temperatures and increasing humidity levels during most months of the year: The removal these lands from agricultural production results in general temperature increases and reduced humidity. In addition, the installation of large scale photovoltaic projects in and of themselves is known to raise ambient temperatures by 3.4° Fahrenheit or more (Fthenakis V. and Yu Y., Analysis of the Potential for a Heat Island Effect in Large Solar Farms 39th IEEE Photovoltaic Specialists Conference, Tampa, Fl., June 17-23, 2013). The combined effects of these phenomena will significantly alter the climate on adjacent lands. This project and others constructed or proposed for construction pose a very significant cumulative impact with respect to both temperature and humidity changes on both project lands and lands adjacent thereto. As a landowner and farmer adjacent to the proposed project I am very concerned about these impacts and I have raised these concern before (See for example my letter dated May 27, 2014 to Patricia Valenzuela, Imperial County Planning & Development Services Department concerning the Notice of Preparation of the Draft EIR for the Iris Cluster Solar Farm). The Draft EIR fails to provide any analysis of the project in this regards either individually or on a cumulative basis and is therefore incomplete. An EIR is to disclose and analyze the direct and the reasonably foreseeable indirect environmental impacts of a proposed project if they are significant (Guidelines, §§ 15126.2, 15064, subd. (d)(3)).

8-13 Cont.

No Fair Analysis of the Non-farmland Project Alternatives

In an attempt to claim that a reasonable range of alternatives was evaluated in the Draft EIR, a token review was made of those alternatives which would avoid impacts to existing farmland. This review overstates purported impacts to certain environmental resources in an attempt to eliminate them from serious consideration. For example, with respect to Alternative 5 – Alternative Location – Desert Land which proposes construction on Bureau of Land Management (BLM) lands along Utility Corridor "N" west of the proposed project, the claim is made that greater impacts to aesthetics, air quality, biological resources, cultural resources, and transportation would occur as a result of the project thereby effectively eliminating this alternative from contention. These sweeping conclusions are not supported in the document. For example, the Draft EIR concludes that impacts to visual resources as measured under the guidelines established by the BLM in its California Desert Conservation Act (CDCA) Plan are somehow greater than the visual impacts that may be experienced by local residents and general population within the proposed project location (Page 8-20). This is not an objective comparison. A point made on page 8-18 is that the proposed development would contrast with the native environment resulting in degraded viewscapes. However, the same can be said to be true with respect to visual contrast of constructing these facilities in agricultural areas. The Draft EIR also claims that excessive dust from the construction of the project could also be considered a visual quality impact although the same can said with respect to impacts in agricultural areas. The problem with the Draft EIR's analysis is that no uniform standard has been applied against all of the alternatives to draw these conclusions.

8-14

In regards to impacts to biological resources under Alternative 5, the Draft EIR argues on page 8-19 that potential impacts to the Flat-tailed Horned Lizard (FTHL) may occur and construction of Alternative 5 would conflict with the BLM's FTHL Rangewide Management Strategy for the Yuha Basin Management Area. While construction of a solar facility on these lands may not conform to BLM's current policies as suggested in the document, this in and of itself does not

8-15

provide support for the contention that significant impacts to FTHL will actually occur. No surveys have been identified in the document as to whether any FTHLs exist in the area of Corridor N and therefore it can't be concluded that they will be significantly impacted (Indeed, no mention is made at all as to the FTHL under Section 4.4 Biological Resources of the Draft EIR). With respect to any alleged BLM policy nonconformance, the fact that Alternative 5 may not be consistent with BLM plans needs to be weighed against the fact that an honest assessment of the project's preferred alternative impacts upon agricultural resources demonstrates a conflict with the County's General Plan. Such a comparison needs to be provided in the Draft EIR for it to serve its purpose under CEQA.

8-15 Cont.

The Draft EIR likewise fails to provide any real evidence that presumed potential impacts to cultural resources on BLM will actually occur relying instead on an assumption that undisturbed lands might contain cultural resources. This oversight should be addressed by performing a survey of the alternative project lands. Also to be noted is the conclusion with respect to transportation that because traffic impacts associated with the project, which will entail similar traffic volumes across all project alternatives, are likely to occur on unpaved road that this is somehow more significant than impacts which would occur under the preferred alternative on paved roads. This conclusion can only be supported by comparing projected traffic volumes against recommended service levels which has not been done.

8-16

Conclusion

The Draft EIR fails in its assessments of environmental impacts, provides an incomplete analysis thereof, or offers inadequate mitigation measures as highlighted above. The Draft EIR also fails to honestly assess impacts under the project's BLM non-agricultural land alternatives in an attempt to support the proposed project. Given the magnitude of these oversights, it is appropriate that the Draft EIR be revised and recirculated for comment. If you have any questions concerning my comments, I would be happy to discuss them with you further.

8-17

Best regards,

Michael Abatti

Michael Abatti
El Centro, California

Letter 8
Michael Abatti
November 19, 2014

Response to Comment 8-1

Comment noted. Please refer to responses to comments 8-2 through 8-17.

Response to Comment 8-2

This comment restates EIR Mitigation Measure 4.2-1a that addresses "Mitigation for Non Prime Farmland." No further response is necessary.

Response to Comment 8-3

This comment restates EIR Mitigation Measure 4.2-1a that addresses "Mitigation for Prime Farmland." No further response is necessary.

Response to Comment 8-4

Comment noted.

Response to Comment 8-5

With respect to the permanent loss of agricultural lands, as discussed on EIR page 4.2-15, with the implementation of Mitigation Measure 4.2-1a, the project applicant would be required to minimize the permanent loss of valuable farmlands through either provision of an agricultural conservation easement, payment into the County agricultural fee program, or entering into a public benefit agreement.

Conservation easements will protect a portion of those remaining agricultural land resources and lessen project impacts in accordance with California Environmental Quality Act (CEQA Guidelines Section 15370). This measure has been accepted and is used by lead agencies as an appropriate mitigation measure under CEQA and because it follows and established rationale similar to that of wildlife habitat mitigation.

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The proposed conversion of agricultural land should be deemed an impact at least from a regional significance standpoint. Hence the search for replacement lands can be conducted regionally or statewide, and need not be limited strictly to lands within the project's surrounding area. Mitigation for the loss of Prime Farmland is suggested at a 2:1 ratio due to its importance in the State of California.

Regarding the agricultural fee program and/or public benefit agreement options within Mitigation Measure 4.2-1a, the County has identified how these monies would be applied to benefit the agricultural industry in Imperial County. This began with the County's adoption of the CIPG Energy Element. Consistent with the CIPG Energy Element and the Agricultural Element, the County Board of Supervisors has taken a number of actions to carry out general plan policies for use of farmland for non-agricultural uses. Also, the Board continues to develop targeted implementing policies. Based upon direction given by the Board of Supervisors on March 1, 2011, a Staff Memorandum (dated September 2, 2011) was prepared by Planning and Development Services staff in response to concerns related to the temporary loss of agricultural land in association with development of solar facilities (Villa 2011). Thereafter, on January 24, 2015, the Board of Supervisors adopted Resolution No. 2015-005. The "Guidelines for the Public Benefit Program for Use with Solar Power Plants in Imperial County" (Guidelines) attached to the Resolution set forth the Agricultural, Community and Sales Tax Benefits which should accrue to the

County from the use of farmland for non-agricultural purposes. In addition, Resolution No. 2015-005 established restricted accounts for the fees collected thereunder and set out an advisory committee to determine uses of the benefit fees collected for mitigation of solar plant impacts. In a February 11, 2014 Memorandum submitted by the Agricultural Commissioner to (and accepted and approved by) the Board of Supervisors, the Agricultural Benefit Advisory Committee reported its progress and requested that the Board take specific actions including approval of the Recommended Funding Allocation Guidelines and Proposed General Procedures/Guidelines for Allocation of Ag Benefit Funds (Valenzuela 2014).

In response to Objective 1.8, the 2011 Staff Memorandum, and Resolution 2012-005, the County retained Development Management Group (DMG) to prepare the *Iris Solar Farm (Inclusive of Ferrell, Iris, Lyons and Rockwood) Economic Impact Analysis (EIA), Employment (Jobs) Impact Analysis (JIA), Fiscal Impact Analysis (FIA)*. DMG's Analysis addresses the clear and immediate need for the project as well as the various types of benefits resulting from the project. The following summarizes the findings:

1. A net increase of 68 jobs compared to the jobs for the existing agricultural use;
2. A net increase of $492,010,551 million in new wages compared to the wages for the existing agricultural use; solar job wages are estimated to be $517,109,382 million compared to estimated $25,098,831 million from continuing existing agricultural jobs;
3. Approximately 876 construction jobs;
4. Approximately $944.06 million in overall economic impact to the Imperial Valley Region over the possible 30+ year term from the construction and operation of the project; and
5. Approximately $23.57 million in gross revenues (sales and property taxes) during the same period.

On February 11, the Board of Supervisors adopted the Agricultural Benefit Committee's Recommended Funding Allocation (Valenzuela 2014). The funding allocation was recommended by a committee of agricultural and economic development experts that included the County Agricultural Commissioner, County Executive Officer, County Farm Bureau, Imperial Valley Vegetable Growers, Imperial County cattle industry, and two members of the general public. This allocation confirms use of these fees are to be used for the stewardship, protection and enhancement of agricultural lands within the County (Resolution 2012-005).

- The Agricultural Business Development Category, such as funding for agricultural commodity processing plants and energy plants that use agricultural products, which was identified as the greatest job creator category would receive 50 percent of the funds;
- The Research & Development Category, such as funding for development of new high-yield or water-efficient crops, new water conservation techniques, new technology to improve yields in existing crops, and partial funding for an endowment to support an agricultural research specialist, would receive 20% of the funds. Improved water conservation and efficient crop production keeps more farmland in production during drought cycles therefore supports job creation and maintenance;
- The Agricultural Stewardship Category, such as programs that bring fields back into production, implement soil reclamation, and improve existing fields to improve crop yields, would receive 20%. Increase production of crops again leads to more agricultural jobs to prepare and harvest the fields; and
- The Education/Scholarship Category, such as matching funds for scholarships awarded by agricultural organizations for agricultural studies, student loans, Future Farmers of America and 4-H loans, would receive 10%. Training the next generation of farmers to continue and expand farming operations will also support agricultural job creation.

With respect to the temporary conversion of agricultural land, the California Department of Conservation (DOC) has identified solar facility mitigations, including preparation of, and implementation of a Reclamation Plan as a feasible mechanism to address temporary displacement of agricultural resources.

Mitigation Measure 4.2-1b will ensure that the project applicant adheres to the terms of the agricultural restoration plans prepared for each of the project sites, which would address the temporary conversion impact.

The DOC has identified that if the solar facility is considered a temporary displacement of agricultural resources, then there should be some assurances that it will be temporary and will be removed in the future. Hence the need for a reclamation plan. The loss of agricultural land (even temporary) represents a reduction in the State's agricultural land resources. The Division has witnessed the negative impacts of non-operational wind power generation facilities and related equipment that have been left to deteriorate on agricultural land. For that reason, the DOC has identified several options for mitigating the temporary conversion of agricultural land as follows:

- Require a reclamation plan suited for solar facilities, based on the principles of the Surface Mining and Reclamation Act (SMARA). As part of this plan, a performance bond or other similar measures may be used.
- A typical requirement would be for the soil to be restored to the same condition it was in prior to the solar facility's construction (i.e. pre-Project soil conditions). Whatever project-related materials have been brought in, or changes made to the land (i.e., graveling, roads, compaction, equipment), would be removed once the solar facility (or portions of) is no longer active.
- Solar projects are generally considered to be "temporary." The County could require that a new permit must be applied for after a certain period of time. Because this is a new and unprecedented use of agricultural land, this would allow the county more flexibility in determining what conditional uses or conditions may be most appropriate in the longer term.
- Require permanent agricultural conservation easements of land of at least equal quality and size as partial compensation for the direct loss of agricultural land.

Mitigation Measure 4.2-1b is consistent with these provisions.

Response to Comment 8-6

Comment noted. Please refer to response to comment 8-5.

Response to Comment 8-7

As stated in EIR Mitigation Measure 4.2-1b Site Reclamation Plan, the land must be restored to land which can be farmed. The Reclamation Plan shall document the procedures by which each CUP will be returned to its current agricultural condition/LESA score of 75.71 for FSF, 71.06 for RSF, 72.75 for ISF, and 69.29 for LSF. Permittee also shall provide financial assurance/bonding in the amount equal to a cost estimate prepared by a California-licensed general contractor or civil engineer for implementation of the Reclamation Plan in the event Permittee fails to perform the Reclamation Plan. Mitigation Measure 4.2-1b is repeated below for the commenter's reference:

> **4.2-1b Site Reclamation ~~Restoration~~ Plan.** The DOC has clarified the goal of a reclamation and decommissioning plan: the land must be restored to land which can be farmed. In addition to MM 4.2.1a for Prime Farmland and Non-Prime Farmland, the Applicant shall submit to Imperial County a Reclamation Plan prior to issuance of a grading permit. The Reclamation Plan shall document the procedures by which each CUP will be returned to its current agricultural condition/LESA score of 75.71 for FSF, 71.06 for RSF, 72.75 for ISF, and 69.29 for LSF. Permittee also shall provide financial assurance/bonding in the amount equal to a cost estimate prepared by a California-licensed general contractor or civil engineer for implementation of the Reclamation Plan in the event Permittee fails to perform the Reclamation Plan.

Please also refer to response to comment 8-5.

Response to Comment 8-8

Please refer to responses to comments 9-3 and 9-4 (Volker letter).

Response to Comment 8-9

The private lands on which the proposed project will be located are designated Agriculture under the County's General Plan and are zoned A-2 General Agriculture, A-2-R General Agriculture – Rural Zone; and A-3 Heavy Agriculture. Solar energy electrical generators, electrical power generating plants, substations and facilities for the transmission of electrical energy are allowed as conditional uses in Agricultural zones. In complying with the zoning designations, the applicant is requesting approval of conditional use permits for the project. The proposed project would not remove land from the Agricultural designation of the General Plan or would not require a zoning change. These projects may be allowed pursuant to the General Plan and Board of Supervisor's Implementing Policies discussed in response to comment 8-7.

