In the Matter of:

Beacon Solar, LLC’s
Application for Certification of the
Beacon Solar Energy Project

Docket No. 08-AFC-2

BEACON SOLAR ENERGY PROJECT’S REVISED POST-WORKSHOP REVISIONS
TO BIOLOGICAL RESOURCES CONDITIONS OF CERTIFICATION

Jane E. Luckhardt
Sophia Rowlands
DOWNEY BRAND, LLP
621 Capitol Mall, 18th Floor
Sacramento, California 95814
Telephone: (916) 444-1000
FAX: (916) 444-2100

February 4, 2010
Recognizing the sensitivity of natural resources in the desert, Beacon worked diligently to select a location for its proposed solar project that would minimize biological impacts. The selected site for the BSEP is located on previously farmed lands that remain substantially disturbed today. The Plant Site would be located entirely within this disturbed area that is predominantly devoid of vegetation and does not provide suitable habitat for special status listed species.

Beacon respectfully requests that Staff review the recommended changes and the rationale for the proposed revisions provided below, and reconsider the FSA’s Conditions of Certification as proposed.

Requested Changes to the Conditions of Certification for Biological Resources

Beacon’s proposed changes to several Conditions are presented below.

DESERT TORTOISE RELOCATION PLAN, CLEARANCE SURVEYS AND EXCLUSION FENCING

BIO-9

The project owner shall undertake appropriate measures to manage construction at the plant site and linear facilities in a manner to avoid or minimize impacts to desert tortoise. Methods for clearance surveys, fence installation, tortoise handling, artificial burrow construction, egg handling and other procedures shall be consistent with those described in the current USFWS guidelines (USFWS 2009) or more current guidance provided by CDFG and USFWS. The project owner shall also implement terms and conditions developed as part of the Habitat Conservation Plan process with USFWS. These measures include, but are not limited to, the following:

1. Fence Installation. Prior to construction-related ground disturbance activities, the entire plant site (east of the railroad tracks) shall be fenced with permanent desert tortoise-exclusion fence. To avoid impacts to desert tortoise during fence construction, the proposed fence alignment shall be flagged and the alignment surveyed within 24 hours prior to fence construction. Surveys shall be conducted by the Designated Biologist using techniques approved by the USFWS and CDFG. Biological Monitors may assist the Designated Biologist under his or her supervision. These surveys shall provide 100 percent coverage of all areas to be disturbed during fence construction and an additional transect along both sides of the proposed fence line. This fence line transect shall cover an area approximately 60 feet wide centered on the fence alignment. Transects shall be no greater than 15 feet apart. All desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined to assess occupancy of each burrow by desert tortoises and handled in accordance with USFWS-approved protocol.

   a. Timing, Supervision of Fence Installation. The exclusion fencing shall be installed prior to the onset of site clearing and grubbing. The fence installation shall be supervised by the Designated Biologist and monitored by the Biological Monitors to ensure the safety of any tortoise present.

   b. Fence Material and Installation. Tortoise exclusionary fencing shall be constructed per USFWS specifications (USFWS 2008a, Appendix D).

   c. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises, including gates that would exclude public access to the transmission line maintenance road at SR 14. The gates shall remain closed except during vehicle passage and may be electronically activated to open and close immediately after vehicle(s) have entered or exited to prevent extended periods with

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Deleted: If temporary fencing is used in certain high traffic areas, will be in place for over 2 months, and/or would be used in areas or during a season that is subject to storms (i.e., high winds and water flow), then the guidelines (materials and construction) for permanent tortoise fencing, including supporting stakes at adequate spacing to insure fence integrity, must be followed. If temporary fencing will be up for a shorter time period, then silt fencing may be used. Silt fencing must be 3 feet high and either buried 12 inches or have the lower 12 inches bent toward tortoise habitat and weighted with soil, stakes, and/or gravel to prevent tortoises from burrowing underneath. In all cases, fences must be checked daily for silt fencing, weekly for metal mesh fencing and during all storm events for all fencing types.
open gates, which might lead to a tortoise entering. Cattle grating designed to safely exclude desert tortoise shall be installed at the gated entries to discourage tortoises from gaining entry.

