenic vistas in the County. The Project would have adverse effects on scenic vistas. (2) Open Space Element Goal OS 5, calling for the County to maintain and enhance the visual character of scenic routes in the County; and (3) Policy OS 5.2, which requires that development along scenic corridors will be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present. Based on the evidence presented, it seems difficult to conclude other than that the Project would not be compatible with the scenic qualities present in the viewshed of portions of Interstate 15 designated as a County scenic route. (FSA 6.5-1)

The Applicant's testimony on this issue does not dissuade. One of the applicant's experts, Wendy Haydon, admitted under cross-examination that the assertions in the Application for Certification ("AFC") that the Project was in compliance with the goals and objectives of the General Plan were not based on any communications with anyone from the County, but were, in effect, conclusory. (Haydon, 12/14/09, 280:7 – 281:2, "Mr. Ratliff: And you conclude in your table with the rather simple and conclusory explanation next to it, that it does so conform. Was that conclusion based on any communication from San Bernardino County about the conformity of this project with that policy? Ms. Haydon: No.")

The County urges the Commission to find that the Project does not satisfy LORS,⁶ notwithstanding the unexplained about-face on the applicability of the County's General Plan in the Final Staff Assessment Addendum ("FSA-Addendum"). At the very least, the County's General Plan Goals and Policies should inform the Commission's deliberations since the MOU provides a cooperative process between the BLM and the County when "applicant's proposals ... may result in inconsistencies with the County General Plan." (Exhibit 1101 (C)(1)(i))

Socioeconomics and Environmental Justice

The Project site is located within the jurisdiction of the San Bernardino County Sheriff's Department. (FSA 6.8-9)

While perhaps not an issue that can be fully addressed under CEQA requirements, the issue of cost of services from local governments would be an issue the County would pursue for projects under its land use jurisdiction. While the Commission may have permitting authority for this Project, it does not provide local services such as emergency services or road maintenance. If the Project is approved, these will be provided by the County and local citizens and other businesses should not bear the brunt of

⁶ Laws, Ordinances, Regulations, and Standards

subsidizing the costs of a for-profit operation such as this. Neither the applicant nor Staff has fully analyzed the costs of these services to the County or, for that matter, Clark County, Nevada. The County will prepare its own fiscal impact analysis for this Project's anticipated demand upon County services. As the Commission is well aware, the current state of the economy does not provide opportunity for local governments to provide services without compensation.

The proposed conservation of 12,000 acres of land for the desert tortoise is another economic impact to the County. Where no development is allowed, there are no jobs and only minimal property tax or payment in-lieu of taxes (PILT: Federal payments to local governments that help offset losses in property taxes due to nontaxable Federal lands within their boundaries). Also, while the traditional mitigation ratio approach requires vast acreages to be set aside as conservation lands, it remains unclear how that provides a viable habitat conservation strategy, and the resulting competition for mitigation areas could drive up land costs without increasing the effectiveness of mitigation.

It is not clear what economic loss might occur due to the impact to visual resources that may result in reduced revenues from tourism and the filming industry.

The future property tax revenue would be essentially limited to

the power plant itself, as it is believed that the heliostat arrays are exempt by statute from property tax. Because the County's PILT is capped, the County will not receive the full amount to which it is entitled and would otherwise receive if the Project site was held in private ownership. Again, the economic loss potential of the site and the mitigation lands is a socioeconomic impact not fully addressed in the FSA or the FSA-Addendum.

While the Project creates both construction jobs and permanent jobs, the FSA lacks meaningful details regarding a practical reality that most of the 90 permanent jobs will likely go to Nevada residents, which would further significantly reduce the economic benefits compared to a project located closer to the County's more urban areas. To quote: "According to AFC section 5.10 (Socioeconomics), it is anticipated that most of the operational workforce will be drawn from the City of Las Vegas within Clark County, Nevada, as well as parts of surrounding rural areas in San Bernardino County, California." (FSA 6.8-11 through 12)

And as further discussed in the FSA, the operational workers would commute as much as one hour to a power plant site from their homes rather than relocate. *Id.* There are no significant residential areas in the County within a one-hour commute, so it can be expected that most, if not all, of the operational workforce will come from Clark County,

comprising another loss of tax revenue to the County that is not mitigated.