Response to Comment 8-10

Please refer to responses to comments 8-5 through 8-7.

Response to Comment 8-11

EIR Sections 4.2 Agricultural Resources and 4.10 Land Use/Planning provide an analysis of the proposed project's consistency with the County's General Plan goals and policies, and as discussed in preceding responses to comments the project is considered consistent with the General Plan. Also, as noted in EIR Section 4.10, while the EIR analyzes the project's consistency with the General Plan pursuant to State CEQA Guidelines Section 15125(d), the Imperial County Planning Commission and Board of Supervisors retain authority for the determination of the project's consistency with the General Plan.

The proposed solar projects are considered compatible with existing agricultural operations, existing solar development, and planned solar development in the surrounding areas. The County has made this finding associated with other previously approved solar projects in the same area as the proposed projects. As shown on EIR Figure 4.2-2 Surrounding Utility-Scale Solar Energy Projects, the project sites adjoin previously approved large-scale solar projects. Large tracts of agricultural fields remain in certain areas; however, certain measures will still need to be adhered to avoid any incompatibility issues, including adherence to Imperial County Right-to-Farm Ordinance, State nuisance law, and weed abatement and pest control plans that will be reviewed and approved by the agricultural commissioner.

Response to Comment 8-12

Please refer to response to comment 8-11.

Response to Comment 8-13

Solar arrays consist of photovoltaic (PV) modules mounted on aluminum and steel support structures. These support structures have little or no exposure to sunlight. The amount of the sun's heat absorbed by a solar module is similar to the amount of the sun's heat absorbed by open land. However, solar modules store less heat than the earth because they consist of a thin, lightweight glass that is surrounded by airflow. As such, heat dissipates quicker from a solar panel compared with solid earth, which dissipates heat slowly and generally does not increase ambient air temperatures. There is no evidence in the record to date that would indicate that the project would increase ambient air temperatures at or around the project site. A study prepared for the Sarnia Solar Power Plant concluded that there is no statically significant mean temperature difference between the air temperatures at the PV solar facility's periphery compared to the surrounding farmland (First Solar, 2010).

Response to Comment 8-14

EIR Section 8.0 Alternatives provides a detailed evaluation of potential alternatives to the proposed project that could avoid, or lessen, the potentially significant impacts associated with the proposed project. CEQA does not require the evaluation of alternatives at the same level as the proposed project. Further, With respect to Alternative 5: Alternative Location – Desert Land, potential impacts associated with the alternative are discussed at a level of detail to allow "meaningful evaluation, analysis, and comparison with the proposed project" pursuant to CEQA Guideline 15126.6(d).

As analyzed in the EIR regarding aesthetics, development of a utility scale solar project would occur in undisturbed, desert lands that are in a natural condition, as compared to development of the project site on lands that have been converted from their natural condition to an agricultural use. As compared to the proposed project, depending on the location of the proposed projects under this alternative, this alternative could affect views from areas such as National Historic Trails, Wilderness areas, or culturally sensitive landscapes, where such resources do not exist at the project site.

With respect to traffic, Similar to the proposed projects, this alternative would temporarily increase the number of vehicles and truck trips on local roadways during construction. However, these construction vehicles and truck trips would be traveling on access roads, which are typically unpaved. Depending on the location of the proposed projects under this alternative, access (including emergency access) to the sites may be more difficult. Compared to the proposed projects, this alternative would result in a greater impact related to transportation/traffic.

Response to Comment 8-15

Please refer to response to comment 8-14. Additionally, FTHL surveys have been conducted within Utility Corridor "N" as part of the environmental review processes for the Imperial Solar Energy Center South and West projects, as well as subsequent biological monitoring activities as part of project construction. These surveys have resulted in confirmation of presence of FTHL within Utility Corridor "N." In comparison, EIR Section 4.4 Biological Resources does not address FTHL because this species has not potential for occurrence on the project site, as it does not contain suitable habitat for this species.

With respect to biological resources, very limited biological resources exist on the project site, with no endangered species identified. However, under this alternative, the projects would be developed in the Flat-tailed Horned Lizard (FTHL) Rangewide Management Strategy, Yuha Basin Management Area (MA). In accordance with the Rangewide Management Strategy, occupancy of FTHL within the MA is assumed; therefore, there is a potential to impact FTHL within the MA, which would be avoided at the proposed project location. Furthermore, there is a one percent disturbance threshold within the Yuha MA. Based on the Record Decision for the Ocotillo Sol Project (BLM/CA/EA-2013/022+1793), the total disturbance (with the Ocotillo Sol Project) in the MA is 0.805 percent. This leaves approximately 112 acres before the BLM reaches the 1 percent disturbance cap. The four solar energy facilities would encompass 1,400~~1,422~~ acres. Based on the remaining acres allowed before the BLM reaches the 1 percent disturbance cap, the projects would exceed this threshold. For these reasons, it is concluded that Alternative 5 would have a greater impact to biological resources than the proposed project.

Response to Comment 8-16

With respect to cultural resources, Alternative 5 has a higher potential to disturb cultural resources because of the desert's generally undisturbed nature as opposed to the project study areas that have been disturbed due to disking over time from farming activity. For example, 29 prehistoric sites, one historic site, and eight isolates were reported as being located within the project footprint of the transmission corridor (located on BLM lands) associated with the Imperial Solar Energy South Project. The potential of finding cultural resources on a highly disturbed site is anticipated to be lower compared to a generally undisturbed site. Compared to the proposed projects, this alternative is likely to result in greater cultural resource impacts.

Response to Comment 8-17

Please refer to preceding responses to comment 8-1 through 8-16.

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November 19, 2014

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Re: Comments of Backcountry Against Dumps, Donna Tisdale, Carolyn Allen, Danny Robinson, William Robinson, and Joseph Tagg on the Draft Environmental Impact Report (DEIR) for the Iris Cluster Solar Farm Project, SCH No. 2014041091

Pursuant to the California Environmental Quality Act ("CEQA"), Public Resources Code section 21000 *et seq.*, and Imperial County's (the "County's") Notice of Availability of a Draft Environmental Impact Report ("NOA"), Backcountry Against Dumps, Donna Tisdale, Carolyn Allen, Danny Robinson, William Robinson, and Joseph Tagg (collectively, "Backcountry") submit the following comments on the County's Draft Environmental Impact Report ("DEIR") for the Iris Cluster Solar Farm Project ("Iris Cluster Solar" or the "Project").

The Project would involve the construction and operation of four utility-scale photovoltaic solar ("PV") electrical generation facilities – the 367.1-acre Ferrell Solar Farm (CUP 13-0054), the 396.2-acre Rockwood Solar Farm (CUP 13-0057), the 520.8-acre Iris Solar Farm (CUP 13-0055) and the 138.4-acre Lyons Solar Farm (CUP 13-0056). Each of the projects would require its own inverter modules and pad-mounted transformers. DEIR 3-8. The Project will also require an unspecified number of O&M buildings, auxiliary facilities, and substations. *Id.* "Each O&M building would include its own emergency power, fire suppression, potable water system and septic system." *Id.* Combined, the four projects would generate as much as 360 megawatts ("MW") of electricity. *Id.*

The Project would be located on and displace more than *1,422* acres of, according to local farmers, *some of the best and most productive* agricultural land in Imperial County, including 683.9 acres that are protected by Williamson Act contracts and substantial acreage of California Department of Conservation-designated Prime Farmland and Farmland of Statewide Importance.

9-1

DEIR 3-1, 3-26. This premier farmland is currently used for agricultural production, and is truly irreplaceable. *Id.* The food and fiber it produces year in and year out for Americans throughout our country are of inestimable value to present and future generations. Yet the Project would preclude cultivation of the land throughout its operational lifetime, and possibly permanently. DEIR 4.2-12 ("there would be a 40-year period where existing agricultural uses within the project study areas would no longer be possible . . . [and] it is possible that project-related activities (e.g., soil disturbance) and subsequent restoration of the site could result in a net reduction in Prime Farmland or Farmland of Statewide Importance"). Furthermore, the Project would likely cause significant additional impacts to agriculture and the agricultural economy countywide by reducing demand for agriculture-serving businesses and interfering with one of the only airports servicing agricultural spraying operations in the County.

9-1 Cont.

Backcountry opposes this Project as an unnecessary industrialization of highly productive farmland. Not only would the Project have significant environmental, agricultural and economic impacts, the proposed industrial-scale electrical generation and transmission uses are forbidden by the Imperial County General Plan (and hence the Planning and Zoning Law, Government Code section 65000 *et seq.*). In further expression of these major concerns and others, Backcountry offers the following comments to assist the County in analyzing the Project and developing a Final Environmental Impact Report ("FEIR") thereon.

I. THE PROPOSED SOLAR ENERGY GENERATION AND TRANSMISSION USES ARE FORBIDDEN BY THE IMPERIAL COUNTY GENERAL PLAN LAND USE ELEMENT.

A. The County May Not Approve a Conditional Use that Is Forbidden by the County General Plan.

The Project is inconsistent with the County General Plan, and thus its approval would violate the Planning and Zoning Law. As acknowledged in *Neighborhood Action Group v. County of Calaveras* ("*Neighborhood*") (1984) 156 Cal.App.3d 1176, 1184, the requirement that use permits be consistent with a county's general plan

9-2

> is necessarily to be implied from the hierarchical relationship of the land use laws. To view them in order: a use permit is struck from the mold of the zoning law ([Government Code section] 65901); the zoning law must comply with the adopted general plan (§ 65860); the adopted general plan must conform with state law (§§ 65300, 65302). The validity of the permit process derives from compliance with this hierarchy of planning laws. *These laws delimit the authority of the permit issuing agency to act and establish the measure of a valid permit.* . . . A permit action taken without compliance with the hierarchy of land use laws is *ultra vires* as to any defect implicated by the uses sought by the permit.

Id. (emphasis added); *Endangered Habitats League, Inv. v. County of Orange* ("*Endangered Habitats League*") (2005) 131 Cal.App.4th 777, 782 ("A project is inconsistent if it conflicts with a general plan policy that is fundamental, mandatory, and clear"); *see also* DEIR 4.10-1 ("The State Zoning Law . . . establishes that zoning ordinances . . . are required to be consistent with the general plan and any applicable specific plans").

9-2 Cont.

Because Imperial County is a general law county, the foregoing settled law is dispositive. Since, as shown below, the proposed solar energy generation and transmission uses are specifically forbidden under the Imperial County General Plan, the County lacks authority to approve those uses in contravention of the General Plan. Any "permit action taken without compliance with the hierarchy of land use laws is *ultra vires*." *Neighborhood*, 156 Cal.App.3d at 1184.

B. The Imperial County General Plan Forbids the Proposed Solar Energy Generation and Transmission Uses.

The Imperial County General Plan's Land Use Element specifically *forbids* the proposed solar uses within the "Agriculture" plan designation that applies to entire Project site. DEIR 4.10-2 (Figure 4.10-2 shows that all Project sites are designated in the General Plan as "Agriculture"). The Land Use Element directs that lands designated as "Agriculture" may not be developed with uses that do not preserve and protect agricultural production and related activities. It states in pertinent part as follows:

> **1. Agriculture.**
>
> This category is intended to preserve lands for agricultural production and related industries including aquaculture (fish farms), ranging from light to heavy agriculture. Packing and processing of agricultural products may also be allowed in certain areas, and other uses necessary or supportive of agriculture. . . .
>
> *Where this designation is applied, agriculture shall be promoted as the principal and dominant use to which all other uses shall be subordinate. Where questions of land use compatibility arise, the burden of proof shall be on the non-agricultural use to clearly demonstrate that an existing or proposed use does not conflict with agricultural operations and will not result in the premature elimination of such agricultural operations. No use should be permitted that would have a significant adverse effect on agricultural production*, including food and fiber production, horticulture, floraculture, or animal husbandry. . . .

9-3

Imperial County General Plan, Land Use Element (Revised 2008), page 48 (emphasis added).

It is clear from the foregoing language that lands designated as "Agriculture" in the

9-4

General Plan must be used *only* for agriculture and related industries that support agricultural production. "Where questions of land use compatibility arise, the burden of proof shall be on the non-agricultural use to *clearly demonstrate* that an existing or proposed use does not conflict with agricultural operations and will not result in the premature elimination of such agricultural operations." *Id.* (emphasis added).

9-4 Cont.

Here, it is undisputed that the proposed industrial-scale solar facility uses would terminate and prevent all agricultural use on the subject lands for at least the Project's operational lifetime of up to 40 years. DEIR 4.10-11 ("The projects would convert the sites from agricultural land to a solar energy facility"), 3-11 (Ferrell Solar Farm "parcels would be leased to the project applicant for up to 40 years, which is the anticipated duration of the project"), 3-14 (stating that anticipated duration of Rockwood Solar Farm, Iris Solar Farm and Lyons Solar Farm would also be "up to 40 years"), 4.2-18 ("Agricultural productivity of the project study areas could be reduced as a result of the projects, *even after* final restoration of individual site components" (emphasis added)).

9-5

As the California Department of Conservation has determined in both the Williamson Act and CEQA contexts, and reiterated in its November 1, 2011, and July 16, 2010 letters (attached hereto as Exhibits 1 and 2) to the Imperial County Planning and Development Services Department regarding other solar projects proposed for lands designated for Agriculture on the County General Plan, commercial solar uses are *completely incompatible* with agricultural uses. This incompatibility is especially odious here where "[m]uch of the land base in the vicinity of and within the project sites and off-site transmission areas is considered productive farmland where irrigation water is available." DEIR 2-2; Michael Abatti, May 27, 2014, Letter to Patricia Valenzuela, p. 2 ("Abatti Letter;" stating that "Agricultural lands within this portion of the County are generally of higher quality as compared to many other areas in the County") (included in DEIR Appendix A).