d. Utility Corridor Fencing. Utility corridors and tower locations may be temporarily fenced with tortoise exclusion fencing to prevent desert tortoise entry during construction, or monitored by a biologist during construction activity. Temporary fencing must follow guidelines for permanent fencing and supporting stakes shall be sufficiently spaced to maintain fence integrity.

e. Fence Inspections. Following installation of the desert tortoise exclusion fencing in the utility corridors, the fencing shall be regularly inspected. Permanent fencing shall be inspected monthly and during/following all major rainfall events. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within two days of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing must be inspected weekly and, where drainages intersect the fencing, during and immediately following major rainfall events. All temporary fencing shall be repaired immediately upon discovery and, if the fence may have permitted tortoise entry while damaged, the Designated Biologist shall inspect the utility corridor or tower site for tortoise.

2. Desert Tortoise Clearance Surveys. Following construction of the tortoise exclusionary fencing around the Plant Site, all fenced areas shall be cleared of tortoises by the Designated Biologist, who may be assisted by Biological Monitors. Clearance surveys shall adhere to the current USFWS clearance survey protocols.

To facilitate seeing the ground from different angles, a second clearance survey shall be walked at 90 degrees to the orientation of the first clearance pass or be offset from transects on the first pass. Surveys where tortoises might be present must coincide with heightened desert tortoise activity from late March through May and during September or October. At BSEP, there are also broad, barren areas that would be highly unlikely to host tortoises. These could be segregated from vegetated portions of the site by temporary tortoise exclusion fencing and cleared during winter when tortoises are inactive (winter) or during summer when tortoises spend less time aboveground than in spring and fall. If any tortoises were found, they would be relocated in accordance with the approved Relocation/Translocation Plan or simply allowed to move offsite through a removed portion of fence. In all cases, monitoring would follow any tortoise that either moves off the Project of its own accord or is relocated or translocated, per procedures outlined in the Relocation/Translocation Plan. All burrows (presumably mostly rodent) would be excavated by hand and collapsed (see No. 5, below). Active kangaroo rat burrows during summer would be excavated in the late afternoon or early evening only, to permit these nocturnal rodents to escape safely. Dormant tortoises found in burrows would be relocated to newly dug burrows outside the permanent perimeter fence.

3. Relocation for Desert Tortoise West of SR 14. If desert tortoises are detected during clearance surveys within the project impact area west of SR 14, the Designated Biologist shall move the tortoise the shortest possible distance, keeping it out of harm’s way but still within its home range. Desert tortoise encountered during construction of any of the utility corridors shall be similarly treated in accordance with the Relocation Plan. Any relocation efforts shall be in accordance with techniques described in the Guidelines for Handling Desert Tortoise during Construction Projects (Desert Tortoise Council 1999) or more current guidance on the USFWS website.

4. Relocation/Translocation for Desert Tortoise East of SR 14. To address desert tortoise encountered during clearance surveys within the project impact area east of SR 14, the
5. **Burrow Inspection.** All potential desert tortoise burrows, including rodent burrows that may host juvenile tortoises, within the fenced area shall be searched for presence. In some cases, a fiber optic scope may be needed to determine presence or absence within a deep burrow. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined. Tortoises excavated from burrows shall be relocated/translocated to unoccupied natural or artificial burrows in accordance with procedures outlined in the Relocation/Translocation Plan.

6. **Burrow Excavation.** Burrows inhabited by tortoises shall be excavated by the Designated Biologist using hand tools, and then collapsed or blocked to prevent re-occupation. If excavated during May through July, the Designated Biologist shall search for desert tortoise nests/eggs. All desert tortoise handling and removal, and burrow excavations, including nests, shall be conducted by the Designated Biologist in accordance with the USFWS-approved protocol (Desert Tortoise Council 1999) or more current guidance on the USFWS website.