Soil and Water Resources

From testimony elicited on January 13, 2010, (Dennis, 1/13/10, 117:11 – 118:12) the applicant has not undertaken any groundwater modeling studies to determine the impacts, recharge and pumping impacts of the Project. The County appreciates and concurs in the Staff's recommendations that the Project, if certified, should be required to comply with County Code, Title 3, Division 3, Chapter 6, Article 5 (§§ 33.06551 et seq.)⁷, titled, "Desert Groundwater Management" ("the Groundwater Ordinance"), as outlined in Mitigation Measures/Proposed Conditions of Certification Soil & Water-3, Soil & Water -4, and Soil & Water -6.

The County enacted its Groundwater Ordinance to help protect water resources in unregulated portions of the desert while not precluding its use. This article requires a permit to locate, construct, operate, or maintain a new groundwater well within the unincorporated, unadjudicated desert region of the County. CEQA compliance must be

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[http://www.amlegal.com/nxt/gateway.dll/California/sanbernardinocounty_ca/sanbernardinocountycaliforniacodeofordin?f=templates\\$fn=default.htm\\$3.0\\$vid=amlegal:sanbernardinocounty_ca](http://www.amlegal.com/nxt/gateway.dll/California/sanbernardinocounty_ca/sanbernardinocountycaliforniacodeofordin?f=templates$fn=default.htm$3.0$vid=amlegal:sanbernardinocounty_ca)

completed prior to issuance of a permit, and groundwater management, mitigation, and monitoring may be required as a condition of the permit. The ordinance states that it does not apply to “groundwater wells located on Federal lands unless otherwise specified by interagency agreement.” Groundwater Ordinance § 33.06552 (c)(8) However, the MOU provides that the BLM will require conformance with this code for all projects proposing to use groundwater from beneath public lands. This may include the applicant preparing a groundwater monitoring plan in accordance with the County’s *“Guidelines for Preparation of a Groundwater Monitoring Plan”* dated January 1998, ensuring that all onsite groundwater wells would be installed in accordance with County and submitting well completion reports to the California Department of Water Resources (“DWR”) in accordance with the DWR well completion reporting requirements. (FSA 6.9-43)

Traffic and Transportation

The Interstate 15 corridor is one of the most heavily traveled Interstate highways in the United States, as it is the only direct linkage between the 9 million people in the Los Angeles area and the entertainment center of Las Vegas. County emergency services providers

respond to almost one thousand accidents each year on that corridor, but there are few private lands or developments from which to fund the County's Fire Department and Hazardous Materials Response team. In fact, the County General Fund subsidizes the fire services for the desert region by over \$5.5 million a year, a subsidy which exists solely for the desert region and no other portions of the County.

Another traffic safety concern of the Project is the possibility that drivers who are distracted by the view of the power towers could cause even more traffic accidents. The FSA mentions some mitigation measures and monitoring for the power tower luminance. The County, California Department of Transportation ("Caltrans") and the transportation planning agency for the County, San Bernardino Associated Governments ("SANBAG"), should be included in the receipt and review of these monitoring reports. Ideally, the Commission would require a traffic safety and emergency services committee comprised of California and Nevada agencies, and the applicant would be required to reimburse the agencies for their costs.

The FSA makes an effort to predict traffic impacts but is lacking any mitigation for cumulative impacts, which are noted as significant. The FSA- Addendum is little better. A typical Environmental Impact Report under CEQA would include a detailed traffic study prepared by a traffic

engineer, analyzing all trips generated, including those from employees, suppliers and tourist stops from the Interstate 15 freeway. If this was done, perhaps mitigation measures such as offsetting work hours, on/off-ramp and street improvements could be provided. The County and SANBAG should have the opportunity to review such a traffic study and have input on required mitigation.

Visual Resources

The CEQA Guidelines define a “significant effect” on the environment to mean a “substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including . . . objects of historic or aesthetic significance.” (Cal Code Regs, Title 14, § 15382.) Appendix G of the Guidelines, under Aesthetics, lists four questions to be addressed regarding whether the potential impacts of a project are significant, and include queries whether the project would have a substantial adverse effect on a scenic vista, would the project damage scenic resources, and would the project degrade the existing visual character? The fourth inquiry is particularly relevant to this Project: Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (FSA 6.12-12)

The County concurs in the conclusions of the FSA, that construction of the Project would result in --

Panoramic elevated views of the valley ... chang[ing] from a relatively undisturbed desert floor landscape dominated by striking views of the Ivanpah dry lake bed, to an industrial, highly man-altered one dominated by roughly four square miles of mirror-arrays and [three (under the most recent amendment)] 459-foot tall solar collector towers topped with brightly lit receiver units, a large graded area, as well as light rays reflected off of ambient atmospheric dust. The mirror fields would display a high degree of visual unity due to their orientation in large-scale circular patterns of high regularity around the collector towers, lending the view a higher level of visual quality than that of many other forms of intensive development. Reflected light rays, when present, would create striking, tentlike patterns, also with high visual unity, which some viewers might consider attractive or interesting. Nevertheless, since the existing intact natural landscape is considered one of the primary attractions for visitors to these mountains, the resulting dramatic alteration of landscape character, particularly as seen from high

sensitivity recreational viewpoints in the Clark Mountains, is considered to represent a substantial adverse visual effect.