9-6

Furthermore, the Project would impede agricultural operations on *surrounding* lands, which is demonstrated by the increasingly rapid conversion of farmland to non-agricultural uses in the Project area as more and more industrial-scale electrical generation projects are proposed and built there. *See* DEIR 2-2 ("a majority of the currently vacant agricultural lands surrounding the project area have been approved for, or are currently proposed for, the development of utility-scale solar energy projects," and are "anticipated to transition into solar energy use in the near future"), 4.2-9 (figure depicting location of Project and similar nearby approved or proposed projects). This is more than concerning to many local farmers, including Joseph Tagg, Danny Robinson and others (like Mr. Abatti, who has separately commented on this Project). The Project threatens not only their environment and rural way of life, it threatens their agricultural livelihood.

9-7

Among the many serious impacts the Project will cause and/or contribute cumulatively to on surrounding farmland is an increase in temperature and reduction in humidity, which will

9-8

necessitate additional irrigation while likely reducing efficiency and crop productivity. This is due to both greatly reduced evapotranspiration on converted farmland and the inherent "heat island effect" of utility-scale solar facilities. Abatti Letter, p. 1 ("The current irrigation of agricultural lands in the project area has the effect of reducing ground surface temperatures and increasing humidity levels during most months of the year"); Fthenakis and Yu, "Analysis of the Potential for a Heat Island Effect in Large Solar Farms," *presented at* 39th IEEE Photovoltaic Specialists Conference, Tampa, Florida, June 17-23, 2013 (attached hereto as Exhibit 3). "Both [Fthenakis and Yu's] field data and . . . simulations show that the annual average of air temperatures in the center of a [photovoltaic] field can reach up to 1.9°C above the ambient temperature," and only begin "approaching (within 0.3°C) the ambient [temperature] at about 300 m [from] the perimeter of the solar farm." Exhibit 3 at 1.

9-8 Cont.

Furthermore, the Project will impede crop dusting on surrounding farmland, particularly where other existing or planned electrical generation facilities abut the land on other sides. It will not only make it more dangerous for pilots to access the land (due to glare from the solar panels and increased risk of collision with Project components), it will increase the likelihood of the planes inadvertently spraying the adjacent electrical generation facilities and causing complaints. In addition, because continued cultivation of the farmland will produce dust that will likely drift onto the adjacent solar panels and associated equipment, the solar project operators will have further incentive to pressure the surrounding farmers to sell their lands or stop farming.

9-9

The Project could also reduce employment, income, sales and tax revenue in the County. As Imperial County Agricultural Commissioner Valenzuela noted in her February 25, 2011 comments (attached hereto as Exhibit 4) on the DEIR for a similar solar project, "removal of any farmland out of production would have a *direct negative impact on employment, income, sales and tax revenue*." The Economic Impact Analysis prepared for the Project, which is Appendix M to the DEIR, concludes that there would be a net increase in County revenue and jobs created by the Project, but it fails to take into account some important factors. For example, as these utility-scale electrical generation and transmission projects convert more and more agricultural land to non-agricultural uses, more and more agriculture-serving businesses will be forced to close.[1] And as the quantity and quality of agriculture-serving businesses decreases in the County,

9-10

[1] For example, the Project could disrupt the functioning of the lone local airport servicing agricultural spraying operations by putting local pilots at risk due to the glint and glare from the Project's solar panels, as well as the collision risk presented by the transmission lines, towers and other tall structures required by the Project and others in the area. *See* DEIR 4.10-11 (variances will be "required to allow the new towers to be built at *140 feet* in height" (emphasis added)). The airport – the Johnson Brothers Airstrip – "is located approximately 0.5 mile southeast of APN 059-050-003 (ISF)." DEIR 4.8-18. "Frontier Agricultural Services . . . operates a crop dusting service for the surrounding agricultural land use" from the airport. *Id.* Incredibly and illogically, the DEIR dismisses these aviation (and agricultural services) impacts because there

more and more farmers will find it uneconomical or impractical to keep farming and sell, lease or use their lands for non-agriculture purposes.

9-10 Cont.

Because the proposed solar energy generation and transmission uses at the Project sites would "conflict with agricultural operations," result in the certain "elimination" of agricultural operations and "have a significant adverse effect on agricultural production," both on the Project sites and elsewhere in the County, the Project is specifically forbidden by the General Plan.

9-11

C. The Project's Incompatibility with the General Plan Agricultural Use Provisions Is Not Cured by Other Conflicting General Plan Provisions or the County Land Use Ordinance.

Despite the fact that the Project would "conflict with" and result in the certain "elimination" of "agricultural operations," and "have a significant adverse effect on agricultural production," the DEIR states that "the project facilities are a conditionally permitted use under the A-2, A-2-R, and A-3 zones and, therefore, are considered consistent with the Agriculture General Plan land use designation." DEIR 4.10-11 (citing the Land Use Element's "Land Use Compatibility Matrix," which "identifies land designated as 'Agriculture' as compatible with lands zoned A-2, A-2-R, and A-3"). The DEIR is mistaken. The existing A-2, A-2-R and A-3 zoning on the Project sites is *inconsistent* with the General Plan's "Agriculture" designation.

9-12

As discussed, the Project is incompatible with the General Plan's explicit use standards for lands designated as "Agriculture." Not only will the proposed solar energy generation and transmission use conflict with existing (and future) agricultural operations and have a significant adverse effect on agricultural production *on* the Project sites by terminating and preventing all agricultural use on the sites for up to *40 years*, it will impede agricultural operations elsewhere in the County as well. To the extent the County Land Use Ordinance – which by law is subordinate to the County General Plan – might be interpreted to allow uses such as the proposed solar facilities that are inconsistent with the General Plan's land use designations, that interpretation is invalid. Government Code § 65860(a); *Neighborhood*, 156 Cal.App.3d at 1184. And to the extent the Land Use Element's Compatibility Matrix, the Agricultural Resources Element, the Conservation and Open Space Element, the Geothermal/Alternative Energy and Transmission

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are or will soon be many tall structures in the area associated with other "nearby solar farms," and because "the agricultural crop dusting will be reduced in the immediate area." DEIR 4.8-18 (first quote), 4.8-19 (second quote). The DEIR's first rationale defies reason: more tall structures near the airport and farmland served by Frontier Agricultural Services will create *greater collision risk*, not less. And the DEIR's second rationale just proves the point that as the number and acreage of local farms decreases, so too will the crop dusting and airport services' business, eventually causing the businesses to close and leaving the remaining farmers without those important services.

Element or any other part of the General Plan can be read to approve zoning regulations that conflict with the Land Use Element's textual land use standards, the General Plan is internally inconsistent and invalid. Government Code § 65300.5 ("the Legislature intends that the general plan and elements and parts thereof comprise an integrated, internally consistent and compatible statement of policies for the adopting agency"); *Concerned Citizens of Calaveras County v. Board of Supervisors* (1985) 166 Cal.App.3d 90, 97 ("a general plan must be reasonably consistent and integrated on its face"); *Sierra Club v. Kern County* (1981) 126 Cal.App.3d 698, 704 ("Since the general plan was internally inconsistent, the zoning ordinance under review . . . could not be consistent with such plan and was invalid when passed.").

The County may not approve a land use in reliance on an invalid zoning regulation or General Plan element. "Under state law, the propriety of virtually any local decision affecting land use and development depends upon consistency with the applicable general plan and its elements. . . . [A]bsence of a valid general plan, or valid relevant elements or components thereof, precludes enactment of zoning ordinances and the like." *Resource Defense Fund v. County of Santa Cruz* (1982) 133 Cal.App.3d 800, 806; *Neighborhood*, 156 Cal.App.3d at 1104; *Concerned Citizens of Calaveras County*, 166 Cal.App.3d at 97. And where there is a clear violation of a specific General Plan provision, mere compatibility with the overarching objectives of the Plan is not enough to make a project consistent and compliant with the Plan as a whole. *Neighborhood*, 156 Cal.App.3d at 1184; *FUTURE v. Board of Supervisors* (1998) 62 Cal.App.4th 1332, 1342.

9-13 Cont.

II. THE PROPOSED SOLAR ENERGY GENERATION AND TRANSMISSION USES ON THE IRIS SOLAR FARM SITE ARE FORBIDDEN BY THE IMPERIAL COUNTY GENERAL PLAN AGRICULTURAL ELEMENT.

Objective 2.1 of the County General Plan Agricultural Element mandates that the County "*not allow* the placement of new non-agricultural land uses such that agricultural fields or parcels become isolated or more difficult to economically and conveniently farm." Imperial County General Plan, Agricultural Element (Revised 1996), page 30 (emphasis added); DEIR 4.2-7 (same). The DEIR states that the Project is "[c]onsistent" with Objective 2.1. DEIR 4.2-7. Not so.

9-14

As discussed above, Mr. Tagg farms the 320 acres that border the Iris Solar Farm site to the south. If the Iris Solar Farm is constructed, it would completely isolate his farming operation. The land he farms would be surrounded *on all four sides* by industrial-scale solar energy generation projects. And as a result, it would be much "more difficult [for Mr. Tagg] to economically and conveniently farm." Imperial County General Plan, Agricultural Element (Revised 1996), page 30. For example, it would be much more difficult – not to mention dangerous – to crop dust the land he farms. In addition, the Iris Solar Farm would likely increase the temperature and reduce the humidity on his farmland, necessitating additional irrigation while reducing efficiency and crop productivity. Furthermore, as the DEIR admits, if not properly

9-15

grounded the Project could cause ground "potential rise," and associated "hazardous voltage, many hundreds of yards away from the grounding electrode location," including on the land Mr. Tagg farms. DEIR 3-21.

9-15 Cont.

Because the Iris Solar Farm would "isolate[]" the land Mr. Tagg farms and make it "more difficult [for him] to economically and conveniently farm," it is prohibited by the County General Plan. *Id.* Approval of the Iris Solar Farm would therefore violate the Planning and Zoning Law. *Neighborhood*, 156 Cal.App.3d at 1184; *Endangered Habitats League*, 131 Cal.App.4th at 782 ("A project is inconsistent if it conflicts with a general plan policy that is fundamental, mandatory, and clear").

9-16

III. THE PROPOSED PROJECT VIOLATES THE WILLIAMSON ACT.

The Project as originally proposed requires the cancellation of the Williamson Act contracts on 683.9 acres of high-quality farmland, including all 520.8 acres of the Iris Solar Farm and 163.1 acres of the Ferrell Solar Farm. But the County cannot lawfully cancel the three Williamson Act contracts here because "the cancellation" is neither "consistent with the purposes of [the Act]" nor "in the public interest." Government Code § 51282(a)(1)-(2). The proposed cancellation is not consistent with the purposes of the Williamson Act because the Project is not "consistent with the applicable provisions of the . . . county general plan." *Id.* § 51282(b)(3). The proposed cancellation is not in the public interest because the benefits of cancellation do *not* "outweigh the objectives of [the Williamson Act]." *Id.* § 51282(c).

9-17

IV. THE DEIR MUST CONTAIN A COMPLETE AND ACCURATE PROJECT DESCRIPTION, AND A ROBUST ANALYSIS OF PROJECT ALTERNATIVES AND IMPACTS.

Despite the fact that the proposed Project's industrial-scale electrical generation and transmission uses are prohibited by the County General Plan, the County has developed a DEIR for the Project in preparation for considering the Project for approval. While Backcountry maintains that the County may not approve the Project under the current General Plan, it nonetheless offers the following comments on the DEIR and any subsequent environmental review of the Project.

9-18

A. The DEIR Must Provide a Complete and Accurate Project Description.

"An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR." *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193. Yet here, the DEIR fails to meet this essential CEQA requirement.

First, the DEIR fails to specify what type of solar PV technology the Project would use. Rather, the DEIR states that "[i]ndividual panels will be installed on *either* fixed-tilt *or* tracker

mount systems (single- *or* dual-axis, using galvanized steel *or* aluminum)." DEIR 3-9 (emphasis added). Indeed, the DEIR does not even know how tall the panels will stand, or what their final layout will be. *Id.* Would the solar panels use silica-based solar cells or something else? Would the Project employ fixed or tracking PV arrays? Would the Project use concentrated PV? The Project and its impacts cannot be evaluated without this information. Therefore this grave inadequacy must be remedied.

Furthermore, the DEIR fails to adequately describe the Project's O&M facilities. "Each solar project facility *may* have its own O&M building and substation, or *may* share among the projects. Up to four O&M buildings and substations are contemplated." DEIR 3-8 (emphasis added). Without concrete information on the proposed development of O&M buildings and substations, the Project description is not "accurate, stable [or] finite." The DEIR also fails to show how SDG&E would use the electricity generated by this Project, or why it is necessary to meet California's renewable energy goals. DEIR 4.14-10 to 4.14-15.

9-18 Cont.

The DEIR's Project Description of the relevant parcels is also inaccurate. The DEIR describes FSF as comprising APNs 052-180-042 and 059-*150*-001. DEIR 3-1, 3-7. However, the discussion of Williamson Act lands within the FSF identifies APN 059-*050*-001. DEIR 3-26. A search of the Imperial County Assessor's GIS indicates that this parcel should be identified as APN 059-050-001 – just as it is identified in DEIR Figures 3.0-2 and 3.0-3, as well as the discussion of Williamson Act lands.

9-19

Finally, the construction timeline in the DEIR must be updated. The DEIR claims that "[c]onstruction activities are proposed to start in mid-2014." DEIR 3-22. However, given that the DEIR was not released until September 2014, and no FEIR has been prepared, that schedule is inaccurate. In order for the public and decisionmakers to fully understand the impacts of the Project, the FEIR must include an accurate construction schedule.

9-20

B. The DEIR Fails to Adequately Analyze a Reasonable Range of Alternatives.

To comply with CEQA, agencies must consider a "reasonable range" of alternatives. CEQA Guidelines §15126.6(a); *Village of Laguna Beach, Inc. v. Board of Supervisors* ("*Village of Laguna Beach*") (1982) 134 Cal.App.3d 1022, 1028. Furthermore, an agency may not approve a Project where there are "feasible alternatives . . . available which would substantially lessen the significant environmental effects" of that Project. Public Resources Code § 21002. Here, the DEIR failed to analyze any non-solar alternative and ignored the significant benefits that would come from a distributed generation alternative. DEIR 8-1 to 8-24.