7. **Monitoring Following During Clearing.** Following desert tortoise clearance removal from the plant site, and relocation/translocation to a new site, heavy equipment shall be allowed to enter the project site to perform earth work such as clearing, grubbing, leveling, and trenching. A Biological Monitor shall be on call during initial clearing and grading activities. Should a tortoise be discovered, it shall be relocated/translocated as described above in accordance with the Relocation Plan.

8. **Reporting.** The Designated Biologist shall record the following information for any desert tortoises handled: a) the locations (narrative and maps) and dates of observation; b) general condition and health, including injuries, state of healing and whether desert tortoise voided their bladders; c) location moved from and location moved to (using GPS technology); d) gender, carapace length, and diagnostic markings (i.e., identification numbers or marked lateral scutes); e) ambient temperature when handled and released; and f) digital photograph of each handled desert tortoise as described in the paragraph below. Desert tortoise moved from within project areas shall be marked for future identification as described in Guidelines for Handling Desert Tortoise during Construction Projects (Desert Tortoise Council 1999) or more current guidance on the USFWS website. Digital photographs of the carapace, plastron, and fourth costal scute shall be taken. Scutes shall not be notched for identification.

**Verification:** Within 90 days prior to start of any pre-construction site mobilization activities, the project owner shall develop and implement a desert tortoise Relocation/Translocation Plan. The Relocation/Translocation Plan shall be consistent with current USFWS approved guidelines, and shall be approved by Energy Commission staff in consultation with the USFWS and CDFG. The Relocation/Translocation Plan shall designate a relocation/translocation site as close as possible to the project impact area east of SR 14 that, and which provides suitable conditions for long-term survival of the relocated/translocated desert tortoise.
Within 30 days after initiation of relocation/translocation activities, the Designated Biologist shall provide to the CPM for review and approval, a written report identifying which items of the Relocation/Translocation Plan have been completed, and a summary of all modifications to measures made during implementation.

Within 30 days of completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to the CPM, USFWS, and CDFG describing how each of the mitigation measures described above has been satisfied. The report shall include the desert tortoise survey results, capture and release locations of any relocated desert tortoises, and any other information needed to demonstrate compliance with the measures described above.

**RATIONALE**

General – Consistency with General Conditions Definitions, page 7-1. Consistency was also made regarding desert tortoise “translocation” vs. “relocation.”

Point No. 1 – Transect spacing has changed in new guidelines (USFWS 2009).

Point Nos. 1b and 1d – More details on temporary fencing have been added to 1b to clarify permanent versus temporary fencing and temporary fencing construction details were removed from 1d as they are more appropriate in 1b.

Point No. 2 – This point has been deleted based on the disturbed nature of the plant site and the absence of any desert tortoise sign.

**EVAPORATION POND NETTING AND MONITORING**

**BIO-14**

The project owner shall cover the evaporation ponds prior to any discharge with 1.5-inch mesh netting designed to exclude birds and other wildlife from drinking or landing on the water of the ponds. The netted ponds shall be monitored regularly to verify that the netting remains intact, is fulfilling its function in excluding birds and other wildlife from the ponds, and does not pose an entrapment threat to birds and other wildlife. The ponds shall include a visual deterrent in addition to the netting, and the pond shall be designed such that the netting will never contact the water. Monitoring of the evaporation ponds shall include the following:

- The Designated Biologist or Biological Monitor shall regularly survey the ponds at least once per month starting with the first month of operation of the evaporation ponds. The purpose of the surveys shall be to determine if the netted ponds are effective in excluding birds, and to determine if the nets pose an entrapment hazard to birds and wildlife. Surveys shall be of sufficient duration and intensity to provide an accurate assessment of bird and wildlife use of the ponds during all seasons. Surveyors shall be experienced with bird identification and survey techniques. Operations staff at the BSEP site shall also report finding any dead birds or other wildlife at the evaporation ponds to the Designated Biologist within one day of the detection of the carcass. The Designated Biologists shall report any bird or other wildlife deaths or entanglements within two days of the discovery to the CPM, CDFG, and USFWS.