(FSA 6.12-15)

The County also posits that the testimony of Staff's witness Kanemoto is intuitively more credible on the impact of this Project on the scenic resource values. It quickly becomes obvious from even a casual observation of the valley that one of its striking features is its openness. In the middle of this vastness will be three power towers, whose height alone (nearly 500 feet) will be intrusive into the existing viewshed. And more striking will be the glare generated from thousands of heliostats redirecting the light of the sun onto these towers. As stated by Kanemoto,

Staff also concluded that the solar receiver units atop the solar power towers would generate conspicuously bright levels of glare for middle-ground viewers, which, while not representing a hazard, could represent a visually dominant feature that would alter the character of views of Clark Mountain from the valley floor, and affect the public's ability to enjoy those views, though not preventing them.

(Kanemoto, 12/14/09, 166:7-15)

The intrusion on the viewshed by the Project is also in conflict with policies and objectives of the County's General Plan, including the

following which were itemized in the FSA 6.12-37-39 and which are duplicated here for emphasis:

GOAL D/CO 1. Preserve the unique environmental features and natural resources of the Desert Region, including native wildlife, vegetation, water and scenic vistas.

Staff's Finding: Inconsistent. The proposed project would intrude into scenic vistas in the Clark Mountains and would require removal of approximately 4 square miles of vegetation.

POLICY. D/CO 1.2 Require future land development practices to be compatible with the existing topography and scenic vistas, and protect the natural vegetation.

Staff's Finding: Inconsistent. The project would not be compatible with existing scenic vistas, and would not substantially protect the natural vegetation.

GOAL OS 5. The County will maintain and enhance the visual character of scenic routes in the County.

Staff's Finding: I-15 in the project viewshed is designated as a County scenic highway (Policy OS 5.3)

POLICY. OS 5.1 Features meeting the following criteria will be considered for designation as scenic resources:

- a. A roadway, vista point, or area that provides a vista of undisturbed natural areas.
- b. Includes a unique or unusual feature that comprises an important or dominant portion of the viewshed (the area within the field of view of the observer).
- c. Offers a distant vista that provides relief from less attractive views of nearby features (such as views of mountain backdrops from urban areas).

Staff's Finding: Inconsistent. The project would not maintain or enhance the visual character of the views on I-15 within its viewshed.

POLICY OS 5.2 Define the scenic corridor on either side of the designated route, measured from the outside edge of the right-of-way, trail, or path. Development along

scenic corridors will be required to demonstrate through visual analysis that proposed improvements are compatible with the scenic qualities present.

Staff's Finding: Inconsistent. Visual analysis of the project concluded that the proposed project would not retain the existing scenic qualities of the viewshed.

POLICY OS 5.3 The County desires to retain the scenic character of visually important roadways throughout the County. A “scenic route” is a roadway that has scenic vistas and other scenic and aesthetic qualities that over time have been found to add beauty to the County. Therefore, the County designates the following routes as scenic highways and applies all applicable policies to development on these routes (see Figures 2-4A through 2-4C of the Circulation and Infrastructure Background Report):

(MULTIPLE REGIONS):

- c. *Interstate 15 from the junction with Interstate 215 northeast to the Nevada state line, excepting those areas within the Barstow Planning Area and*

the community of Baker where there is commercial /industrial development; those portions within the Yermo area from Ghost Town Road to the East Yermo Road overcrossing on the south side only and from First Street to the East Yermo Road overcrossing on the north side; and all incorporated areas. (Emphasis added.)

Staff's Finding: Inconsistent. Visual analysis of the project concluded that the proposed project would not retain the existing scenic qualities of the viewshed.