The DEIR considered six alternatives: (1) No Project, (2) Reduced Acreage - Avoid Prime Farmland, (3) Reduced Acreage - Avoid Williamson Act Land, (4) Alternative Location - Private Land, (5) Alternative Location - Desert Land, and (6) No Utility-Scale Development - Distributed Commercial and Industrial Rooftop Only. DEIR 8-2, 8-5, 8-9, 8-13, 8-18, 8-20.

9-21

However, no non-solar alternative was considered. Without such an alternative, the County could not comply with CEQA's requirement that the DEIR consider a reasonable range of alternatives. CEQA Guidelines §15126.6(a); *Village of Laguna Beach*, 134 Cal.App.3d at 1028.

9-21 Cont.

Furthermore, the DEIR's discussion of Alternative 6 – the distributed generation alternative – ignores the environmental setting for that alternative and therefore substantially understates the benefits of the alternative as compared to the Project. DEIR 8-20 to 8-24. The distributed generation alternative would be built "within existing *developed* areas, typically on the rooftops of commercial and industrial facilities." DEIR 8-20 (emphasis added). Therefore, any potential impacts of this alternative would occur within a previously developed area, thereby limiting the significance of certain effects. For example, the DEIR concludes that distributed generation will have a greater aesthetic impact than the proposed Project. DEIR 8-21. However, this cursory statement ignores the fact that these rooftop solar panels will be constructed on commercial and industrial rooftops, which have little aesthetic value to begin with. DEIR 8-20 to 8-21. Similarly, the DEIR concludes, without support, that distributed generation will have a more significant impact on biological resources, cultural resources, land use, and noise. DEIR 8-21 to 8-23. Again, these unsupported conclusions ignore the developed commercial and industrial setting in which this alternative would be constructed.

9-22

Distributed energy projects such as rooftop solar PV have substantial environmental, aesthetic, economic and public safety benefits over remote, industrial-scale solar energy facilities such as the Iris Cluster Solar Project.[2] They do not mar the landscape with massive and unsightly arrays of glare-producing PV and CPV panels, or their associated powerlines, substations and industrial operations and maintenance buildings. They are much less likely to ignite catastrophic wildfires. They do not displace agriculture and wildlife habitat. They present a much smaller threat to wildlife. They do not waste electricity due to conductor resistance and corona discharges along lengthy transmission lines.[3] Their reliability is far greater. And they are easier

[2] As former California Public Utilities Commission ("CPUC") Commissioner John Bohn acknowledged, "[u]nlike other generation sources, [distributed generation] projects can get built quickly and without the need for expensive new transmission lines. And . . . these projects are extremely benign from an environmental standpoint, with neither land use, water, or air emission impacts." CPUC, "CPUC Approves Edison Solar Roof Program," Press Release, June 18, 2009, *available at:* http://docs.cpuc.ca.gov/published/News_release/102580.htm.

[3] The U.S. Energy Information Administration estimates that California lost nearly *18 million* kilowatt-hours of electricity in 2010, due primarily to conductor resistance, corona discharges and other transmission and distribution line losses. Energy Information Administration, January 27, 2012, *State Electricity Profiles 2010*, DOE/EIA-0348(01)/2, at p. 30, *available at:* http://www.eia.gov/electricity/state/pdf/sep2010.pdf.

to upgrade as technology improves.

In addition, as these solar PV technologies improve and the liability costs of utility-scale renewable energy facilities become clearer, the per-watt installed price for distributed solar PV systems should soon drop below that of remote, utility-scale projects like the Iris Cluster Solar Project. In likely recognition of this trend, many utility-scale renewable energy project developers themselves agree that distributed generation is the future of renewable energy power. For example, NRG Energy, Inc., CEO David Crane stated the following in a 2011 call with financial analysts:

> Ultimately, however, we fully recognize that the current generation of utility-sized solar and wind projects in the United States is largely enabled by favorable government policies and financial assistance. It seems likely that much of that special assistance is going to be phased out over the next few years, leaving renewable technologies to fend for themselves in the open market.
>
> We do not believe that this will be the end of the flourishing market for solar generation. We do believe that it will lead to a *stronger and more accelerated transition from an industry that is currently biased towards utility-sized solar plants to one that's focused more on distributed and even residential solar solutions on rooftops and parking lots*.
>
> We are already planning for this transition now within NRG, so that any potential decline in either the availability of utility-sized solar projects or in the attractiveness of the returns being realized on these projects, *will be exceeded in aggregate by the increase in the business we are doing on smaller distributed and residential solar projects* . . . . (emphasis added).[4]

9-22 Cont.

In sum, distributed generation is not only feasible, it is environmentally and economically preferable to remote, utility-scale renewable energy generation facilities like the Iris Cluster Solar Project.

The DEIR's lack of support for its conclusory assertions about distributed generation must be remedied. Without this necessary information, the public and decisionmakers cannot understand the actual benefits of potential alternatives and how they relate to the Project. Public Resources Code §21002; CEQA Guidelines §15126.6(a); *Village of Laguna Beach*, 134

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[4] Seeking Alpha, April 22, 2011, "NRG Energy's CEO Discusses Q4 2010 Results – Earnings Call Transcript," at p. 7, *available at:* http://seekingalpha.com/article/254272-nrg-energy-s-ceo-discusses-q4-2010-results-earnings-call-transcript (attached hereto as Exhibit 5)

Cal.App.3d at 1028; *Vineyard Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 428; *Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* ("*Berkeley Keep Jets*") (2001) 91 Cal.App.4th 1344, 1355-1356.

9-22 Cont.

C. The DEIR Must Analyze the Project's Significant Agricultural Impacts.

As discussed above, the Project would have a significant impact on agricultural production by terminating and preventing all agricultural use of the subject lands for up to *40 years*, and potentially indefinitely. DEIR 3-11, 3-14, 4.2-18, 4.10-11. Yet the DEIR ignores or mistakenly dismisses many of the Project's significant negative impacts on Imperial Valley agriculture, including the following six.

First, the DEIR ignores the fact that the Land Use Element's use standards on lands designated as "Agriculture" *prohibit* the proposed utility-scale electrical generation and transmission uses proposed here, as discussed above. DEIR 4.10-11 (asserting, without analysis of the Land Use Element's use standards, that the "project facilities are a conditionally permitted use under the A-2, A-2-R, and A-3 zones and, therefore, are considered consistent with the Agriculture General Plan land use designation"). The DEIR also erroneously concludes that the Project is consistent with Objective 2.1 of the General Plan Agricultural Element. DEIR 4.2-7. These omissions violate CEQA, which requires a thorough General Plan consistency analysis. Where, as here, general plan requirements are adopted to protect environmental quality, departure from those general plan standards constitutes evidence of a significant environmental impact. The Governor's Office of Planning and Research has made this clear in its *CEQA Technical Advice Series* (September 1994):

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> The agency should also rely upon its general plan as a source of environmental standards. For instance, policies for the conservation of agricultural land may yield a threshold based on soil type, project size, and water availability.

Id., "Thresholds of Significance: Criteria for Defining Environmental Significance." Here, the General Plan has gone one step further by specifically designating the subject sites for exclusively "Agriculture" use and the "placement of new non-agricultural land uses such that agricultural fields or parcels become isolated or more difficult to economically and conveniently farm." DEIR 4.2-7. Thus, it is clear that the General Plan's land use standards and policy for the conservation of agricultural land forbid the proposed utility-scale energy generation and transmission use. Violation of this environmental standard demonstrates the significance of the Project's impacts on the environment. *The Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 930 (holding that "if substantial evidence supports a fair argument that the proposed project conflicts with [the applicable land use policies and regulations, and those policies were adopted *in order to avoid or mitigate environmental impacts*], this constitutes grounds for requiring an EIR").

Second, the DEIR concludes that the "net reduction in [Prime Farmland and Farmland of Statewide Importance] within the project study areas would be" reduced "to a less than significant" level by "ensur[ing] that the project applicant adheres to the terms of the agricultural restoration plans prepared for each of the project sites." DEIR 4.2-13. But the DEIR fails to account for the fact that when the proposed conditional use permits expire, the Project applicant – or another solar energy developer – could and may well apply for another conditional use permit to use the Project sites for *another* 40 years for the same non-agricultural purposes. Nothing prevents this outcome, which would eviscerate the proposed restoration plan requirement.

9-24

Third, the DEIR fails to analyze the many ways in which the Project would impede agricultural operations on farmland surrounding the Project sites, such as those discussed above in Section I(B). Instead, the DEIR erroneously concludes that "the operation of the solar generating facilities is not expected to inhibit or adversely affect adjacent agricultural operations through the placement of sensitive lands uses, generation of excessive dust or shading, or place [sic] additional development pressures on adjacent areas." DEIR 4.2-16 (quote), 4.2-17 to 4.2-18. To understand the fallacy of the DEIR's conclusion, one need only observe the increasingly rapid conversion of farmland to non-agricultural uses in the Project area as more and more industrial-scale electrical generation projects are proposed and built there. *See* DEIR 2-2, 4.2-9.

Among the many serious impacts the Project will cause and/or contribute cumulatively to on surrounding farmland is an increase in temperature and reduction in humidity, which will necessitate additional irrigation while likely reducing efficiency and crop productivity. Abatti Letter, p. 1; Exhibit 3 at 1. Furthermore, the Project will impede crop dusting on surrounding farmland, particularly where other existing or planned electrical generation facilities abut the land on other sides. It will not only make it more dangerous for pilots to access the land, it will increase the likelihood of the planes inadvertently spraying the adjacent electrical generation facilities and causing complaints. In addition, because continued cultivation of the farmland will produce dust that will likely drift onto the adjacent solar panels and associated equipment, the solar project operators will have further incentive to pressure the surrounding farmers to sell their lands or stop farming. The DEIR either wholly ignores or fails to fully analyze these impacts and thereby violates CEQA.

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Fourth, the DEIR fails to analyze how the Project would affect agriculture *countywide* due to the cumulatively significant conversion of fertile farmland to non-agricultural uses. As these utility-scale energy projects convert more and more agricultural land to non-agricultural uses, more and more agriculture-serving businesses will be forced to close, due to both declining revenues and logistical problems. And as the quantity and quality of agriculture-serving businesses decrease in the County, more and more farmers will find it uneconomical or impractical to keep farming and be forced to sell, lease or use their lands for non-agriculture purposes. The DEIR violates CEQA by ignoring this "spiral of death" leading to ever more farmland conversion to industrial uses.

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Fifth, the DEIR fails to adequately analyze whether the Project could disrupt the functioning of the lone local airport servicing agricultural spraying operations – the Johnson Brothers Airport, described above – and put local pilots at significant risk due to the glint and glare from the Project's solar panels, as well the construction of numerous tall structures. The DEIR erroneously dismisses these aviation (and agricultural services) impacts because there are or will soon be many tall structures in the area associated with other "nearby solar farms," and because "the agricultural crop dusting will be reduced in the immediate area." DEIR 4.8-18 (first quote), 4.8-19 (second quote). The DEIR also claims that "the projects would not use materials that would reflect significant levels of glare or glint upwards in a manner that could affect flight operations." DEIR 4.1-29. All three rationales fail.

The DEIR's first rationale defies reason: more tall structures near the airport and farmland served by Frontier Agricultural Services will create *greater collision risk*, not less. The DEIR's second rationale just proves the point that as the number and acreage of local farms decreases, so too will the crop dusting and airport services' business, eventually causing the businesses to close and leaving the remaining farmers without those important services. And the DEIR's third rationale fails because the DEIR never specifies the make or model of the panels to be used by the Project or provide visual evidence to support its assertion. DEIR 4.1-29. Without more, especially given the history of utility-scale solar panels producing significant glare,[5] the DEIR lacks the requisite "substantial evidence" to support its conclusion that the Project would not produce glare. *Vineyard*, 40 Cal.4th at 426; *Laurel Heights Improvement Association v. Regents of the University of California* (1988) 47 Cal.3d 376, 409 n. 12.

9-27

Sixth, the DEIR wrongly concludes that the conversion of land under Williamson Act Contract presents no significant impact because the "Williamson Act Cancellation process [will be completed] in accordance with Government Code Section 51282(a)" and because the applicant will restore the Project sites to agricultural use after the conditional use permits expire. DEIR 4.2-16. As discussed above, the proposed cancellation of the Williamson Act contracts on 683.9 acres of high-quality farmland is *not* "consistent with the applicable provisions of the . . . county general plan." Government Code § 51282(b)(3). As a result, and because the benefits of cancellation do *not* "outweigh the objectives of [the Williamson Act]," any Williamson Act contract cancellation as part of the Project would violate the Act and constitute a significant impact under CEQA. *Id.* § 51282(c).

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[5] Glint and glare from a utility-scale solare energy generation facility in southern Imperial County may have caused or contributed to the June 4, 2014 military jet crash in the City of Imperial, which severely damaged at least three homes and hospitalized the pilot. Infoscape.com, June 9, 2014, "Did the Glint of a Few Million Solar Panels Cause a Military Jet to Crash in California?," *available here*:
http://infoscape.com/did-the-glint-of-a-few-million-solar-panels-cause-a-military-jet-to-crash-in-california/ (attached as Exhibit 6 hereto).

D. The DEIR Must Analyze the Project's Impacts on the Greater Sandhill Crane, the Burrowing Owl and Other Listed, Rare and Important Species.

The Project would have potentially significant impacts to numerous species, including the greater sandhill crane. DEIR 4.4-6 to 4.4-10, 4.4-12 to 4.4-18. According to the DEIR, "the greater sandhill crane is state listed as threatened and is also on the [Migratory Bird Treaty Act] list of sensitive birds." DEIR 4.4-7. The crane "could be found on the project sites and . . . in adjacent [alfalfa and bermuda] fields." *Id.* Yet despite this admission of potential significant impacts to the crane, the DEIR completely fails to analyze the Project's impacts on the species. DEIR 4.4-12 to 4.4-18. Indeed, except for DEIR 4.4-7 and DEIR Appendix E – which both discuss existing conditions – there is no mention of the greater sandhill crane in the DEIR. DEIR 4.4-7; DEIR Appendix E, Biological Resources Evaluation Technical Report, p. 15.