- If dead or entangled birds are detected, the Designated Biologist shall take immediate action to correct the source of mortality or entanglement. The Designated Biologist shall make immediate efforts to contact and consult the CPM, CDFG, and USFWS by phone and electronic communications prior to taking remedial action upon detection of the problem, but the inability to reach these parties shall not delay taking action that would, in the judgment of the Designated Biologist, prevent further mortality of birds or other wildlife at the evaporation ponds.
• If after 12 monthly site visits no significant bird or wildlife deaths or entanglements are detected by or reported to the Designated Biologist, monitoring can be reduced to quarterly visits, and be conducted by the ECM following training by the Designated Biologist.

• If after 12 consecutive quarterly site visits no significant bird or wildlife deaths or entanglements are detected by or reported to the Designated Biologist, the site visits can be reduced to two surveys per years, during spring and fall migration.

Verification: No less than 30 days prior to operation of the evaporation ponds the project owner shall provide to the CPM as-built drawings and photographs of the ponds indicating that the bird exclusion netting has been installed. The Designated Biologist shall provide information describing the dates, durations and results of site visits conducted at the evaporation ponds for inclusion in the annual compliance report for the site (per COMPLIANCE-4). The annual reports shall fully describe any bird or wildlife death or entanglements detected during the site visits or at any other time, and shall describe actions taken to remedy these problems. The report shall be submitted to the CPM, CDFG, and USFWS no later than January 31st of every year for the life of the project.

RATIONALE
General – Consistency with General Conditions Definitions, page 7-1.

Main – The mesh size has been removed from the condition because it will be dependent upon the best feasible technology available.

Bullet 1 – The Designated Biologist was deleted and the Environmental Compliance Manager was added. With the netting installed, the DB should not be required to do surveys and the ECM should be able to identify if birds are trapped within the netting. If birds are trapped, information can be collected for identification.

Bullet 4 – It is unreasonable to expect surveys for the life of the project if netting is required. A limit has been added for semi-annual surveys subsequent to the condition of quarterly surveys.

Verification – Clarification has been added to be consistent with reports required under COMPLIANCE-4.

BURROWING OWL IMPACT AVOIDANCE, MINIMIZATION, AND COMPENSATION MEASURES
BIO-17 The project owner shall implement the following measures to avoid and offset impacts to burrowing owls:

1. Pre-Construction Surveys. Concurrent with desert tortoise clearance surveys, the Designated Biologist shall conduct pre-construction surveys for burrowing owls within the project site and along all linear facilities in accordance with CDFG guidelines (California Burrowing Owl Consortium 1993). If burrowing owls are detected within the impact area or within 500 feet of any proposed construction activities, the Designated Biologist shall prepare a Burrowing Owl Monitoring and Mitigation Plan in consultation with CDFG, USFWS, and Energy Commission staff. This plan shall include detailed measures to avoid and minimize impacts to burrowing owls in and near the construction areas and shall be consistent with CDFG guidance (CDFG 1995).

2. Artificial Burrow Installation. Prior to any ground-disturbing activities, the project owner shall install no less than four artificial burrows, or at least two burrows for each owl displaced by the project, in the proposed relocation area immediately north of the project site, a 6-acre area within the 14.39-acre parcel owned by Beacon Solar, LLC. Design of the artificial burrows shall be consistent with CDFG guidelines (CDFG 1995). The Designated Biologist shall survey the site selected for artificial burrow construction to verify that such construction will not affect desert tortoise or Mohave...
ground squirrel. The design of the burrows shall be approved by the CPM in consultation with CDFG and USFWS.