Admittedly, “beauty is in the eye of the beholder,” but Kanemoto raised some observations that bear scrutiny and should guide the Commission in formulating its recommendation. This is not “another mediocre, nondescript, forgettable landscape.” (Kanemoto, 12/14/09, 168:11-12), but it is “predominantly natural”(*Id.* at 168:16), that its “intactness strongly predominates over manmade intrusions.” (*Id.* at 168:20-21), and finally, that it has “a unity or wholeness created by its visual enclosure by nearby mountains on all sides.” (*Id.* at 168:22-23).

Contrast this with the applicant’s self serving testimony that the view of the Project site from Interstate 15 is “not pristine in that this

area is crossed by roads and a major electric transmission line, and that the Primm Valley golf course ... is visible in the middleground as travelers approach if from the east and west.” (Applicant’s Testimony, November 16, 2009, p. 113⁸)

The Staff testimony related to the BLM Visual Resource Management (“VRM) classifications was also persuasive. Recall that the applicant had attempted to downgrade the scenic vista to VRM class 4, or the lowest in the BLM ranking format. Kanemoto testified that the BLM visual resource management specialist rated the area as a VR class 3, described as a moderate level of overall sensitivity or susceptibility to impact (Kanemoto, 12/14/09, generally at pages 170-171) and that this was an understatement of the areas scenic value (*Id.*, 171:20-22), primarily because it received a scenic quality rating score of 11, and a score of 12 would have resulted in a VR class, or moderately high scenic quality. (*Id.*, 172:2-14)

The Commission should also keep in mind that this scenic vista is not only from the heavily traveled Interstate 15, but from numerous points of view by those using the surrounding valleys and mountains for recreation.

⁸ This document is actually sans page numbers, but when viewing the electronic version, the page numbers are electronically calculated. This reference is on the third page of the “Visual Resources” section.

The combination of the heliostat fields plus the towers, what Kanemoto analogized as “seven 40-story, highrise towers, with brightly lit roofs” means, in his opinion that by definition, the Project creates a substantial significant impact. (*Id.*, 175:14-17)

And the issue of glare cannot be underestimated, but unfortunately, cannot be accurately replicated via visual simulations. (*Id.*, 177:4-19)

There was significant discussion in terms of relating the tower glare to that of a 100 watt light bulb, an analogy which by its making seems to understate the visual impact. Staff’s lighting consultant, James Jewell, provided testimony from that seemed to clarify this issue:

The thing that's misleading in applicant's documents is when he says it's equivalent to seeing a lamp. However, the enclosure for a 100-watt lamp is an A-19, which means it's 2-3/8 inches in diameter.

Now, what happens is it's the equivalent of a lot of those. The generator surface is 20 meters high. The width varies by the different side. So what someone sees is not a single 100-watt lamp somehow mysteriously hung up in the air, but a great field of 100-watt lamps. Now I want to assure

the Commissioners the effect is not cumulative. In other words, it's not as if you were seeing several hundred, or indeed perhaps several thousand, 100-watt lamps all together. What you're seeing is a field of light. (Jewell, 12/14/09, 82:19 – 83:10)

And, this “field of light” will be visible from 5 miles away. (Gilon, 12/14/09, 110:1-2) Because the primary way that people experience the desert is from the highway, the imposition into their view of this Project is a significant impact that cannot be mitigated.

Even Mitigated Ivanpah 3 cannot mitigate the impacts of the Project on visual resources below a level of significance, which raises the question whether the Commission should adopt overrides. Curiously, in arguing that the unmitigable impacts should be overridden, Staff takes a position contra to its own testimony. Terry O’Brien, Deputy Director of the California Energy Commission, in his Memorandum to the Committee dated March 16, 2010, stated: “The fact that the ISEGS project’s site is adjacent to, and in the vicinity of, extensive development, (e.g., a golf course, Interstate 15, casinos, and existing electricity infrastructure, including major transmission lines and another power plant), is a significant factor in reaching the conclusion that an override is appropriate in this case.” This conclusion is unsupportable given Kanemoto’s

testimony about the predominantly natural landscape prevailing over man-made intrusions, a position that is not recanted in his follow-up testimony in the FSA-Addendum.