The Project will also have a significant impact on the burrowing owl. DEIR 4.4-13. The construction impact to "burrowing owl foraging habitat is considered a *significant impact,*" as are the indirect construction impacts. *Id.* Operational impacts would also "be considered a *significant impact* and mitigation would be required." *Id.* However, the DEIR's analysis of these threats is inadequate.

9-29

The burrowing owl surveys completed were inadequate, making any analysis based on those surveys inadequate as well. CDFW sets forth specific guidelines for burrowing owl surveys, yet the County failed to follow those procedures.[6] The Biological Resources Evaluation Technical Report identifies the dates that burrowing owl surveys were completed – four surveys at each of the four sites between April 29, 2013 and July 15, 2013. DEIR Appendix E, Biological Resources Evaluation Technical Report, p. 10. However, CDFW requires that of the four surveys completed, one must occur between February 15 and April 15. CDFW 2012 Staff Report, p. 28. None were performed between those dates. DEIR Appendix E, Biological Resources Evaluation Technical Report, p. 10. Furthermore, the CDFW guidelines call for three weeks between each of the three remaining visits that occur after April 15. CDFW 2012 Staff Report, p. 28. Again, the burrowing owl surveys failed to meet this requirement. DEIR Appendix E, Biological Resources Evaluation Technical Report, p. 10. Without adequate surveys of the Project area the public and decisionmakers cannot accurately determine the impacts of the Project on burrowing owls and their habitat, in violation of CEQA. CEQA Guidelines §15144; *Vineyard*, 40 Cal.4th at 428; *Berkeley Keep Jets*, 91 Cal.App.4th at 1355-1356.

Not only was the focused survey for the burrowing owl inadequate, but the DEIR's

[6] CDFW, *Staff Report on Burrowing Owl Mitigation*, March 7, 2012, available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843 ("CDFW 2012 Staff Report") (attached hereto as Exhibit 7).

discussion of impacts to the owl and mitigation measures to protect it also fails. The thousands of Project photovoltaic panels would present a substantial collision risk to burrowing owls, particularly given that the height of the panels – up to 30 feet above the ground – would likely be about the same height at which the owls typically forage. DEIR 3-9. Furthermore, to the extent the Project would eliminate burrowing animals and their burrows from the Project sites, it would significantly impact the owls by (1) reducing the abundance of prey for the owls, and (2) destroying their nesting habitat, as burrowing owls use burrows created by other animals instead of making their own. DEIR 4.4-15 to 4.4-17.

An EIR must avoid potentially significant impacts where it is feasible to do so. Public Resources Code § 21002; Guidelines §§ 15121, 15125, 15126, 15126.4. But despite the clear confirmation that the project area is occupied by "15 adult burrowing owls and one juvenile burrowing owl," as well as "eight occupied burrows and six active burrows," and construction and operation would both result in a significant impact to the species, the DEIR incorrectly assumes that with limited mitigation this impact would be less than significant. DEIR 4.4-13. In fact, this assumption does not follow from the facts for three reasons.

9-29 Cont.

First, such significant impacts to the burrowing owl – direct mortality, entrapment or injury in crushed burrows, and loss of burrows or other habitat – cannot simply be mitigated by avoiding burrows or evicting the owls from their burrows through a one-way door. DEIR 4.4-13, 4.4-15 to 4.4-16. Indeed, given the physical dimensions of the solar collections, avoiding burrows is not always possible, and even where it is, it does not mitigate the impacts of noise or night lighting. DEIR 4.4-13 ("Noise and vibrations from construction equipment may disturb or disrupt burrowing owl nesting behavior").

Second, the DEIR erroneously asserts that construction noise impacts would be mitigated by a buffer of 160 feet. DEIR 4.4-15 to 4.4-16. However, 160 feet would not be sufficient to protect the burrowing owl. Contrary to the DEIR's assertion, these mitigations would not make the impacts to the burrowing owl less than significant.

Third, where avoidance fails, this protected species would be forced to leave its burrow. DEIR 4.4-16. However, the DEIR fails to analyze what effect this "mitigation" would have on the species. *Id.* A single statement that eviction and other mitigation measures "shall only be completed upon prior approval by and cooperation with the CDFW" does not suffice for analysis of this impact and subsequently, fails to provide the public and decisionmakers with sufficient information to fully consider the impacts of the Project. DEIR 4.4-16; CEQA Guidelines §15144; *Vineyard*, 40 Cal.4th at 428; *Berkeley Keep Jets,* 91 Cal.App.4th at 1355-1356. Deferral of mitigation measures to a future date with no guidelines on what those mitigations require, violates CEQA. CEQA Guidelines §15126.4; *Endangered Habitats League v. County of Orange* (2005) 131 Cal.App.4th 777, 793-4 (mitigation may be deferred *only where* it includes specific performance criteria).

9-30

The impacts to burrowing owls must be better understood with a more thorough survey covering the entire Project area and conforming to the CDFW's survey protocols. Only then can the impacts be adequately analyzed and appropriate mitigation measures presented. Even with attempted avoidance or eviction as mitigation, however, the impact to burrowing owls would remain significant.

9-30 Cont.

The DEIR also fails to address the dangerous "lake" effect that the Project's reflective solar panels may create, and its impacts on avian species. The "pseudo-lake effect" occurs when glare, glint, and reflection from the PV solar panels appears as a large body of water to birds flying above the facility, which can in turn entice them to dive downwards and collide with the solar panels.[7] Solar projects' reflective panels often attract migratory birds searching for water. This "pseudo-lake effect" is suspected to be one of the main causes of migratory bird trauma and death at the PV facility Desert Sunlight.[8] Yet here, the DEIR downplays this documented potential for glint, claiming that the panels will have a low reflectivity, and completely ignores the potential impact to birds. DEIR 4.1-29 to 4.1-30.

The DEIR admits that "land traffic in roadways around the proposed parcels might be exposed to certain degree of glint," but never once addresses the impact on wildlife, and specifically the avian species that fly overhead. DEIR Appendix B, Reflectivity Analysis, p. 27; See also DEIR section 4.4 (Biological Resources). The DEIR admits that there is potential for numerous protected avian species to be found at the project site, including the greater sandhill crane, loggerhead shrike, yellow warbler, ferruginous hawk, mountain plover, long billed curlew, short billed dowitcher, and horned lark. DEIR 4.4-7 to 4.4-10. However, it completely fails to consider the impacts of glint and the pseudo-lake effect on these species.

9-31

The DEIR's failure to provide adequate studies to understand the Project's impacts on critical environmental resources violates CEQA's informational purpose and prevents the public and decisionmakers from fully considering the impacts of the Project. CEQA Guidelines § 15144; *Vineyard*, 40 Cal.4th at 428; *Berkeley Keep Jets*, 91 Cal.App.4th at 1355-1356.

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[7] *See* Chris Clarke, July 10, 2013, "Endangered Bird Found Dead at Desert Solar Power Facility," Rewire, *KCET* (attached hereto as Exhibit 8).

[8] National Fish and Wildlife Forensics Laboratory *Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis*, Rebecca A. Kagan, Tabitha C. Viner, Pepper W. Trail, and Edgard O. Espinoza ("FWS"), pp. 1, 11, available at: http://docketpublic.energy.ca.gov/PublicDocuments/09-AFC-07C/TN201977_20140407T161504_Center_Supplemental_Opposition_to_Motion.pdf (attached hereto as Exhibit 9).

E. The DEIR Must Analyze the Project's Stray Voltage and Ground Potential Rise Impacts.

The DEIR notes that the Project could cause "ground potential rise" if not properly grounded. DEIR 3-21. The DEIR describes ground potential rise as being "caused by electrical currents that occur at electrical substations, power plants, or high-voltage transmission lines and are injected into the earth at the grounding electrode." *Id.* at n. 1. As the DEIR admits, the "resulting potential rise can cause *hazardous voltage*, *many hundreds of yards away* from the grounding electrode location." *Id.* (emphasis added). This has the potential to significantly impact farmers and residents on surrounding lands, like Joseph Tagg. But the DEIR fails to analyze this possibility or the consequences of coming into contact with such "hazardous voltage." *Id.* Instead it attempts to brush this potentially significant impact under the rug with the conclusory statement – unsupported by any details or evidence – that a "grounding system would be installed to permit dissipation of ground fault currents and minimize ground potential rise." DEIR 3-21. This does not constitute the thorough analysis CEQA requires

9-32

F. The DEIR Must Analyze the Project's Direct, Indirect and Embedded Greenhouse Gas Emissions.

The DEIR admits that Project construction will produce 1,439 tCO_2e per year, and that operational emissions will be 124 tCO_2e per year. DEIR 4.7-9. However, the DEIR only accounts for construction emissions "generated from operation of both on-road and off-road equipment." *Id.* But the County must do more. The FEIR must also (1) assess the Project's substantial *embedded* greenhouse gas emissions: the GHG emissions associated with production of the materials used to construct the Project, such as the photovoltaic panels; and (2) compute the change in GHG emissions from and carbon sequestration in the soil on the Project site resulting from the Project's conversion of the land from agricultural production to the proposed solar farm. The DEIR did neither and this inadequacy must be remedied.

9-33

V. CONCLUSION

The Project's industrial use of lands designated "Agriculture" is specifically forbidden by the Imperial County General Plan. Therefore the County may not approve the Project. Despite this the County has developed a DEIR for the Project. While Backcountry maintains that the County may not approve the Project under the current General Plan, it nonetheless provides the foregoing comments on the Project's DEIR, so that these inadequacies can be remedied prior to any potential Project approval. 9-34

Respectfully submitted,

Stephan C. Volker
Attorney for Backcountry Against Dumps, Donna Tisdale, Carolyn Allen, Danny Robinson, William Robinson, and Joseph Tagg

SCV:taf

LIST OF EXHIBITS

1. John M. Lowrie, California Department of Conservation, Letter to Armando Villa re: Cancellation of Land Conservation (Williamson Act) Contract No. 2001-00706, November 1, 2011;

2. Dan Otis, California Department of Conservation, Letter to Patricia Valenzuela re: Notice of Preparation for a DEIR for Imperial Solar Energy Center South, July 16, 2010;

3. Vasilis Fthenakis and Yuanhao Yu, "Analysis of the Potential for a Heat Island Effect in Large Solar Farms," *presented at* 39th IEEE Photovoltaic Specialists Conference, Tampa, Florida, June 17-23, 2013;

4. Connie L. Valenzuela, Imperial County Agricultural Commissioner, Letter to Armando Villa re: CUP 10-0035 8 Minutenergy Renewables, LLC, Calipatria Solar Farm II, February 25, 2011;

5. Seeking Alpha, April 22, 2011, "NRG Energy's CEO Discusses Q4 2010 Results – Earnings Call Transcript;"

6. Infoscape.com, June 9, 2014, "Did the Glint of a Few Million Solar Panels Cause a Military Jet to Crash in California?," available at: http://infoscape.com/did-the-glint-of-a-few-million-solar-panels-cause-a-military-jet-to-crash-in-california/;

7. California Department of Fish and Wildlife, *Staff Report on Burrowing Owl Mitigation*, March 7, 2012, available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843;

8. Chris Clarke, July 10, 2013, "Endangered Bird Found Dead at Desert Solar Power Facility," Rewire, *KCET*;

9. National Fish and Wildlife Forensics Laboratory, Rebecca A. Kagan, Tabitha C. Viner, Pepper W. Trail, and Edgard O. Espinoza, *Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis*, available at: here: http://docketpublic.energy.ca.gov/PublicDocuments/09-AFC-07C/TN201977_20140407T161504_Center_Supplemental_Opposition_to_Motion.pdf.

EXHIBIT
1

NATURAL RESOURCES AGENCY EDMUND G. BROWN, JR., GOVERNOR

DEPARTMENT OF CONSERVATION

Managing California's Working Lands

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • FAX 916 / 327-3430 • TDD 916 / 324-2555 • WEBSITE conservation.ca.gov

November 1, 2011

Mr. Armando G. Villa, Director
Imperial County
Department of Planning and Development Services
801 Main Street
El Centro, CA 92243

Dear Mr. Villa:

SUBJECT: Cancellation of Land Conservation (Williamson Act) Contract No. 2001-00706; Landowner: James R. & Barbara A. Smith; Applicant: 8 Minute Energy (Calipatria Solar Farm II); APN 022-170-005

The Department of Conservation (Department) monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act. The Department has reviewed the application submitted by the Imperial County Department of Planning and Development Services (County) regarding the referenced cancellation and offers the following recommendations.

Project Description

The petition proposes to cancel 563 acres of agricultural land subject to Williamson Act Contract in order to build a photovoltaic energy facility (Project) which will generate a total of 50 megawatts. The Project Site is located approximately one mile north of Calipatria, California within Imperial County and is bounded by Blair Road to the east, E. Peterson Road to the north, W. Lindsey Road to the south and the Southern Pacific Railroad to the west. The Calipatria State Prison is located to eth northeast of the project site. According to the petition, the applicant has submitted a Conditional Use Permit for a 40 year term.

Cancellation Findings

Government Code (GC) section 51282 states that tentative approval for cancellation may be granted only if the local government makes ***either*** one of the following findings:

1) Cancellation is **consistent** with purposes of the Williamson Act, (not addressed by the cancellation petition) ***or***
2) Cancellation is in the **public interest.**

The following are the requirements for the public interest findings required under GC section 51282 (above):

2) Cancellation is in the Public Interest

For the cancellation to be in the public interest, the Board must make both of the following findings:

a. Other public concerns substantially outweigh the objectives of the Williamson Act, and

b. There is no *proximate, noncontracted land*[1] which is available and *suitable*[2] for the use proposed on the contracted land, or, development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

Department Comments on the Public Interest Cancellation Findings
The Department has reviewed the petition and additional information supplied by the applicant, and offers the following comments with regards to the submitted public interest findings:

a) Other public concerns substantially outweigh the objectives of the Williamson Act:
Renewable energy is energy generated from sources such as the sun, wind, the ocean, and the earth's core. Solar photovoltaic electricity qualifies as a renewable energy source for the purposes of California's Renewables Portfolio Standards. In April, Governor Brown signed Senate Bill 2 (First Extraordinary Session) which extends the current 20% renewables portfolio standard target in 2010 to a 33% renewables portfolio standard by December 31, 2020. Through a number of legislative actions and/or policies, the State has placed an importance on renewable energy as well as preserving farmland.

