June 18, 2010

California Energy Commission
Docket No. 09-AFC-8
1516 9th St.
Sacramento, CA 95814

Genesis Solar Energy Project - Docket Number 09-AFC-8

Docket Clerk:

Enclosed for filing with this letter is one hard copy and one electronic copy of the Supplemental Information for the Genesis Solar Energy Project, dated June 18, 2010.

Sincerely,

Tricia Bernhardt
Project Manager/Tetra Tech EC

cc: Mike Monasmith /CEC Project Manager
APPLICATION FOR CERTIFICATION FOR THE  
GENESIS SOLAR ENERGY PROJECT  

Docket No. 09-AFC-8

PROOF OF SERVICE  
(Revised 6/7/10)

APPLICANT
Ryan O’Keefe, Vice President  
Genesis Solar LLC  
700 Universe Boulevard  
Juno Beach, Florida 33408  
E-mail service preferred  
Ryan.o.okeefe@nexteraenergy.com

Scott Busa/Project Director  
Meg Russell/Project Manager  
Duane McCloud/Lead Engineer  
NextEra Energy  
700 Universe Boulevard  
Juno Beach, FL 33408  
Scott.Busa@nexteraenergy.com  
Meg.Russell@nexteraenergy.com  
Duane.mccloud@nexteraenergy.com  
E-mail service preferred  
Matt Handel/Vice President  
Matt.Handel@nexteraenergy.com

Email service preferred  
Kerry Hattevik/Director  
West Region Regulatory Affairs  
829 Arlington Boulevard  
El Cerrito, CA 94530  
Kerry.Hattevik@nexteraenergy.com

Mike Pappalardo  
Permitting Manager  
3368 Videra Drive  
Eugene, OR 97405  
mike.pappalardo@nexteraenergy.com

Kerry Hattevik/Director  
West Region Regulatory Affairs  
829 Arlington Boulevard  
El Cerrito, CA 94530  
Kerry.Hattevik@nexteraenergy.com

APPLICANT’S CONSULTANTS
Tricia Bernhardt/Project Manager  
Tetra Tech, EC  
143 Union Boulevard, Ste 1010  
Lakewood, CO 80228  
Tricia.bernhardt@tteci.com

James Kimura, Project Engineer  
Worley Parsons  
2330 East Bidwell Street, Ste.150  
Folsom, CA 95630  
James.Kimura@worleyparsons.com

COUNSEL FOR APPLICANT
Scott Galati  
Galati & Blek, LLP  
455 Capitol Mall, Ste. 350  
Sacramento, CA 95814  
sgalati@gb-llp.com

INTERESTED AGENCIES
California-ISO  
e-recipient@caiso.com

Allison Shaffer, Project Manager  
Bureau of Land Management  
Palm Springs South Coast  
Field Office  
1201 Bird Center Drive  
Palm Springs, CA 92262  
Allison.Shaffer@blm.gov

INTERVENORS
California Unions for Reliable Energy (CURE)  
c/o: Tanya A. Guesserian, Rachael E. Koss, Marc D. Joseph  
601 Gateway Boulevard, Ste 1000  
South San Francisco, CA 94080  
tguesserian@adamsbroadwell.com  
rkoss@adamsbroadwell.com

Tom Budlong  
3216 Mandeville Cyn Rd.  
Los Angeles, CA 90049-1016  
tombudlong@roadrunner.com

*Mr. Larry Silver  
California Environmental  
Law Project  
Counsel to Mr. Budlong  
E-mail preferred  
larrysilver@celproject.net

Californians for Renewable Energy, Inc. (CARE)  
Michael E. Boyd, President  
5439 Soquel Drive  
Soquel, CA 95073-2659  
michaelboyd@sbcglobal.net

*Lisa T. Belenky, Senior Attorney  
Center for Biological Diversity  
351 California St., Suite 600  
San Francisco, CA 94104  
lbelenky@biologicaldiversity.org

*Mr. Larry Silver  
California Environmental  
Law Project  
Counsel to Mr. Budlong  
E-mail preferred  
larrysilver@celproject.net

Californians for Renewable Energy, Inc. (CARE)  
Michael E. Boyd, President  
5439 Soquel Drive  
Soquel, CA 95073-2659  
michaelboyd@sbcglobal.net

*Lisa T. Belenky, Senior Attorney  
Center for Biological Diversity  
351 California St., Suite 600  
San Francisco, CA 94104  
lbelenky@biologicaldiversity.org

*indicates change  
1
I, Tricia Bernhardt, declare that on June 18, 2010, I served and filed copies of the **Supplemental Information for the Genesis Solar Energy Project** dated June 18, 2010. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [http://ww.energy.ca.gov/sitingcases/genesis_solar].

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

*(Check all that Apply)*

**FOR SERVICE TO ALL OTHER PARTIES:**

- [x] sent electronically to all email addresses on the Proof of Service list;
- [x] by personal delivery or by depositing in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked “email preferred.”