Worker Safety and Fire Protection

The County respectfully disagrees with Staff's conclusion that the proposed Project will not have impacts on local fire protection services. Review by the County Fire Department indicates that the fire risks at the proposed facility would pose significant added demands on local fire protection services. Service areas for existing stations are currently far in excess of reasonable demands and are frequently stretched far beyond their capacity. The County Fire Department further disagrees with Staff's conclusion that response times and staffing are adequate for this Project. Under perfect conditions, the closest station is barely inside the "golden hour" for successful trauma response and recovery. Routine responses to average weekend traffic incidents can completely deplete staff and resources. Also, inclusion of references to mutual aid with Nevada jurisdictions fails to recognize that mutual aid is voluntary and not compulsory. In addition, it would be appropriate for Staff to further investigate Emergency Medical Service impacts that will arise from over

1,000 employees, particularly since Advance Life Support Services is just within an hour travel time under perfect conditions regardless of the precautions and conditions taken on-site.

Financial impacts to fire protection services need further study. Although financial issues may not be a direct environmental impact, if the fire service does not have the financial support for staffing, equipment and facilities to respond to fire, hazmat and other emergencies at the Project, then incidents on-site could predictably result in both on-site and even off-site environmental degradation.

Geology, Paleontology and Minerals

The California Environmental Quality Act (CEQA) guidelines, Appendix G, provide a checklist of questions that lead agencies typically address. Sections (VI) (a), (b), (c), (d), and (e) focus on whether or not a project would expose persons or structures to geologic hazards.

The Ivanpah Fault and Stateline Fault are mentioned but do not seem to be analyzed in sufficient detail as we do not find full discussion of whether (and how) there may be hydrogeological features that may influence groundwater recharge and drawdown models. Further, these faults may be a seismic source as some recent literature suggests, a

reference to which the County forwarded to the BLM on October 15, 2009. The seismic safety of the power plant and towers directly relates to worker safety at the facility.

Recreation

To evaluate whether the proposed Project and alternatives would generate a potentially significant impact as defined by CEQA on recreational resources, the Staff evaluated them against checklist questions posed in the 2006 CEQA Guidelines, Appendix G, Environmental Checklist established for Recreational Resources. These questions are:

- A. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- B. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Testimony elicited during the hearing revealed that annual visitors to the Clark Mountains range in estimates from 12,300 to in excess

of 41,000. Per BLM guidelines, a “high use level” is considered to be 10,000 visitors or more. (Kanemoto, 12/14/09, 179:7-21) Just considering recreational use at the Project site, the Ivanpah Dry Lakebed alone is visited by an estimated 5,000 visitors annually. (FAS 4-14)

The activities of these visitors are widely varied, from merely enjoying wide open desert landscapes (hiking, camping, windsailing), to historical study (mining, ranching, etc.), to enjoyment and study of nature (bird watching, flora, fauna, wildlife, geological, etc.). Filling in these wide open spaces with miles and miles of mirrors and brightly lit towers would certainly detract from and discourage these recreational experiences. Again, the loss of recreational opportunities on another unidentified 12,000 acres of desert land set aside for mitigation is not addressed.

Mitigation Measure REC-1 proposes to mitigate the loss of recreation by establishing a viewing platform to see the Project facility. While we concur with the viewing facility recommendation, the proponent should also be required to pursue a permit from Caltrans for a freeway sign for the viewing facility exit.

Engineering Assessment

Since no renewable energy project of this type and size has

been built anywhere, let alone in the unique constraints of the Mojave Desert, there remain many unanswered questions.

The FAS recognizes that one of the objectives of the Project is to “demonstrate the technical and economic viability of Bright Source’s technology in a commercial-scale project.” (FAS p. 2-5) One highly significant example is the uncertainty of the heliostat positioning plan, which is to be submitted 90 days before operation. Mr. Gilon admitted that the applicant’s technicians are still learning how these operate. (Gilon, 12/14/09, 125:21 – 126:7) Similarly, changes in the Project over the time from the filing of the Application indicate a troubling degree of indecision about key factors of the Project, such as reducing the number of power towers from three each in Ivanpah 1 and 2 down to one each, the most recent reduction of power towers in Ivanpah 3 from five to one, the considerable change in tower height from 262 feet to 459 (an increase of 75%), along with resulting changes in the configuration of the heliostats. The Project, if constructed and operated as proposed would occupy over nine acres per MW of power output, a figure about double that of some other solar power technologies. (FSA 7.2-1)

Further questions are raised about the submission by the applicant of Mitigated Ivanpah 3 In response to the evidence that the Ivanpah 3 site contains more rare plants and ephemeral washes than the

Ivanpah 1 and Ivanpah 2 sites, the mitigation proposal outlines a reduction of the Ivanpah 3 footprint by reducing the Ivanpah 3 site by 433 acres, thereby claiming to avoid that portion of the Project site with the greatest concentration of rare plants. The tradeoff for Mitigated Ivanpah 3 is a reduction of power towers from five to one (and for the entire Project from seven to three) and a concomitant reduction in the overall number of heliostats.