3. **Surveys of Relocation Area.** The Designated Biologist shall survey the relocation area during the nesting season to assess use of the artificial burrows by owls using methods consistent with Phase II and Phase III Burrowing Owl Consortium Guideline protocols (CBOC 1993). Surveys shall start upon completion of artificial burrow construction and shall continue for a period of five years. If survey results indicate burrowing owls are not nesting on the relocation area, remedial actions shall be developed and implemented in consultation with the CPM, CDFG and USFWS to correct conditions at the site that might be preventing owls from nesting there. A report describing survey results and remedial actions taken shall be submitted to the CPM, CDFG and USEWS no later than January 31st of each year for five years.

4. **Protect and Manage 6-Acre Relocation Area.** The project owner shall provide a mechanism to protect 6 acres of the 14.39-acre relocation area in perpetuity as habitat for burrowing owls, either in fee title, or as a permanent deed restriction. The project owners shall prepare a draft Burrowing Owl Relocation Area Management Plan for review and approval by the CPM in consultation with CDFG. The overall objective of the plan shall be to manage the 6-acre relocation parcel for the benefit of burrowing owls, with the specific goals of:

a. Maintaining the functionality of at least four artificial or natural burrows for the 5-year monitoring period; and

b. Minimizing the occurrence of weeds (species considered “moderate” or “high” threat to California wildlands as defined by CAL-IPC [2006] and noxious weeds rated “A” or “B” by the California Department of Food and Agriculture and any federal-rated pest plants [CDFA 2009]) at less than 10 percent cover of the shrub and herb layers.

The Burrowing Owl Relocation Area Management Plan shall include monitoring and maintenance requirements, details on methods for measuring compliance goals and remedial actions to be taken if management goals are not met. A report describing results of monitoring and management of the relocation area shall be submitted to the CPM, CDFG and USEWS no later than January 31st of each year for the life of the project.

5. **Acquire 20 Acres of Burrowing Owl Habitat.** In addition to protecting the 6 acre relocation area north of the project site, the project owner shall acquire, in fee or in easement, 20 acres of land suitable to support a resident population of burrowing owls and shall provide funding for the enhancement and long-term management of these compensation lands. The responsibilities for acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to Mojave Desert habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. Agreements to delegate land acquisition to CDFG or an approved third party and to manage compensation lands shall be implemented within 12 months of the Energy Commission’s License Decision.

a. **Burrowing Owl Compensation Lands Mitigation Criteria.** The terms and conditions of this acquisition or easement shall be as described in BIO-11, with the additional criteria to include: 1) the 20 acres of mitigation land must provide suitable habitat for burrowing owls, and 2) the acquisition lands must be either capable of currently supporting burrowing owls or be no farther than 5 miles from an active burrowing owl
nestling territory. The 20 acres of burrowing owl compensation mitigation lands may be included with the 115 acres of desert tortoise and Mohave ground squirrel compensation mitigation lands ONLY if these two burrowing owl criteria are met.

b. **Security.** If the 20 acres of burrowing owl compensation mitigation land is separate from the 115 acres required for desert tortoise and Mohave ground squirrel compensation lands the project owner or an approved third party shall complete acquisition of the proposed compensation lands prior to initiating construction-related ground disturbance- disturbing project activities. Alternatively, financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security (“Security”) prior to initiating construction-related ground disturbance- disturbing project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with CDFG, to ensure funding in an amount determined by a Property Analysis Record (PAR) or PAR-like analysis of the proposed compensation lands.

**Verification:** Within 60 days prior to start of any construction project-related ground disturbance activities of publication of the Energy Commission Decision, the project owner shall submit to the CPM, CDFG and USFWS a draft Burrowing Owl Relocation Area Management Plan. Within 30 days prior to any construction-related ground disturbance- disturbing activities on the project site the project owner shall submit to the CPM a final Burrowing Owl Relocation Area Management Plan that reflects review and approval by Energy Commission staff in consultation with CDFG and USFWS.