**AND**

**FOR FILING WITH THE ENERGY COMMISSION:**

- [x] sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (**preferred method**);
- **OR**

- [ ] depositing in the mail an original and 12 paper copies, as follows:

  **CALIFORNIA ENERGY COMMISSION**
  Attn: Docket No. 09-AFC-8
  1516 Ninth Street, MS-4
  Sacramento, CA 95814-5512
docket@energy.state.ca.us

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

Original Signed By:

Tricia Bernhardt
1.0 Introduction

Two documents were recently docketed with the California Energy Commission (CEC) containing additional information about the Project and the Colorado River Substation to which the Genesis Solar Energy Project (GSEP) would connect:

*Reasonably Foreseeable Development Scenario, Southern California Edison Colorado River Substation, Genesis Solar Energy Project,*
*Dated May 19th, 2010*

*Minor Changes to the Genesis Solar Energy Project Description; 6-pole Extension of Transmission Line Inclusion of Distribution and Telecommunications Line Removal of “Toe” Area from Plant Facility,*
*Dated May 21st, 2010*

The Revised Staff Assessment (RSA) for the GESP was published on June 11th, 2010. The information in this document provides supplemental information to the above documents and to the RSA.

2.0 Secondary Access Road/Spur Road

CEC staff and the Riverside County Fire Department have had recent discussions regarding the need for a secondary access to the GESP for fire safety reasons. Several ideas for this access have been proposed. At this time, the Condition of Certification Worker Safety-6 in the RSA, states the following:

**WORKER SAFETY-6** The project owner shall:

a. Provide a second access gate for emergency personnel to enter the site. This secondary access gate shall be at least one-quarter mile from the main gate and shall be accessed via a gravel road off the main road near the facility fence line.

b. Provide a “spur” road that starts at a gate in the I-10 right-of-way not closer than ½ mile west of the Wiley Wells Road interchange with I-10 and which connects to the main access road approximately ½ mile to the north. The “spur” road shall be at a minimum an all-weather gravel road, at least 24 feet wide, and with
culverts to direct flow under the road at any wash the road may cross.

c. Maintain the main access road and the “spur” road and provide a plan for implementation.

Plans for the secondary access gate, the method of gate operation, gravel road, “spur” road, and to maintain the roads shall be submitted to the Riverside County Fire Department for review and comment and to the CPM for review and approval.

Therefore, the secondary access/spur road will be located ½ mile west of Wiley’s Well Road interchange and will run in a north/south direction adjacent to the generation-tie line for the project. (See Figure 1) This area was already surveyed for biological and cultural resources because it is within the same corridor as the proposed generation tie (gen-tie) line for the GESP.

This location for the secondary access road represents the least additional impact to biological and cultural resources while satisfying the requirements of an alternative emergency access point from I-10. Because the gen-tie line was already planned for this area, there would already be a narrow access road associated with the transmission line. This access road will be upgraded to meet the requirements of the Riverside County Fire Department and become the secondary access road.

The secondary access road will be designed to the standards required by the Riverside County Fire Department and will be a 24-foot width, all-weather gravel road. There will be an emergency gate directly off of I-10, but no additional shoulder or pull-off area along I-10 will be constructed. The emergency gate will be locked and the Riverside County Fire Department will have a key.

2.1 Cultural Resources

Class III Cultural resource surveys were conducted at this secondary access road location in 2009. A confidential report titled Revised Draft Class II and Class III Cultural Resources Inventories for the Proposed Genesis Solar Energy Project, Riverside County, California, dated October 2009 was produced by Tetra Tech. According to the lead archeologist on the job, there are no cultural resource sites in this location. (Personal communication with Jenna Farrell, TTEC).

2.2 Biological Resources

Table 1 below describes the temporary and permanent acreage impacts to vegetation communities along the secondary access road. However, this
disturbance was already accounted for in the linear corridor analysis in the Application for Certification (AFC) as a part of the gen-tie line. (See Table 3.2-2, Acres of Temporary and Permanent Disturbance in the AFC, dated August 30, 2009.)

Table 1

<table>
<thead>
<tr>
<th>Vegetation Communities Affected by the Secondary Access Road</th>
<th>Total Temporary Impact Acreage</th>
<th>Total Permanent Impact Acreage</th>
<th>Total Impact Acreage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sonoran Creosote Bush Scrub</td>
<td>1.72</td>
<td>0.82</td>
<td>2.54</td>
</tr>
<tr>
<td>Stabilized and Partially Stabilized Sand Dunes</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Playa and Sand Drifts Over Playa</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Desert Dry Wash Woodland</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Chenopod Scrub</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total Acres</td>
<td>1.72</td>
<td>0.82</td>
<td>2.54</td>
</tr>
</tbody>
</table>

1 Acreage calculations are based on a 24ft-wide permanent access road with an additional 50ft for temporary impacts.

Figure 2 shows the biological resources near the secondary access road as seen during the 2009 and 2010 biology surveys.

Table 2, attached to the end of this document, shows the direct impacts to waters of the U.S. An additional .09 acres designated as state waters will be impacted by the creation of the secondary access road.

3.0 Distribution/Telecommunications Line

The GESP will need temporary power and communication during construction at the facility footprint. The project will need to tap into electrical power from an existing Southern California Edison (SCE) distribution line near the Wiley’s Well Rest Stop.