Significant questions were posed by the Committee about the optimization of the Project and its ability to hit the 400 mw target, which required Ivanpah 3 to produce fully half of the projected power. (See, generally, DeYoung, 1/14/10, 162 – 168) Questions remain about the engineering capacity of the revised Project. After all, the “fundamental objective [of the Project] is to build a solar project that generates 400 MW of renewable solar energy that will help the State meet its Renewable Portfolio Standard goals for new electric generation.” (FAS p.2-5) And the seven tower configuration was described in the FAS as the “optimized project design” (FAS 3-2, 3-3, 3-6) Although not addressed, this raises questions about the Project’s ability to meet the contractual output requirements on which the Project has been recommended for certification.

Not meaning to question Mr. Gilon's professional expertise, he nevertheless testified about his involvement with the first Lux project, a second generation trough collector considered the state of the art for the time. Mr. Gilon testified that he was responsible for the performance model and the optics related to the receiver and collectors. In 1991, Lux went bankrupt (Gilon, 12/14/09, 120:5). The performance model for this Project is of critical importance to the County, because if a project like this, utilizing an unproven technology, fails, the public lands within the County's boundaries will be marred with a potentially horrific sight of abandoned towers, infrastructure, abandoned heliostats and a permanently marred desert landscape.

Conclusion

Frankly, it is surprising how easily Staff capitulated to the consideration of overriding considerations, and virtually without analyses. There is virtually no analysis of the trade-offs between the almost certain environmental impacts of the Project with the negligible, virtually imperceptible reduction this Project will have on global warming. Or to put it another way, this Project, by itself, will have an infinitesimal impact

on saving species from the effects of global warming, but there is no question about its direct impact on those very species.

Although presented in the form of public comment, Dr. Bruce Pavlik offered perhaps one of the most persuasive reasons for a careful, unhurried review of this Project. (Pavlik, 1/14/10, 289:13 – 293:15) To wit, how the Commission and the BLM review this Project will establish a procedural precedent for the numerous “downstream” renewable energy projects to follow. If the analysis is short-cut or substandard but the Project is certified anyway, other proponents can urge similar treatment. The Ivanpah standards will be replicated across the landscape even though they may thereby be destroying the very resources that the renewable energy movement is trying to save. It is critical that the analysis of this Project be performed to a standard that, in reality, may be unreachable given the synthetic timeframes superimposed over the review process.

That the Project is located within the County’s boundaries is obviously of particular moment to this Party. But the fact that the Project will occupy a huge tract of public land and that the Project is going to be funded in large part by grants and loans from the Federal government makes it even more incumbent upon the Commission to insure that the public is getting an optimal Project. Unfortunately but realistically, the Commission is not likely to know with any degree of certainty given the

tight time-frames from two perspectives. First, the applicant is hurried to meet the federal funding deadlines. And second, the traditional role played by opponents in processes such as these is to supply the analytical tension, in which circumstances the weakness, inefficiencies and limitations can be fully identified, analyzed and if possible and if justified, eliminated.

At bottom is the fact that the Project consists of a technology largely unproven domestically that is built on a scale that dwarfs anything comparable even on a global scale. Since the impacts will be largely felt within the County, the County urges the Commission to give the Project the thorough, searching, and copious review and consideration that the County would give such a project, and then either require that the County's impacts be mitigated, especially those relative to habitat loss, private property loss, public lands access, lost economic opportunities in more urbanized areas of the desert and costs of providing public services, or alternatively to determine that these and other impacts cannot be mitigated and deny the certification.

Dated: April 1, 2010

Respectfully submitted,

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APPLICATION FOR CERTIFICATION
FOR THE *IVANPAH SOLAR ELECTRIC
GENERATING SYSTEM*

DOCKET NO. 07-AFC-5
PROOF OF SERVICE
(Revised 3/11/10)

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DECLARATION OF SERVICE

I, **Renee Meyer**, declare that on **April 1, 2010**, I served and filed copies of the attached, **Opening Brief of Intervenor, County of San Bernardino dated, April 1, 2010**. The original document, filed with the Docket Unit, 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/ivanpah]

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

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- sent electronically to all email addresses on the Proof of Service list;
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Attn: Docket No. 07-AFC-5
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I declare under penalty of perjury 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.



Renee Meyer