There are many factors in determining whether the production of solar energy is of a higher public interest than the pre-existing agricultural use of the land. Some factors may include the quality of the soil, current agricultural production and the availability of reliable irrigation water. The Department has no comment regarding this particular finding.

[1] "Proximate, noncontracted land" means land not restricted by contract, which is sufficiently close to land which is so restricted that it can serve as a practical alternative for the use which is proposed for the restricted land. (GC section 51282).

[2] "Suitable" for the proposed use means that the salient features of the proposed use can be served by the land not restricted by contract. Such nonrestricted land may be a single parcel or may be a combination of contiguous or discontiguous parcels. (GC section 51282).

b) *There is no available and suitable proximate non-contracted land for the use proposed on the contracted land*:
According to the petition, the property was chosen due to its close proximity to the electrical grid which has the capacity for the solar facility. The Department has no comment regarding this particular finding.

Cancellation Findings Conclusion
Imperial County Board of Supervisors could approve the cancellation application based on the required public interest findings only if the Board feels it has adequate amount of information and has built the record to meet the statuary requirements.

Compatible Use
The Department has determined that commercial solar facilities are an industrial use of the land and inconsistent with the intent of the Williamson Act and its protection of open space and agricultural resources. The suggestion that a solar facility is a compatible use as defined by the Williamson Act is misguided. The footprint of a solar facility and the fact that it does not allow for the continuation of agricultural operations or open space activities as the main operation of the land, make it inconsistent with many different sections of the Act. The Department views GC §51238, which cites the compatibility of gas, electric, water, communication, or agricultural labor housing facilities in an *agricultural preserve*, as referring to those structures which have minimal impact on the land, and which are necessary for the needs of a community. The Department has consistently interpreted this section to describe overhead power lines, electrical substations, underground communication lines, and water lines, all of which take up a minimal amount of land.

Additionally, the Williamson Act provides a preferential tax assessment on contracted land in exchange for limiting the land to agricultural or open space uses. Agricultural use means the use of the land for the purpose of producing an agricultural commodity for commercial purposes (GC§51201(a)). Open space is the use or maintenance of land in a manner that preserves its natural characteristics, beauty, or openness for the benefit and enjoyment of the public or for wildlife habitat (GC§51201(o)). A commercial solar facility does not meet the definition of an agricultural use and solar energy does not meet the definition of an agricultural commodity, which means any and all plant and animal products produced in this State for commercial purposes. Nor is it consistent with the definition of an open space use. In addition, GC§51242 requires that land enrolled in a Williamson Act contract be devoted to agricultural use. When a solar project displaces all of the agriculture, and replaces it with a use that has no agricultural utility, the land clearly ceases to be devoted to agriculture.

Neither the Legislature nor City Councils or Boards of Supervisors can override the restrictions included within the Williamson Act or the Constitutional provision enabling the Act. The construction of solar facilities removes and replaces agriculture or open space uses to have a significant impact on agricultural and open space lands, including grazing land. After a review of the proposal, the Department does not believe that the County can consider commercial solar facilities compatible with the Williamson Act contract.

Site Restoration Plan

Since solar technology is advancing rapidly over time, the amount of open land that is needed for the same amount of solar energy production may decrease significantly in the future. That same land may also one day be needed again for the production of food.

It is important that proposals for the conversion of agricultural land to solar energy projects include a detailed site restoration plan describing how the project proponents will restore the land back to its current condition including irrigation supplies if and when some or all of the solar panels are removed. This type of plan would be similar to SMARA-required restoration plans on proposed mining sites. The Department recommends that an acceptable site restoration plan be required by the County for the proposed project.

Thank you for the opportunity to provide comments on the proposed cancellation. Please provide our office with a copy of the Notice of Public Hearing on this matter ten (10) working days before the hearing and a copy of the published notice of the Board's decision within thirty (30) days of the tentative cancellation pursuant to GC section 51284. If you have any questions concerning our comments, please contact Sharon Grewal, Environmental Planner at (916) 327-6643.

Sincerely,

John M. Lowrie
Program Manager
Williamson Act Program

EXHIBIT
2

NATURAL RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

DEPARTMENT OF CONSERVATION

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

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July 16, 2010

VIA FACSIMILE (760) 353-8338
Ms. Patricia Valenzuela, Planner III
Imperial County Planning & Development Services
801 main Street
El Centro, CA 92243

Subject: Notice of Preparation for a DEIR for Imperial Solar Energy Center South - SCH# 2010061038

Dear Ms. Valenzuela:

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Notice of Preparation (NOP) for a DEIR for Imperial Solar Energy Center South. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the proposed project's potential impacts on agricultural land and resources.

Project Description:

The project is located on Pullman Road and Anza Road in an unincorporated part of Imperial County on the US/Mexico Border. The project site is 903 acres of agricultural land. The site is designated Prime Farmland and Farmland of Statewide Importance per the Imperial County Farmland Mapping and Monitoring Program maps. The existing General Plan designation is Agriculture and the zoning is General Agriculture Rural Zone and Heavy Agriculture.

The project proposes the development of a solar energy center and would consist of ground mounted photovoltaic solar power generation system, supporting structures, an operations and maintenance building, substation, water treatment facility, plant control system, meteorological station, roads and fencing. The project also plans a 120-foot wide Right-of-Way from the project site, along BLM land, within BLM's designated Utility Corridor "N" to the Imperial Valley Substation.

Division Comments:

The initial study for the NOP stated that because solar generation facilities are an allowed use within the zone district and subject to a conditional use permit, they do not conflict with existing zoning for agriculture and thus no impact is identified. However, the entire purpose of going through the conditional use permit process is to trigger a thorough CEQA review of a project's potential impacts. The development of 903 acres of Prime Farmland and Farmland of Statewide Importance is a substantial amount of development and displacement of agricultural resources.

The Department of Conservation's mission is to balance today's needs with tomorrow's challenges and foster intelligent, sustainable, and efficient use of California's energy, land, and mineral resources.

The Department of Conservation considers the construction of a solar facility that removes and replaces agriculture on agricultural lands to have a significant impact on those agricultural lands, including grazing land. While solar panels may be an allowed use under the County zoning and General Plan, they can and should be considered an impact under CEQA to the project site's agricultural resources.

Although direct conversion of agricultural land is often an unavoidable impact under California Environmental Quality Act (CEQA) analysis, mitigation measures must be considered. A principal purpose of an EIR is to present a discussion of mitigation measures in order to fully inform decision-makers and the public about ways to lessen a project's impacts. In some cases, the argument is made that mitigation cannot reduce impacts to below the level of significance because agricultural land will still be converted by the project, and, therefore, mitigation is not required. However, reduction to a level below significance is not a criterion for mitigation. Rather, the criterion is feasible mitigation that lessens a project's impacts. Pursuant to CEQA Guideline §15370, mitigation includes measures that "avoid, minimize, rectify, reduce or eliminate, or compensate" for the impact. For example, mitigation includes *"Minimizing impacts by limiting the degree or magnitude of the action and its implementation (§15370(b))"* or *"Compensating for the impact by replacing or providing substitute resources or environments (§15370(e))."*

All measures allegedly feasible should be included in the DEIR. Each measure should be discussed, as well as the reasoning for selection or rejection. A measure brought to the attention of the Lead Agency should not be left out unless it is infeasible based on its elements.

Finally, when presenting mitigation measures in the DEIR, it is important to note that mitigation should be specific, measurable actions that allow monitoring to ensure their implementation and evaluation of success. A mitigation consisting only of a statement of intention or an unspecified future action may not be adequate pursuant to CEQA.

Project Impacts on Agricultural Land

When determining the agricultural value of the land, the value of a property may have been reduced over the years due to inactivity, but it does not mean that there is no longer any agricultural value. The inability to farm the land, rather than the choice not to do so, is what could constitute a reduced agricultural value. The Division recommends the following discussion under the Agricultural Resources section of the Draft EIR:

- Type, amount, and location of farmland (Prime, Unique, and Farmland of Statewide Importance) conversion that may result directly and indirectly from project implementation and growth inducement, respectively.
- Impacts on current and future agricultural operations; e.g., land-use conflicts, increases in land values and taxes, etc.
- Incremental project impacts leading to cumulative impacts on agricultural land. This would include impacts from uses allowed with the proposed solar facility, as well as impacts from past, current, and likely projects in the future.

Under California Code of Regulations Section 15064.7, impacts on agricultural resources may also be both quantified and qualified by use of established thresholds of significance. As such, the Division has developed a California version of the USDA Land Evaluation and Site Assessment (LESA) Model. The California LESA model is a semi-quantitative rating system for establishing the environmental significance of project-specific impacts on farmland. The model may also be used to rate the relative value of alternative project sites. The LESA Model is available on the Division's website at:

http://www.consrv.ca.gov/DLRP/qh_lesa.htm

Solar Facility Mitigations and Reclamation Plan

If the solar facility is considered a temporary displacement of agricultural resources, then there should be some assurances that it will be temporary and will be removed in the future. Hence the need for a reclamation plan. The loss of agricultural land (even temporary) represents a reduction in the State's agricultural land resources. The Division has witnessed the negative impacts of non-operational wind power generation facilities and related equipment that have been left to deteriorate on agricultural land. For that reason, the Division offers a variety of permitting conditions the County might use for energy projects on agricultural land:

- Require a reclamation plan suited for solar facilities, based on the principles of the Surface Mining and Reclamation Act (SMARA). As part of this plan, a performance bond or other similar measure may be used.
  - A typical requirement would be for the soil to be restored to the same condition it was in prior to the solar facility's construction. Whatever project-related materials have been brought in, or changes made to the land (i.e. graveling, roads, compaction, equipment), would be removed once the solar facility (or portions of) is no longer active.
- Solar projects are generally considered to be "temporary". The County could require that a new permit must be applied for after a certain period of time. Because this is a new and unprecedented use for agricultural land, this would allow the County more flexibility in determining what conditional uses or conditions may be most appropriate in the longer term.
- Require permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the direct loss of agricultural land.
  - Conservation easements will protect a portion of those remaining agricultural land resources and lessen project impacts in accordance with California Environmental Quality Act (CEQA) Guideline §15370. The Department highlights this measure because of its acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because it follows an established rationale similar to that of wildlife habitat mitigation.

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The proposed conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands can be conducted regionally or statewide, and need not be limited strictly to lands within the project's surrounding area. Mitigation for the loss of Prime Farmland

is suggested at a 2:1 ratio due to its importance in the State of California. The use of conservation easements is only one form of mitigation, and any other feasible mitigation measures should also be considered. Mitigations for temporary solar projects can also be flexible, especially in cases where there is a reclamation plan in place that requires the land to be returned to an agricultural state.

The Department also has available a listing of approximately 30 "conservation tools" that have been used to conserve or mitigate project impacts on agricultural land. This compilation report may be requested from the Division at the address or phone number at the conclusion of this letter. Of course, the use of conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered.

Thank you for giving us the opportunity to comment on the Notice of Preparation for a DEIR for Imperial Solar Energy Center South project. Please provide this Department with a copy of the DEIR, the date of any hearings for this particular action, and any staff reports pertaining to it. If you have questions regarding our comments, or require technical assistance or information on agricultural land conservation, please contact Meri Meraz, Environmental Planner, at 801 K Street, MS 18-01, Sacramento, California 95814, or by phone at (916) 445-9411.

Sincerely,

Dan Otis
Program Manager
Williamson Act Program

cc: State Clearinghouse

Imperial County Farm Bureau
1000 Broadway
El Centro, CA 92243
FAX (760) 352-0232

EXHIBIT
3

Analysis of the Potential for a Heat Island Effect in Large Solar Farms

Vasilis Fthenakis[1,2] and Yuanhao Yu[1]

[1] Center for Life Cycle Analysis, Department of Earth and Environmental Engineering, Columbia University, New York, NY

[2] PV Environmental Research Center, Brookhaven National Laboratory, Upton, NY

Abstract — **Large-scale solar power plants are being built at a rapid rate, and are setting up to use hundreds of thousands of acres of land surface. The thermal energy flows to the environment related to the operation of such facilities have not, so far, been addressed comprehensively. We are developing rigorous computational fluid dynamics (CFD) simulation capabilities for modeling the air velocity, turbulence, and energy flow fields induced by large solar PV farms to answer questions pertaining to potential impacts of solar farms on local microclimate. Using the CFD codes Ansys CFX and Fluent, we conducted detailed 3-D simulations of a 1 MW section of a solar farm in North America and compared the results with recorded wind and temperature field data from the whole solar farm. Both the field data and the simulations show that the annual average of air temperatures in the center of PV field can reach up to 1.9°C above the ambient temperature, and that this thermal energy completely dissipates to the environment at heights of 5 to 18 m. The data also show a prompt dissipation of thermal energy with distance from the solar farm, with the air temperatures approaching (within 0.3°C) the ambient at about 300 m away of the perimeter of the solar farm. Analysis of 18 months of detailed data showed that in most days, the solar array was completely cooled at night, and, thus, it is unlikely that a heat island effect could occur. Work is in progress to approximate the flow fields in the solar farm with 2-D simulations and detail the temperature and wind profiles of the whole utility scale PV plant and the surrounding region. The results from these simulations can be extrapolated to assess potential local impacts from a number of solar farms reflecting various scenarios of large PV penetration into regional and global grids.**

Index Terms – **PV, climate change, heat island, fluid dynamics**

I. Introduction

Solar farms in the capacity range of 50MW to 500 MW are being proliferating in North America and other parts of the world and those occupy land in the range from 275 to 4000 acres. The environmental impacts from the installation and operation phases of large solar farms deserve comprehensive research and understanding. Turney and Fthenakis [1] investigated 32 categories of impacts from the life-stages of solar farms and were able to categorize such impacts as either beneficial or neutral, with the exception of the "local climate" effects for which they concluded that research and observation are needed. PV panels convert most of the incident solar radiation into heat and can alter the air-flow and temperature profiles near the panels. Such changes, may subsequently affect the thermal environment of near-by populations of humans and other species. Nemet [2] investigated the effect on global climate due to albedo change from widespread installation of solar panels and found this to be small compared to benefits from the reduction in greenhouse gas emissions. However, Nemet did not consider local micro-climates and his analytical results have not been verified with any field data. Donovan [3] assumed that the albedo of ground-mounted PV panels is similar to that of underlying grassland and, using simple calculations, postulated that the heat island effect from installing PV on grassy land would be negligible. Yutaka [4] investigated the potential for large scale of roof-top PV installations in Tokyo to alter the heat island effect of the city and found this to be negligible if PV systems are installed on black roofs.