This new distribution/telecommunications line will follow the proposed Genesis linear corridor and access road up to the plant facility. This installation could either be above or below ground based on site conditions and availability of material. The type of material is likely to be single wood poles. Once the construction phase of the project is complete, these lines will likely be left in place to serve the onsite facilities such as offices, warehouse, and a control room. The development of the distribution line will follow the current SCE’s standards, guidelines and procedures for installation of electrical distribution power lines.
The distribution/telecommunications line will be built adjacent to the final gen-tie line. Table 3 below shows the assumptions for the distribution line and the disturbance acres.

### Table 3
**Distribution Line Disturbance Area**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Qty</th>
<th>Disturbance Assumption</th>
<th>Disturbance (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear Distance</td>
<td>6.5 miles</td>
<td>distance of access road</td>
<td></td>
</tr>
<tr>
<td>Pole Spacing</td>
<td>250’ from SCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Poles</td>
<td>138</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Spur Roads</td>
<td>138</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Permanent Disturbance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Qty</th>
<th>Disturbance Assumption</th>
<th>Disturbance (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Pole Pads</td>
<td>138</td>
<td>3’ X 3’</td>
<td>0.03</td>
</tr>
<tr>
<td>Spur Roads</td>
<td>138</td>
<td>30’ X 14’</td>
<td>1.33</td>
</tr>
<tr>
<td>Radius from access road to spur road</td>
<td>138</td>
<td>20’ radius</td>
<td>1.27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>2.63</strong></td>
</tr>
</tbody>
</table>

#### Temporary Disturbance

<table>
<thead>
<tr>
<th>Feature</th>
<th>Qty</th>
<th>Disturbance Assumption</th>
<th>Disturbance (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pole Pad Construction Area</td>
<td>57</td>
<td>25’ X 25’ (see Note)</td>
<td>0.58</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>0.58</strong></td>
</tr>
</tbody>
</table>

*Note: Less portion of the spur road that is coincident with the 25’ X 25’ pole pad construction area. Less pole pad permanent Disturbance (3’ X 3’)*

### 3.1 Redundant Telecommunications Line

A secondary redundant telecommunications system may be required by SCE. If the project does need a secondary telecommunications system, it will be one of two scenarios: a wireless microwave system or an underground line in an already disturbed area such as the access road under or adjacent to the gen-tie line.

**Figure 3** shows the location of a potential secondary telecommunications line following the linear corridor. No impact acreage was calculated for this line, since the disturbance has already been accounted for in the disturbance of the gen-tie line and associated access/maintenance road. A buried telecommunication line is typically a single cable 1 inch in size or smaller, and is very easily installed no more than a couple of feet deep in the ground using a “ditch-witch” type piece of machinery.

**Appendix A** contains a more detailed description of the potential redundant telecommunications line.
4.0 Removal of “Toe” and Changes to State Waters Impacts

During a CEC workshop for the Genesis Solar Energy Project at the Bureau of Land Management (BLM) office in Palm Springs, California on May 5th, 2010, the idea of not using the “toe” of the Genesis plant facility was discussed. (See Figure 4) The proposal to remove the toe as part of the active plant facility would minimize or negate some potential environmental impacts, primarily due to the presence of sand dunes and habitat for the Mojave fringe-toed lizard. Additionally, the toe area has several drainage washes running through it. Genesis Solar, LLC agreed to remove the solar troughs and other plant facilities from the toe area, and to reconfigure the plant design to accommodate the change.

The toe removal reduces 41.4 acres of potential disturbance in sensitive habitat. Of that number, 27.2 acres are identified as sand dunes, with 14.2 acres as creosote bush scrub. The CEC, BLM and staff from U.S. Fish and Wildlife Service, and the California Department of Fish and Game consider this a positive project contribution to avoiding, reducing and minimizing impacts.

Table 2, attached to the end of this document, shows the reduction in impacts to state waters by removing the toe from the project. As a result of not using the toe, 21 acres of state waters are not being impacted.

5.0 Colorado River Substation Expansion

A 230 kV expansion of the already-permitted but not yet constructed Colorado River Substation (CRS) is needed to accommodate additional solar projects in the area, including the GESP. The expansion will consist of approximately 45 additional acres adjacent to the original footprint of the CRS. Figure 5 shows the location of the CRS and the expansion area.

The CRS expansion is a Southern California Edison (SCE) project that SCE would permit, construct, own and operate to serve several projects in the area. However, because the proposed expansion of the CRS is a reasonably foreseeable development scenario, a description of the expansion and any associated potential environmental impacts will be addressed in the NEPA and CEQA-equivalent documents being prepared by the BLM and the CEC for the Genesis project. Mitigation for any impacts associated with the CRS expansion area would be the responsibility of SCE under the permits SCE will be obtaining in order to construct the substation.
5.1 Cultural Resources

A cultural resource record search and survey of the expansion area was conducted by SCE’s consultant, ASM Affiliates (ASM), in March 2010 *.

ASM conducted a literature review at the Eastern Information Center University of California Riverside for the CRS expansion project area. This review identified six previously conducted cultural resource field surveys (three are within the CRS) and 21 previously recorded prehistoric and historic archaeological sites within one mile of the CRS expansion. No previously recorded sites were identified within the CRS expansion area.

In addition, ASM conducted an intensive pedestrian cultural resources survey (Class III Survey, as defined in BLM Manual 8100 Guidance) for the CRS expansion area from March 23-25, 2010. This field survey and previous field surveys (identified in the literature review) included the Area of Potential Effects (APE) for the proposed CRS expansion. The literature review and intensive survey were conducted for a study area of 429 acres (new additional surveys account for 226 acres) of the CRS. See Figure 6 for the location of the cultural resource field surveys conducted.

ASM submitted a Draft Cultural Resources Inventory of the Proposed Colorado River Substation Expansion Project Riverside County, California report to the BLM in June 2010. The draft report was reviewed by a qualified archeologist working for Tetra Tech, a consultant to Genesis Solar, LLC.

No cultural resource sites or isolates were identified within or near the APE of the expansion area.

*ASM Affiliates conducted this study for SCE and the Bureau of Land Management (BLM) Palm Spring Field Office in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 and 4331-4335), the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC 470 et seq.), and the requirements set forth in Protection of Historic Properties (36 CFR 800), implementing regulations of the NHPA. This level of examination and study further satisfies the project review requirements of the California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code § 21000 et seq.), and was conducted pursuant to the Guidelines for Implementation of the California Environmental Quality Act (California Code of Regulations, Title 14, § 15000 et seq.).

5.2 Biological Resources

In spring 2010, AECOM conducted, on behalf of Solar Millennium comprehensive surveys for biological resources of the proposed CRS. The survey area included a 241 acre area that was surveyed using 30-ft wide belt transects (100 percent coverage) plus zone-of-influence transects out to one mile from this area. The 100 percent coverage area encompassed the location of the 500kV area already permitted by the CPUC, the proposed 230kV expansion area, and the additional
six poles for the gen-tie line for Genesis. The following is a summary of the biological resources observed during those surveys as related to the CRS 230kV expansion area (expansion area; approximately 45 acres). **Figures 7 and 8** show the results of the wildlife and plant surveys conducted in the area.

**Vegetation Communities**
The expansion area will be located entirely within Stabilized and Partially-Stabilized Sand Dunes (see Holland 1986). This vegetation community is BLM Sensitive per the Northern and Eastern Colorado Management (NECO) Plan (BLM and CDFG 2002) and requires compensation at a ratio of 3:1 (three acres to every one acre disturbed). The expansion will result in 45 acres of permanent disturbance to Stabilized and Partially-Stabilized Sand Dunes.

**Special-status Plants**
Two special-status plant species are present within the expansion area: Harwood’s woollystar (*Eriastrum harwoodii*, CNPS 1B.2) and Ribbed cryptantha (*Cryptantha costata*, CNPS 4.3). Both species would be directly and indirectly impacted by development of the expansion area.

**Desert Tortoise**
No desert tortoise sign was observed within the expansion area; however, two Class 4 burrows and three bone fragments were found within the one mile survey buffer area. One burrow was 0.76-mi to the southwest of the expansion area, and the other was 0.50-mi to the northeast of the expansion area. Class 4 burrows are defined as “deteriorated condition, possibly tortoise”. One bone fragment was mineralized; all three were just less than one mile from the expansion area. The presence of Class 4 burrows and bone fragments indicate tortoise are likely in the vicinity of the expansion area; however, the expansion area will be located in Stabilized and Partially-Stabilized Sand Dunes, and sand dunes are not considered desert tortoise habitat.

**Mojave Fringe-toed Lizard**
Multiple Mojave fringe-toed lizards were observed within the expansion area. Because the expansion area will be located within Stabilized and Partially-Stabilized Sand Dunes, which is considered Mojave fringe-toed lizard habitat, there will likely be direct and indirect impacts to this species.

**Western Burrowing Owl**
No burrowing owls or their sign were observed along the expansion area; however, live birds and their sign were observed east of the gen-tie at the edge of the Stabilized and Partially-Stabilized Sand Dunes. An active burrow with birds was observed approximately 0.70-mi from the expansion area. Although no sign was observed within the expansion area, survey results indicate that burrowing owl are present in the vicinity of the expansion area.
Other Special-status Wildlife
Swainson’s hawk was observed within the expansion area and loggerhead shrike, Cooper's hawk, ferruginous hawk, and a kit fox complex were observed within one mile of the expansion area. None of the birds were observed nesting.

Jurisdictional Waters
No federal or state jurisdictional waters are present within the expansion area.

6.0 Six Pole Transmission Line Extension

The six pole transmission line extension is adjacent to the CRS expansion area on the west side.

As described in the AFC and subsequent documents, the GESP gen-tie would start at the Genesis power plant site and go approximately 7 miles to the southeast until it reaches the existing Blythe Energy Transmission Line Project (BETP). From that point, the Genesis gen-tie would be strung eastward along existing BETP poles until the point where it leaves the BETP to enter into the CRS. Because the BETP runs immediately to the south of the proposed CRS location, Genesis had always assumed the gen-tie would go directly from the BETP poles into the south side of the CRS in a single span. However, SCE recently provided Genesis with a substation design that now requires the gen-tie, after it leaves the existing BETP poles, to come up around the western side of the substation and enter from the north. This will require Genesis to add up to six additional gen-tie poles before entering the CRS.