In our study we aim in comprehensively addressing the issue by modeling the air and energy flows around a solar farm and comparing those with measured wind and temperature data.

II. Field Data Description and Analysis

Detailed measurements of temperature, wind speed, wind direction, solar irradiance, relative humidity, and rain fall were recorded at a large solar farm in North America. Fig. 1 shows an aerial photograph of the solar farm and the locations where the field measurements are taken.

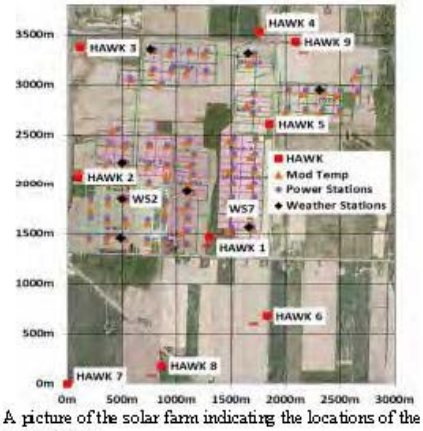


Fig. 1. A picture of the solar farm indicating the locations of the monitoring stations

The field data are obtained from 17 monitoring stations within and around the solar farm, including 8 weather stations (WS) and 9 Hawk stations (HK), all at 2.5 m heights off the ground. There also 80 module temperature (MT) sensors at the back-side of the modules close to each of the corresponding power stations. The WS and MT provide data at 1-min intervals, while the Hawk provides data every 30 minutes. The WS and MT data cover a period of one year from October 2010 to September 2011, while the Hawk data cover a period of 18 months from March 2010 through August 2011.

Hawk stations 3, 6, 7, 8 and 9 are outside the solar farm and were used as reference points indicating ambient conditions. The measurements from Hawk 3, 6, 8 and 9 agree very well confirming that their distances from the perimeter of the solar farm are sufficient for them to be unaffected by the thermal mass of the PV system; Hawk 7 shows higher temperatures likely due to a calibration inaccuracy. In our comparative data analysis we use Hawk 6 as a reference point and, since the prevailing winds are from the south, we selected the section around WS7 as the field for our CFD simulations. Figures 2 to 7 show the difference between the temperatures in Hawk 6 and those in the weather stations WS2 and WS7 within the field, and Hawks 1, 2, 4 and 5 around the solar field.

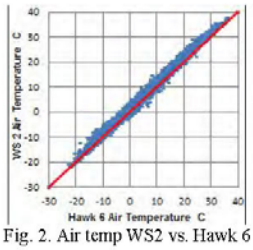


Fig. 2. Air temp WS2 vs. Hawk 6

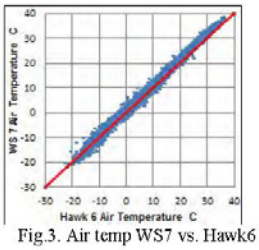


Fig.3. Air temp WS7 vs. Hawk6

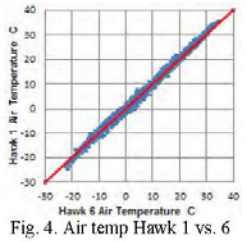


Fig. 4. Air temp Hawk 1 vs. 6

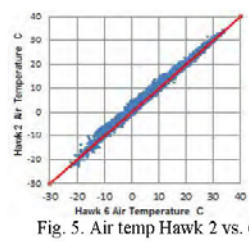


Fig. 5. Air temp Hawk 2 vs. 6

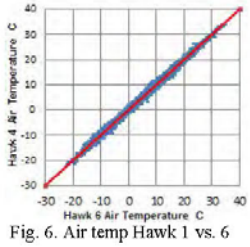


Fig. 6. Air temp Hawk 1 vs. 6

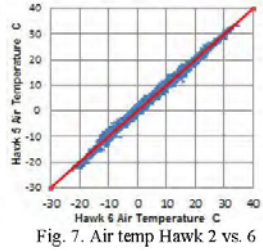


Fig. 7. Air temp Hawk 2 vs. 6

These figures and Table 1 show that with the exception of Hawk 4, the closer the proximity to solar farm the higher the temperature difference from the ambient (indicated by Hawk 6). The relative high temperatures recorded at Hawk 4, and also the relative low temperatures at Hawks 1 and 5 are explained by the prevailing wind direction, which for the time period used in our analysis (8/14/2010-3/14/2011) was Southerly (158°-202°). Hawk 4 is downwind of the solar farm, whereas Hawks 1 and 5 are upwind; the downwind station "feels" more the effect of the heat generated at the solar farm than the ones upwind.

Fig. 8 shows the decline in air temperature as a function of distance to solar farm perimeter. Distances for WS2 and WS7 are negative since they are located inside the solar farm site. WS2 is further into the solar farm and this is reflected in its higher temperature difference than WS7.

TABLE I
DIFFERENCE OF AIR TEMPERATURE (@2.5 M HEIGHTS) BETWEEN THE LISTED WEATHER AND HAWK STATIONS AND THE AMBIENT

Met Station	WS2	WS7	HK1	HK2	HK3	HK4	HK5	HK9
Temp Difference from H6 (°C)	1.878	1.468	0.488	1.292	0.292	0.609	0.664	0.289
Distance to solar farm perimeter (m)	-440	-100	100	10	450	210	20	300

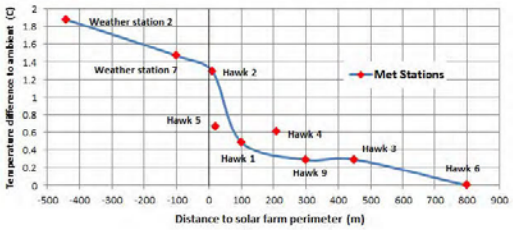


Fig. 8. Air temperature difference as a function of distance from the perimeter of the solar farm. Negative distances indicate locations within the solar farm.

We also examined in detail the temperature differences between the modules and the surrounding air. These vary throughout the year but the module temperatures are consistently higher than those of the surrounding air during the day, whereas at night the modules cool to temperatures below ambient; an example is shown in Fig. 9. Thus, this PV solar farm did not induce a day-after-day increase in ambient temperature, and therefore, adverse micro-climate changes from a potential PV plant are not a concern.

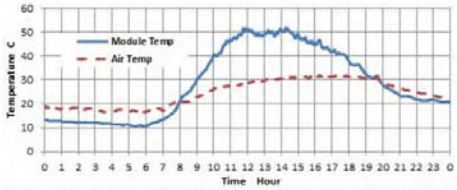


Fig. 9. Comparison of module temperature and air temperature 2.5 m off the ground on a sunny day (July 1, 2011)

III. CFD Model Development

In preliminary simulations we tested the Ansys CFX and FLUENT computational fluid dynamics codes (CFD) and decided to use FLUENT in detailed simulations. FLUENT offers several turbulence schemes including multiple variations of the k-ε models, as well as k-ω models, and Reynolds stress turbulence models. We used the standard, renormalized-group (RNG), and realizable k-ε turbulence closure scheme as it is the most commonly used model in street canyon flow and thermal stratification studies [5]. FLUENT incorporates the P-1 radiation model which affords detailed radiation transfer between the solar arrays, the ground and the ambient air; it also incorporates standard free convection and wind-forced convection models. Our choice of solver was the pressure-based algorithm SIMPLE which uses a relationship between velocity and pressure corrections to enforce mass conservation and obtain the pressure field. We conducted both three-dimensional (3-D) and 2-D simulations.

A 3-D model was built of four fields each covering an area of 93-meters by 73-meters (Fig. 10). Each field contains 23 linear arrays of 73-meter length and 1.8-meter width. Each array has 180 modules of 10.5% rated efficiency, placed facing south at a 25-degree angle from horizontal, with their bottom raised 0.5 m from the ground and their top reaching a height of 1.3 m . Each array was modeled as a single 73 m ×1.8 m × 1 cm rectangular. The arrays are spaced 4 meters apart and the roads between the fields are 8 m. Fig. 10 shows the simulated temperatures on the arrays at 14:00 pm on 7/1/2011, when the irradiance was 966 W/m^2. As shown, the highest average temperatures occur on the last array (array 46). Temperature on the front edge (array 1) is lower than in the center (array 23). Also, temperature on array 24 is lower than array 23, which is apparently caused by the cooling induced by the road space between two fields, and the magnitude of the temperature difference between arrays 24 and 46 is lower than that between arrays 1 and 23, as higher temperature differences from the ambient, result in more efficient cooling.

TABLE II
Modules Temperature

Arrays	1	23	24	46
Temperature ℃	46.1	56.4	53.1	57.8

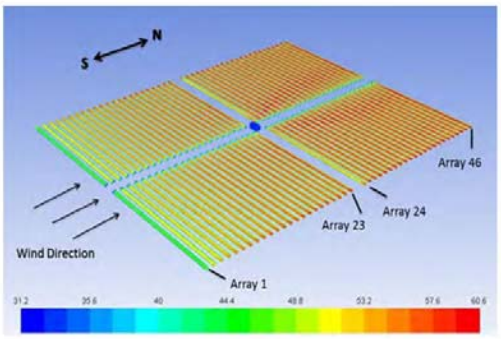
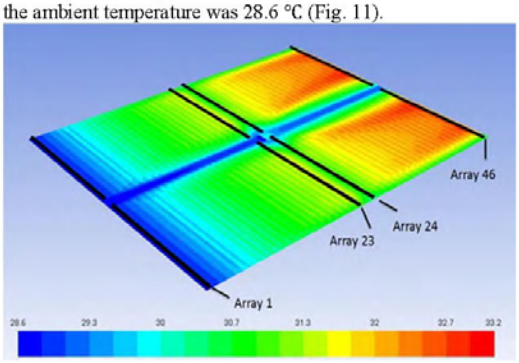
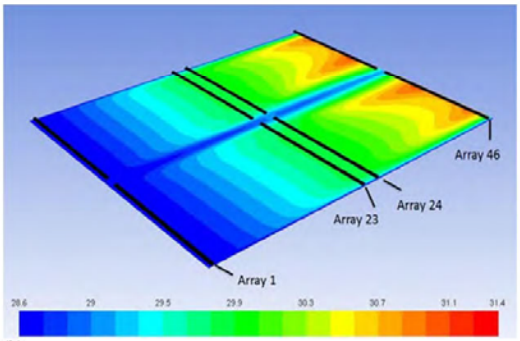


Fig. 10. Module temperatures from 3-D simulations of air flows and thermal exchange during a sunny day

Our simulations also showed that the air temperatures above the arrays at a height of 2.5 m ranged from 28.6 ℃ to 31.1℃; the ambient temperature was 28.6 ℃ (Fig. 11).



(a)



(b)

Fig. 11 Air temperatures from 3-D simulations during a sunny day. a) Air temperatures at a height of 1.5 m; b) air temperatures at a height of 2.5 m.

TABLE III
AIR TEMPERATURE

Temperature	Ambient (℃)	Low (℃)	High (℃)	Average (℃)
2.5m height	28.6	28.6	31.1	30.1
1.5m height	28.6	28.6	33.2	30.8

These simulations show a profound cooling effect with increasing height from the ground. It is shown that the temperatures on the back surface of solar panels is up to 30° C warmer than the ambient temperature, but the air above the arrays is only up to 2.5°C higher than the ambient (i.e., 31.1°C). Also the road between the fields allows for cooling, which is more evident at the temperatures 1.5 m off the ground (Fig. 11a). The simulations show that heat build-up at the power station in the middle of the fields has a negligible effect on the temperature flow fields; it was estimated that a power station adds only about 0.4% to the heat generated by the corresponding modules.

The 3-D model showed that the temperature and air velocity fields within each field of the solar farm were symmetrical along the cross-wind axis; therefore a 2-D model of the downwind and the vertical dimensions was deemed to be sufficiently accurate. A 2-D model reduced the computational requirements and allowed for running simulations for several subsequent days using actual 30-min solar irradiance and wind input data. We tested the numerical results for three layers of different mesh sizes and determined that the following mesh sizes retain sufficient detail for an accurate representation of the field data: a) Top layer: 2m by 1m, b) Middle layer: 1.5m by 0.6m, c) Bottom layer: 1m by 0.4m. According to these mesh specifications, a simulation of 92 arrays (length of 388m, height 9m), required a total of 13600 cells. Figures 12-15 show comparisons of the modeled and measured module and air temperatures.

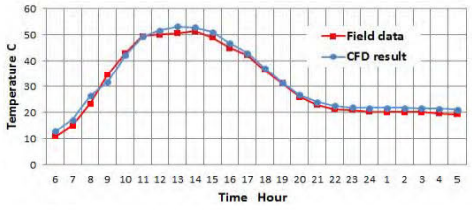


Fig. 12. Comparisons of field and modeled module temperatures; a sunny summer day (7/1/2011); 2-D simulations.

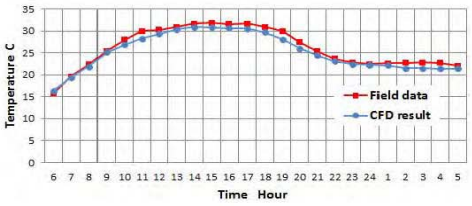


Fig. 13. Comparisons of field and modeled air temperatures at a height of 2.5 m; a sunny summer day (7/1/2011); 2-D simulations.