6.1 Cultural Resources

A cultural resource record search and survey of the area where the six pole transmission line extension will be needed was conducted by SCE’s consultant, ASM, in March 2010. Figure 9 shows the location of the six pole transmission line extension over the areas that were surveyed for cultural resources.

ASM conducted a literature review at the Eastern Information Center University of California Riverside for the CRS expansion project area. This review identified six previously conducted cultural resource field surveys (three are within the CRS) and 21 previously recorded prehistoric and historic archaeological sites within one mile of the 6 pole extension. No previously recorded sites were identified within the six pole extension area.

In addition, ASM conducted an intensive pedestrian cultural resources survey (Class III Survey, as defined in BLM Manual 8100 Guidance) for the six pole extension area from March 23-25, 2010. This field survey and previous field surveys (identified in the literature review) included the APE for the proposed
CRS expansion and the transmission line extension. The literature review and intensive survey were conducted for a study area of 429 acres (new additional surveys account for 226 acres) of the CRS.

ASM submitted a *Draft Cultural Resources Inventory of the Proposed Colorado River Substation Expansion Project Riverside County, California* report to the BLM in June 2010. The draft report was reviewed by a qualified archeologist working for Tetra Tech, a consultant to Genesis Solar, LLC.

The review of the documents resulted in the identification of two historic archaeological sites and one isolate *near* the APE of the six pole transmission line extension.

- Historic resource ARG-2 (ASM temporary site designation number) can be characterized as a light artifact scatter of two historic glass bottles and one historic metal can (c.1942-1943). This site does not appear to contain artifacts that would directly associate it with the Desert Training Center/California-Arizona Maneuver Area.
- Historic resource P33-17325 is characterized as a historic refuse associated with the World War II Patton Desert Training Center era.
- The isolate ARG I-4 (ASM temporary isolate designation number) is a single prehistoric buff ware ceramic shard.

No other cultural resource sites or isolates were identified within or near the APE of the six pole extension area. A programmatic agreement will ensure the protection of historic properties. Given the small size of the historic resources, slight modification of two pole locations would result in complete avoidance.

### 6.2 Biological Resources

In spring 2010, AECOM, on behalf of Solar Millennium, conducted comprehensive surveys for biological resources of the proposed Colorado River Substation (CRS). *Figures 7 and 8* display the results of the wildlife and vegetation surveys of the area. The survey area included a 241 acre area that was surveyed using 30-ft wide belt transects (100 percent coverage) plus zone-of-influence transects out to one mile from this area. The 100 percent coverage area encompassed the location of the additional six poles for the generation tie-line (gen-tie) for Genesis. The following is a summary of the biological resources observed during those surveys as related to the six additional poles needed to connect the gen-tie line to the CRS.

**Vegetation Communities**

The gen-tie will be located entirely within Stabilized and Partially-Stabilized Sand Dunes (see Holland 1986). This vegetation community is BLM Sensitive per the Northern and Eastern Colorado Management (NECO) Plan (BLM and CDFG 2002) and requires compensation at a ratio of 3:1 (three acres to every one acre.
The development of the gen-tie will result in 5.36 acres of temporary disturbance and 1.19 acres of permanent disturbance, for a total disturbance of 6.54 acres.

**Special-status Plants**

Two special-status plant species are present along the gen-tie route: Harwood’s woollystar (*Eriastrum harwoodii*, CNPS 1B.2) and Ribbed cryptantha (*Cryptantha costata*, CNPS 4.3). Both species would likely be directly and indirectly impacted by development of the gen-tie. These species will be avoided where feasible and impacts will be mitigated pursuant to Condition of Certification BIO-19 (CEC 2010).

**Desert Tortoise**

No desert tortoises or sign were observed within the gen-tie area; however, two Class 4 desert tortoise burrows and three bone fragments were found within the one-mile survey buffer area. One burrow was 0.67-mi to the southwest of the closest pole of the gen-tie, and the other was 0.56-mi to the northeast of the closest pole of the gen-tie. Class 4 burrows are defined as “deteriorated condition, possibly tortoise”. One bone fragment was mineralized; all three were just under a mile from the closest gen-tie pole. The presence of Class 4 burrows and bone fragments indicate tortoises are likely in the vicinity of the gen-tie; however, the gen-tie will be located in Stabilized and Partially-Stabilized Sand Dunes, and sand dunes are not considered desert tortoise habitat. Potential direct and indirect impacts to desert tortoise will be mitigated pursuant to Conditions of Certification BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-7, BIO-8, BIO-9, BIO-10, BIO-11, BIO-12, BIO-13, and BIO-14 (CEC 2010).

**Mojave Fringe-toed Lizard**

Multiple Mojave fringe-toed lizards were observed within the gen-tie area. The gen-tie will be located within Stabilized and Partially-Stabilized Sand Dunes which is considered Mojave fringe-toed lizard habitat. Direct and indirect impacts to this species will be mitigated pursuant to Conditions of Certification BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-7, BIO-8, BIO-14, and BIO-20 (CEC 2010).

**Western Burrowing Owl**

No burrowing owls or their sign were observed along the gen-tie route; however, live birds and their sign were observed east of the gen-tie at the edge of the Stabilized and Partially-Stabilized Sand Dunes. An active burrow with birds was observed approximately 0.92-mi from the closest gen-tie pole. Although no sign was observed along the gen-tie route, surveys results indicate that burrowing owl are present in the vicinity of the gen-tie. Any direct and indirect impacts to burrowing owl will be mitigated pursuant to Conditions of Certification BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-7, BIO-8, BIO-14, and BIO-18 (CEC 2010).

**Other Special-status Wildlife**
Other special-status wildlife species observed along the gen-tie route were Swainson’s hawk, loggerhead shrike, and Cooper’s hawk; ferruginous hawk and a kit fox complex was observed east of the gen-tie route. None of the birds were observed nesting. All of these species were observed in spring 2009 and Spring 2010 surveys of the Genesis Plant Site and Linear Facilities (see Tetra Tech and Karl 2009, 2010) except Cooper’s hawk. Cooper’s hawk is a California Fish and Game Watch List species specific to nesting birds. This species is a year-round resident of the area but is not known to breed in the area (Curtis et al. 2006). Any direct and indirect impacts to special-status species will be mitigated pursuant to Conditions of Certification BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-7, BIO-8, BIO-15, BIO-16, and BIO-17.

**Jurisdictional Waters**
No federal or state jurisdictional waters are present along the gen-tie route.

### 7.0 References


ASM, Draft Cultural Resources Inventory of the Proposed Colorado River Substation Expansion Project Riverside County, California inventory report to the Bureau of Land Management (BLM) in June 2010.


Personal Communication between Tricia Bernhardt and Jenna Farrell, Tetra Tech, June 11, 2010, regarding cultural resource sites within or near the proposed secondary access road.

Table 2
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<th>Permanent Impact (acres)</th>
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<th>No. of Trees &gt; 4&quot; in Diameter Associated with Washes (acres)</th>
<th>No. of Directly Impacted Trees</th>
<th>Directly Impacted Microphyll Vegetation Areas (acres)</th>
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*Notes:
- Plant Site 'Toe' removed - No longer affected by development. Based on aerial; Acreages calculated using GIS; Contains field verified washes 7-10
- No Longer in Project Area
- Verified by field survey
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* Includes washes within 500 ft. survey buffer area
** Transmission line impact calculations include stub roads
IW - Ironwood
PV - Palo Verde
HM - Honey Mesquite
Figure 1
SPUR ROAD location for Genesis RSA: WORKER SAFETY-6
Figure 2
Figure 3
Figure 4
Proposed Change to "Toe" Area of Plant Facility

Legend
- Proposed Transmission Interconnect
- Proposed Gas Line
- Proposed Access Road
- "Toe" Area - Proposed to be Removed from Plant Facility
- Plant Facility
- Project Requested ROW

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI
GENESIS SOLAR ENERGY PROJECT
RIVERSIDE COUNTY, CALIFORNIA

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, TTEC, AECOM

Legend
- Existing Blythe T-line
- Remainder Of Genesis Generation Tie Line
- Spring 2010 Biological Resources Survey Area
- SCE CO River Substation (CRS)
- Index Footprint Permitted By CPUC In 2009
- Proposed 230kv Expansion Area

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, TTEC, AECOM
Figure 6
GENESIS SOLAR ENERGY PROJECT
RIVERSIDE COUNTY, CALIFORNIA

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, TTEC, AECOM

Legend
- Existing Blythe T-line
- Genesis Generation Tie Line
- Spring 2010 Biological Resources Survey Area
- SCE CD River Substation (CRS)
- 500kv Footprint Permitted by CPUC, In 2009
- Proposed 230kv Expansion Area

CRS GSEP EXPANSION

CRS APE
- Carrico & Eckhardt 2006
- McDougall et al. 2006
- Eckhardt & Wilson 2009
Figure 7
GENESIS SOLAR, LLC

GENESIS SOLAR ENERGY PROJECT
RIVERSIDE COUNTY, CALIFORNIA

Mesa
Phoenix
Anaheim
Riverside
San Diego

Legend
- Additional Generation Tie Line W/ 6 Additional Generation Tie Poles
- Existing Alpha Tie Line
- Genesis Generation Tie Line
- Spring 2010 Biological Resources Survey Area 100% Survey Coverage
- 1 Mile Buffer Area
- SCE CO River Substation (CRS)
- Additional Generation Tie Line W/ 6 Additional Generation Tie Poles
- Existing Blythe T-line
- Spring 2010 Biological Resources Survey Area 100% Survey Coverage
- 1 Mile Buffer Area
- SCE CO River Substation (CRS)
- Additional Generation Tie Line W/ 6 Additional Generation Tie Poles
- Existing Blythe T-line

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, TTEC, AECOM

ENLARGED AREA

FOR THE GENERATION TIE LINE

SPECIAL-STATUS WILDLIFE

G E N E S I S  S O L A R ,  L L C

Last Saved: Wednesday, June 16, 2010 7:51 AM   Analyst: J MacLachlan
File: P:\projects_2005\fpl\maps\Genesis_Bio\CRS_Expansion\Wildlife.mxd
Figure 8
GENESIS SOLAR ENERGY PROJECT
RIVERSIDE COUNTY, CALIFORNIA