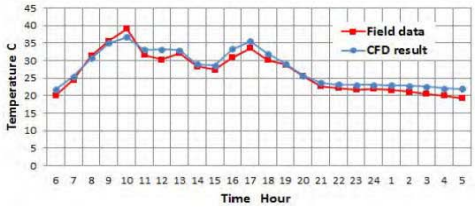


Fig. 14. Comparisons of field and modeled module temperatures; a cloudy summer day (7/11/2011); 2-D simulations.

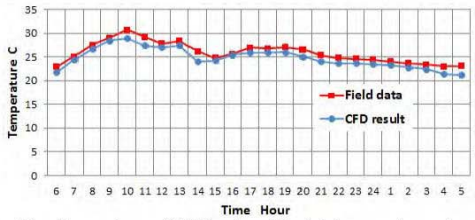
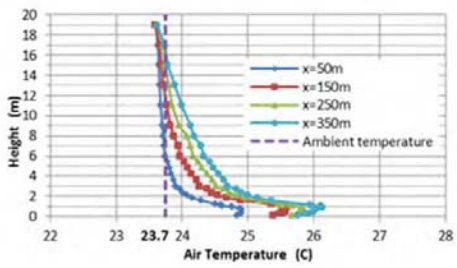
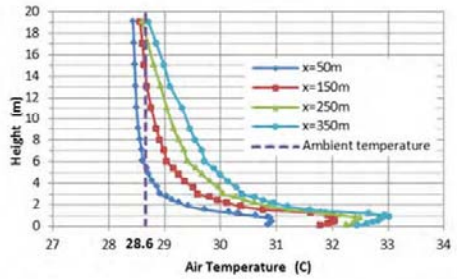


Fig. 15. Comparisons of field and modeled air temperatures at a height of 2.5 m; a cloudy summer day (7/11/2011); 2-D simulations.

Figures 16a and 16b show the air temperature as a function of height at different downwind distances in the morning and afternoon during a sunny summer day. At 9 am (irradiance 500 W/m2, wind speed 1.6 m/s, inlet ambient temperature 23.7°C), the heat from the solar array is dissipated at heights of 5-15m, whereas at 2 pm (irradiance 966 W/m^2, wind speed 2.8m/s, inlet ambient temperature 28.6°C , the temperature of the panels has reached the daily peak, and the thermal energy takes up to 18 m to dissipate.



(a) 9:00 am



(b) 2:00 pm

Fig. 16 Air temperatures within the solar farm, as a function of height at different downwind distances. From 2-D simulations during a sunny summer day (7/1/2011) at 9 am and 2 pm.

IV. Conclusion

The field data and our simulations show that the annual average of air temperatures at 2.5 m of the ground in the center of simulated solar farm section is 1.9°C higher than the ambient and that it declines to the ambient temperature at 5 to 18 m heights. The field data also show a clear decline of air temperatures as a function of distance from the perimeter of the solar farm, with the temperatures approaching the ambient temperature (within 0.3°C), at about 300 m away. Analysis of 18 months of detailed data showed that in most days, the solar array was completely cooled at night, and, thus, it is unlikely that a heat island effect could occur.

Our simulations also show that the access roads between solar fields allow for substantial cooling, and therefore, increase of the size of the solar farm may not affect the temperature of the surroundings. Simulations of large (e.g., 1 million m^2) solar fields are needed to test this hypothesis.

Acknowledgement

We are grateful to First Solar for providing data for this study.

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[4] Y. Genchi, M. Ishisaki, Y. Ohashi, H. Takahashi, & A. Inaba, "Impacts of large-scale photovoltaic panel installation on the heat island effect in Tokyo, " *in Fifth Conference on the Urban Climate*, 2003.

[5] Theory Guide, *ANSYS Fluent HELP 13.*

EXHIBIT
4

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Agricultural Commissioner
Sealer of Weights and Measures

Linda S. Evans
Assistant Agricultural Commissioner/
Asst. Sealer of Weights and Measures

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February 25, 2011

Armando G. Villa
Planning & Development Services Director
801 Main Street
El Centro, CA 92243

RE: CUP 10-0025 8 Minutenergy Renewables, LLC, Calipatria Solar Farm II

The project entails the construction, development and operation of a ground mounted 50 MW Photovoltaic solar energy facility. The proposed solar plant will convert approximately 563 acres of privately owned farmland to non-farm use. The project will be located approximately one mile north of Calipatria, California in Imperial County and is bounded by Blair Road to the east, E. Peterson Road to the north, W. Lindsey Road to the south, and the Southern Pacific Railroad to the west. Agricultural lands lie to the immediate north, south, east and west of the project. The Calipatria State Prison is located to the northeast of the project site. An algae farm (Earthrise Farms) is located adjacent to the northwest corner of the site across the Southern Pacific Railroad tracks.

The California Department of Conservation has classified the property as Farmland of Statewide Importance. This farmland supports crops that contribute directly to Imperial County's $1.45 billion gross agricultural production value. Temporary or permanent removal of any farmland out of production would have a direct negative impact on employment, income, sales and tax revenue.

During the construction phase and perhaps afterwards depending on whether this project will have some level of permanent staffing, neighboring agricultural operations would be impacted and restricted in their ability to use some pesticides or some pesticide application methods. Also, any complaints received by the construction site regarding nearby agricultural operations would need to be investigated; costs incurred to conduct investigations into incidents and complaints are not directly reimbursed by the state.

Since the project will be surrounded by farmland it will be exposed to higher than normal levels of dust and potential pesticide drift which will likely increase the cleaning requirements of the panels.

The land under the solar panels could harbor pests including noxious weeds, plant diseases, insects, and vertebrates which are detrimental to agriculture and could cause damage to adjacent fields and crops. This could be a problem if a cover crop is used for dust control and needs to be addressed or mitigated. In addition to direct crop damage caused by pests, if these solar panels are located next to or near any produce or organic fields, they could create food safety issues (i.e. E. coli in spinach caused by animal dropping getting into the field). Many produce growers today have to comply with Leafy Greens Agreements to ensure product safety.

Sincerely,

Connie L. Valenzuela
Agricultural Commissioner
Sealer of Weights and Measures

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NRG Energy's CEO Discusses Q4 2010 Results - Earnings Call Transcript

February 22, 2011 | about: NRG

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Christian Schade - Chief Financial Officer and Executive Vice President

Mauricio Gutierrez - Chief Operating Officer and Executive Vice President

Nahla Azmy - Vice President of Investor Relations

Jason Few - SVP of Mass Markets and Operations, Reliant Energy, Inc.

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Dan Eggers - Crédit Suisse AG

Brandon Blossman - Tudor, Pickering, Holt & Co. Securities, Inc.

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Theodore Durbin - Goldman Sachs Group Inc.

James Dobson - Wunderlich Securities Inc.

Brian Chin - Citigroup Inc

NRG Energy (NRG) Q4 2010 Earnings Call February 22, 2011 9:00 AM ET

Operator

Good day, ladies and gentlemen, and welcome to the Fourth Quarter and Full Year 2010 NRG Energy Earnings Conference Call. My name is Deanna, and I'll be your operator for today. [Operator Instructions] And I would now like to turn the call over to your host for today, Ms. Nahla Azmy, Senior Vice President of Investor Relations. Please proceed.

Nahla Azmy

Thank you, Deanna. Good morning, and welcome to our Fourth Quarter and Full Year 2010 Earnings Call.

This call is being broadcast live over the phone and from our website at www.nrgenergy.com. You can access the call presentation and press release through a link on the Investor Relations page of our website. A replay of the call will also be available on our website. This call, including the formal presentation and the question-and-answer session, will be limited to one hour. In the interest of time, we ask that you please limit yourself to one question with just one follow-up.

And now for the obligatory Safe Harbor statement. During the course of this morning's presentation, management will reiterate forward-looking statements made in today's press release regarding future events and financial performance. These forward-looking statements are subject to material risks and uncertainties that could cause actual results to differ materially from those in the forward-looking statements. We caution you to consider the important risk factors contained in our press release and other filings with the SEC that could cause actual results to differ materially from those in the forward-looking statements in the press release and this conference call.

In addition, please note that the date of this conference call is February 22, 2011, and any forward-looking statements that we make today are based on assumptions that we believe to be reasonable as of this date. We undertake no obligation to update these statements as the result of future events except as required by law.

During this morning's call, we will refer to both GAAP and non-GAAP financial measures of the company's operating financial results. For complete information regarding our non-GAAP financial information, the most directly comparable GAAP measures and a quantitative reconciliation of those figures, please refer to today's press release and this presentation.

And now with that, I'd like to turn the call over to David Crane, NRG's President and Chief Executive

Officer.

David Crane

Thank you, Nahla, and good morning, everyone, and welcome to our year-end 2010 earnings call. Today, with me, and participating in the presentation is Mauricio Gutierrez, the company's Chief Operating Officer; and Chris Schade, the company's Chief Financial Officer. Also with me today and available to answer questions are Jason Few, who runs NRG's retail company, Reliant; and Chris Moser, who runs the commercial operations function for this company.

So without further ado, to begin -- so ladies and gentlemen, current and perspective shareholders of NRG, as we speak today, it's now been 32 months since natural gas prices began their relentless fall and the economy at large entered into a great recession, the likes of which, I'm sure none of us wish to experience again in our lifetimes, yet the financial performance of NRG during this period has been superb. And that financial performance has been built on the foundation of an equally exceptional operating performance across all phases of our operations and across all our regions.

In 2010, the second full year of the great recession, our financial performance surpassed all previous years of company results, save for fiscal year 2009, which was of course the first year of the great recession, a year in which we performed spectacularly, achieving both record financial performance and the acquisition of Reliant.

While I am, for the most part, extremely pleased with both the company's financial and its operating performance during 2010, I am acutely mindful of the fact that NRG shareholders did not see any of the benefits of our exceptional performance and share price appreciation during that year. As a management team, we recognize that we have a long way to go in presenting NRG's present value and future potential to the market.

In this presentation and in subsequent presentations that Mauricio, Chris and I will be making during the spring Investor Relations season, we intend to make a concerted effort to explain the NRG value proposition. From the competitive strength of our core businesses, even in a low commodity price environment, to the meaningful and measurable value of our growth opportunities, as well as our effective risk mitigation in areas which we believe to be of concern to the investment community.

So starting with 2010, as summarized on Slide 3, the company continued to generate a very high level of EBITDA in excess of $2.5 billion and also throw off a substantial amount of free cash flow. Indeed, in regard to what should perhaps be the most important metric to shareholders, free cash flow yield, our free cash flow yield for 2010 was a robust 29%, making our seven-year average exceed 23%. And in response to some people who said that we should measure free cash flow for these purposes after both maintenance and environmental CapEx, we have done it in that way but before growth CapEx.

A substantial amount of that free cash flow yield was redeployed back to stakeholders in the form of debt repayment and through our 2010 share buyback program and also into various growth initiatives, which we'll discuss in a minute. But over $650 million of excess free cash flow was returned as cash into the company's coffers, with the result being that our liquidity position at the end of 2010, $4.3 billion of total liquidity with $3 billion of cash on hand, is stronger than it has ever been.

It has always been my position that next to safety, the most important thing that we do as executive management at NRG is capital allocation, and given the amount that we are investing on an annual basis and the record amount that we currently have available either to invest in growth or to return to our equity and debt stakeholders, capital allocation has never been more important than it is now. As

such, I'm going to focus the greater part of my remaining remarks on capital, which we expect to invest in our growth initiatives in the months and years to come. Chris will focus a good deal of his comments on capital to be returned to stakeholders.

In terms of the allocation of capital to our growth initiatives, it's important to start with the obvious point that we want to invest the company's capital in assets and initiatives that not only are likely to yield a return significantly in excess of our risk-adjusted weighted average cost of capital, but also in businesses and initiatives which advance the company's strategy.

As depicted on Slide 4, the company's long-term strategy for some time has been twin-tracked. First, to strengthen and enhance our generation to retail business in our core markets through superior operating performance, continued implementation of our first-lean-enabled, long-term hedging program and pursuit of both select acquisitions and the repowering of our older facilities with advantage locations inside load pockets in our core markets. This comply of our strategy which we have pursued with relentless consistency and a high degree of effectiveness for the past five years was joined a couple years ago with a supplemental strategy that is overtly green and designed to take advantage of the societal trend towards sustainability.

This sustainability trend is, in our opinion, about to accelerate as a result of the emergence of various consumer-oriented disruptive technologies, which will make green energy at the consumer level the focal point of sustainability. We made considerable progress on both strategic fronts during 2010, with substantial advances across every facet of our sustainability initiative.

From our rollout of our eVgo network in Houston, which is centered around an innovative fueling package in approach to electric vehicle infrastructure that is already being replicated in other locations through the smart meter e-Sense applications now being sold by Reliant in quantity, to our unique approach to CCS/EOR being funded in collaboration with the DOE at our Parish facility in Texas. All of these initiatives are exciting and off to a good start. All will, I am confident, return considerable value to NRG to shareholders in the medium term.

You will hear more about these initiatives in the future but not today, because today, consistent with my theme, I want to concentrate my comments on the growth initiatives which are more immediate and which are key priorities for deployment of your investment capital during 2011. This is shown on Slide 6.

By way of background, in 2010, we committed substantial growth capital in four general areas: Zero carbon renewables, with an emphasis on solar; new advanced nuclear development; conventional gas-fired acquisitions and repowerings; and green retail acquisitions in the form of Green Mountain Energy. All four are likely to be areas of additional capital expenditure in 2011 but with very different investment profiles from 2010.

First, we expect an acceleration and significant expansion in our equity capital invested in high-growth, high-return solar projects. At the greater part of our utility scale, solar portfolio should achieve financial close and enter the construction phase during 2011.

Second, investment in conventional generation assets should be relatively flat year-on-year, as spending on GenConn and Cottonwood should give way to spending on El Segundo, but conventional CapEx could increase depending on our development success at Astoria, Saguaro or Encina and also, whether we find any strategic assets that can be acquired at value.

Third, capital invested in green retail should drop precipitously as obviously the big expenditure in this