Legend
- Additional Generation Tie Line & 8 Additional Generation Tie Poles
- Existing Blythe T-line
- Genesis Generation Tie Line
- Spring 2010 Biological Resources Survey Area 100% Coverage
- 1 Mile Buffer Area
- SCE CO River Substation (CRS)
- Proposed 500kv Expansion Area
- Harwood’s Milkvetch
- Ribbed Cryptantha
- Winged Cryptantha
- Harwood’s Woollystar
- Disturbed Habitat
- Sonoran Creosote Scrub Brush
- Stabilized and Partially Stabilized Sand Dunes

Notes:
(a) UTM Zone 11, NAD 1983 Projection.
(b) Source data: ESRI, TTTEC, AECOM

VEGETATION AND
SPECIAL-STATUS PLANTS
FOR THE GENERATION TIE LINE

Last Saved: Wednesday, June 16, 2010 7:24 AM   Analyst: J MacLachlan
File: P:\projects_2005\fpl\maps\Genesis_Bio\CRS_Expansion\StabilizedVegetation.mxd
Figure 9
Appendix A
Appendix A
Edison Carrier Solutions, Outside Plant (OSP)

Colorado River-Q193 Desert Center Blythe (Genesis) Project
Redundant Telecommunications (Fiber Optic Cable) Installation

**OSP Fiber Optic Cable Engineering Plan:** The construction of one All-Dielectric Self-Supporting (ADSS) fiber optic cable between the following facilities is for telecommunication interconnection between Colorado River substation and the Q193 Genesis Solar switchyard, to provide protective relay circuits, Supervisory Control and Data Acquisition (SCADA) circuits, data, and telecommunication services.

**Construction Activities:** The Colorado River-Q193 Genesis fiber optic cable, this will be a newly constructed fiber optic cable between and into the Southern California Edison (SCE) owned Colorado River-Genesis Solar switchyard MEER (Mechanical Electrical Equipment Room) buildings. The installation of ADSS fiber optic cable is approximately 69,000 feet. Edison Carrier Solution crews will use standard construction methods to construct this fiber optic cable. The crews will comply with all rules, regulations and standards with inter-departments and other agencies in their performance of the construction phase. Portions of the fiber optic cable will be constructed on existing overhead Transmission and Distribution wood pole structures. In addition, portions of the cable will be constructed in new underground conduit system(s).

**Cable Route:** At Colorado River substation, starting at the MEER building, proceed south trenching approximately 1,000 feet installing underground cable in new underground conduit to intersect with the Devers-Palo Verde No.1 500kV T/L R/W existing patrol road, turn west and install approximately 26,000 feet of underground cable in new underground conduit in the roadway, install riser on existing distribution pole 2327741E and continue north on Wiley’s Well Rd approximately 7,100 feet installing overhead cable on existing wood poles, continue west approximately 1,250 feet to pole 2325077E installing overhead cable on existing overhead structures, continue north approximately 350 feet installing overhead cable on existing overhead structures, continue east approximately 350 feet installing overhead cable on existing overhead structures, continue north approximately 1,300 feet crossing over the I-10 freeway to pole 2205390E installing overhead cable on existing overhead structures, continue east approximately 1,000 feet installing overhead cable on existing overhead structures to pole 2205390E, turn west onto the new distribution line (pole number to be determined) following the Genesis entry road up to Genesis site approximately 29,500 feet, install riser on existing distribution pole, drop down and continue north trenching approximately 1,000 and installing underground cable in new conduit to the MEER building in the central switchyard at Q193 Genesis Solar site.
**Structures:** Portions of the cable will be constructed in new underground conduit system(s). On average, all existing and new overhead structures would be in height of approximately between 25 feet and 85 feet tall.

**Pole Site Preparation:** Most pole sites would need minimal site preparation prior to pole installation. The majority of the proposed pole locations would be along existing SCE ROWs or along public roads. Sites may require minor grading, leveling, or clearing to accommodate the new poles. Where new access roads would be necessary, pole sites would be cleared and graded at approximately the same time that access roads would be constructed.

**Pole Installation:** Construction activities would begin with the survey of the communication line routes. Survey crews would stake the wood pole locations, including reference points and centerline hubs. Wood Poles would be installed in native soil in holes bored approximately 18 to 24 inches in diameter and 5 to 7 feet deep. Wood poles are normally installed utilizing a Digger Derrick truck. Once the poles have been set in place, bore spoils (material from holes drilled in the soil) would be used to backfill the hole. If the bore spoils are not suitable for backfill, imported clean fill material, such as clean fill dirt and/or pea gravel, would be used. Excess bore spoils would be distributed at each pole site.

**Fiber Optic Cable:** The proposed cable construction will utilize an All-Dielectric Self-Supporting (ADSS) 48 strand single mode fiber optic cable. Approximately 69,000 feet of new fiber optic cable will be installed. New roads, grading, and lay down areas would be required for this activity.

**Fiber Optic Cable Attachments To Overhead Structures:** For the attachments (Pole Framing) to existing overhead pole structures, the fiber optic cable will utilize a T&D five foot wood cable arm and Fiberlign high-strength engineered dielectric suspension support block. This suspension support block is oriented vertically and attached to the cable arm, 1 per overhead structure would be required.

**Fiber Optic Cable Installation In Underground Systems:** For the installation in the new underground conduit and underground structures, the fiber optic cable will utilize a high density polyethylene smoothwall innerduct which provides protection and identification for the cable. The fiber optic cable will be installed in and throughout the length of the new underground conduit structure, 5” PVC schedule 40 and underground manhole structures 4’x4’x5’.

**Project-related Access Roads and Spur Roads:** The construction of the fiber optic cable will utilize the franchise area and existing T/L roads and spur roads. Lane closure permits within the franchise area shall be under local government jurisdiction. Work hour restrictions will be at their discretion and will be determined at a later date. Access roads, through roads that run between and along overhead wood pole structures form the main transport route along the major extent of the fiber optic cable. T/L Spur roads are roads that lead from the access road and dead-end into one or more overhead structure sites. All existing and new overhead structures have vehicle access routes.
**Pulling and Splice Location:** Fiber Optic Cable stringing includes all activities associated with the installation of cables onto the overhead wood pole structures. This activity includes the installation of vibration dampeners, and suspension and dead-end hardware assemblies. Stringing sheaves (rollers or travelers) are attached during the framing process. A standard wire stringing plan includes a sequenced program of events starting with determination of cable pulls and cable pulling equipment set-up positions. Advanced planning by experienced crew Foreman determines pulling locations, times, and safety protocols needed for ensuring that the installation of cable is accomplished correctly. Typically, fiber optic cable pulls occur every 6,000 feet to 10,000 feet on flat and mountainous terrain. Fiber optic cable splices are required at the end and beginning of each cable pull. “Fiber optic cable pulls” are the length of any given continuous cable installation process between two selected points along the overhead or underground structure line. Fiber optic cable pulls are selected, where possible, based on availability of pulling equipment and designated dead-end structures at the ends of each pull, geometry of the line as affected by points of inflection, terrain, and suitability of fiber optic cable stringing and splicing equipment set ups. The dimensions of the area needed for stringing set ups varies depending upon the terrain, however a typical stringing set up is 40 feet by 60 feet. Where necessary due to suitable space limitations, crews can work from within a substantially smaller area.

**Marshalling Yard:** The crews will utilize Colorado River Substation and Blythe District Office as a lay-down area for all material for the proposed fiber optic cable which would be delivered by truck. Material would be placed inside the perimeter of the fenced substation in a designated area during construction. The majority of the truck traffic would use major streets and would be scheduled for off-peak traffic hours. All construction debris would be placed in appropriate onsite containers and periodically disposed of in accordance with all applicable local jurisdiction regulations. The primary marshalling yard for the Colorado River-Q193 Genesis fiber optic cable project would be established inside the Colorado River Substation, or, if room is not available, a suitable existing manned SCE facility outside the substation would be located. This yard location would be selected based on its central location, and proximity to the construction project. If a primary marshalling yard is required outside of the Colorado River Substation property, the alternate location would preferably be no further than 20 miles from the Colorado River Substation. Materials and equipment to be staged to this yard include but are not limited to: fiber optic cable reels and hardware, heavy equipment, light trucks, and portable sanitation facilities. In addition to the materials and equipment already detailed for new construction, the following may be routed through this yard: empty fiber optic cable and innerduct reels, and other debris associated with the installation of the fiber optic cable process.
**Labor Force and Construction Equipment:** Construction would be performed by ECS OSP construction crews and/or by contractors. Anticipated construction personnel and equipment are summarized below.

<table>
<thead>
<tr>
<th>Construction Element Requirements</th>
<th>Number of Personnel</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Construction</td>
<td>4</td>
<td>2 – Bucket Trucks (Diesel)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 – Pick-up (Diesel)</td>
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<tr>
<td></td>
<td></td>
<td>2 – Cable Dollies</td>
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<tr>
<td></td>
<td></td>
<td>1 – Single Drum Puller (Diesel)</td>
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<tr>
<td></td>
<td></td>
<td>1 – 2 Axle Trailer</td>
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<td>Receive and Load Out Materials</td>
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<td>1 – 5-Ton Forklift (Diesel)</td>
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<td>1 – Pick-up (Diesel)</td>
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<tr>
<td>Pole Installation</td>
<td>3</td>
<td>1 – Digger Derrick (Diesel)</td>
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<td>1 – Pick-up (Diesel)</td>
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<tr>
<td>Cleanup</td>
<td>4</td>
<td>2 – Bucket Trucks (Diesel)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 – Pick-up (Diesel)</td>
</tr>
</tbody>
</table>

**OSP Fiber Optic Cable Construction Schedule:**
The Colorado River-Q193 Genesis fiber optic cable would require approximately 161 mandays or 32 crew days (5 man crew) to complete.
The attached information is a preliminary route and subject to change as needed based on further review by SCE. Final routes may be subject to further due diligence and approval by SCE.