If pre-construction surveys detect burrowing owls within 500 feet of proposed construction activities, the Designated Biologist shall provide to CDFG, USFWS, and the CPM a Burrowing Owl Monitoring and Mitigation Plan at least 30 days prior to the start of any project-related site disturbance activities. The project owner shall report monthly to CDFG, USFWS, and the CPM a Burrowing Owl Monitoring and Mitigation Plan at least 30 days prior to the start of any project-related site disturbance activities. The project owner shall provide the CPM and CDFG a written construction termination report identifying how mitigation measures described in the plan have been completed.

No less than 90 days prior to acquisition of compensation lands the property, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a formal acquisition proposal to the CPM, and CDFG, and USFWS describing the 20-acre parcel intended for purchase. Prior to start of any construction project-related ground disturbance activities the project owner shall provide written verification to the CPM that the 20 acres of compensation lands and/or conservation easements have been acquired and recorded in favor of the approved easement holder(s). Alternatively, before beginning construction-related project ground disturbance- disturbing activities, the project owner shall provide Security to the CPM in accordance with this condition. Within 90 days of the compensation land or easement purchase, as determined by the date on the title, the project owner shall provide the CPM with a management plan for review and approval, in consultation with CDFG, for the compensation lands and associated funds.

The annual compliance report (per COMPLIANCE-4) shall include information describing results of surveys, monitoring and management of the relocation area.

If the 20 acres of burrowing owl compensation mitigation land is separate from the 115 acres required for desert tortoise and Mohave ground squirrel compensation lands, the project owner shall fulfill the requirements described in BIO-11, including submittal of a formal acquisition proposal no less than 90 days prior to acquisition, and a management plan within 30 days after the compensation land purchase.
RATIONALE
General – Consistency with General Conditions Definitions, page 7-1. Consistency was also added by changing “mitigation lands” to “compensation lands” throughout.

Point No. 3 – The statement regarding success of the relocation area being based upon successful nesting in the burrows has been deleted. This is an unreasonable criteria for success because WBO may be using other burrows within their home range, and they may use burrows for wintering but not nesting. The WBO population in the area also is not dense, which provides WBOs in the area with more opportunity to pick and choose amongst available burrows. Therefore the use of burrows in the relocation area – whether artificial or natural – is not a biologically appropriate measure of relocation success. Furthermore, the 6-acre conservation area is being provided for relocation and not for compensatory mitigation. An additional 20 acres of compensation lands are being acquired to fully mitigate impacts to WBO. In accordance with the 1993 CBOC Guidelines and CDFG 1995 guidelines, WBO impacts are mitigated by the acquisition of offsite acreage at a rate commensurate with the number of pairs/individuals impacted and the quality of habitat acquired. The Project is proposing to acquire occupied habitat offsite to compensate for impacts to 2 pairs of WBO (based on survey data), based on 6.5 acres per pair, which is equivalent to a 13-acre compensatory mitigation requirement. The project is acquiring 20 acres for WBO, more than required.

Point 4 – The information should be provided in the Annual Compliance Report per COMPLIANCE-4. This information was removed and added to the verification as part of the timing of the measure.

Verification – Timing has been adjusted to what is considered reasonable based upon anticipated activities and successful species avoidance and minimization measures.

STREAMBED IMPACT MINIMIZATION AND COMPENSATION MEASURES
BIO-18
The project owner shall compensate for permanent impacts to waters of the state by constructing a new channel that replicates the hydrological and biological functions of the impacted drainages, and shall establish a channel maintenance program. The channel created by the applicant shall: be designed to be geomorphologically equivalent to a typical desert wash system; maintain existing hydrological connections and levels of sediment transport; provide conditions that would support recruitment and maintenance of native vegetation, provide wildlife habitat, and maintain the biological functions and values of a natural desert wash ecosystem; be designed, constructed and maintained such that it would not create a movement barrier or hazard for desert tortoise or other wildlife, or be a source of invasive weeds. The project owner shall also implement Best Management Practices and other measures described below to protect jurisdictional waters of the State occurring along linear alignments. The project owner shall implement the following measures to compensate for impacts to waters of the state:

1. Submit Channel Design for Review: No later than 60 days prior to start of site mobilization, the project owner shall submit channel design and construction drawings for review and approval by the CPM in consultation with CDFG, as described in Soil&Water-5. The channel shall be designed such that it would remain accessible to desert tortoise and other wildlife at all times (i.e., all side slopes 3:1 or more gradual, with textured soil cement that would enhance traction for tortoise), and would promote a slightly aggradational (depositional) pattern of sediment deposition to allow for natural geomorphic processes;

2. Prepare a Desert Wash Revegetation Plan that follows the outline provided for rehabilitation plans described in Newton and Claassen (2003), Appendix C: Sample
Outline for a Rehabilitation Plan. The Desert Wash Revegetation Plan shall meet the following criteria at the end of the 10-year revegetation period:

a. Establishment of at least 15 percent native desert wash shrub cover within the channel bottom (6.2 acres total within the 41.5-acre channel bottom, and under no circumstances less than 4.8 acres);

b. Establishment of at least 7 percent native desert wash shrub cover on each of the 11 channel reaches between drop structures;

c. Maintain percent cover of noxious weeds (defined as non-native species that pose a “moderate” or “high” threat to California wildlands as defined by CAL-IPC (2006) within the channel) below 2 percent within the channel bottom (less than 0.8 total within the 41.5-acre channel bottom);

3. Review and Submittal of Plan and Cost Estimate: Within 60 days of publication of the Energy Commission Decision, the project owner shall submit to the CPM and CDFG a draft Desert Wash Revegetation Plan and a draft estimate of costs to fully implement the plan. Prior to any ground-disturbing activities within waters of the State, the project owner shall submit to the CPM a final Desert Wash Revegetation Plan and a final cost estimate for implementation that reflects review and approval by Energy Commission staff in consultation with CDFG.

4. Acquire Off-Site Desert Wash: If at the end of the 10-year revegetation period the success criteria defined in the Desert Wash Revegetation Plan have not been achieved, the project owner shall acquire, in fee or in easement, land that includes at least 16 acres of desert wash state jurisdictional waters and their immediate watershed and floodplain. Prior to acquisition the applicant shall prepare an acquisition proposal for review and approval by Energy Commission staff and CDFG describing the 16 acres of state waters and the surrounding watershed and floodplain, and shall ensure that the acquired parcel(s) include sufficient area to manage the lands. The responsibilities for acquisition and management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-profit organization dedicated to Mojave Desert habitat conservation, subject to approval by the CPM, in consultation with CDFG and RWQCB prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. The terms and conditions of this acquisition or easement shall be as described in BIO-11, with the additional criteria that the desert wash mitigation lands: 1) include at least 16 acres of state jurisdictional waters; 2) be characterized by similar soil permeability and hydrological and biological functions as the impacted wash; and 3) be within the same watershed as the impacted wash.

5. Review and Approval of Compensation Lands Prior to Acquisition. A minimum of three months prior to acquisition of the compensation lands property, the project owner, or a third-party approved by the CPM, in consultation with CDFG, shall submit a formal acquisition proposal to the CPM and CDFG describing the parcel(s) intended for purchase. This acquisition proposal shall include a description and delineation of waters of the state within the parcel(s); and shall describe the floodplain and immediate watershed in the vicinity of the drainage; and shall identify the area of lands surrounding the drainage needed to adequately manage the waters of the state to protect and enhance their biological functions and values. Approval from the CPM, in consultation with CDFG, shall be required for acquisition of all parcels comprising the compensation lands in advance of purchase.

1 The 10-year revegetation period begins upon completion of construction of the new channel.
6. **Security for Implementation of Mitigation**: A security in the form of an irrevocable letter of credit, pledged savings account, or certificate of deposit for the amount of all mitigation measures pursuant to this condition of certification shall be submitted to, and approved by, the CPM, in consultation with CDFG, prior to commencing project activities within waters of the state. The security shall be approved by the CPM, in consultation with CDFG’s legal advisors, prior to its execution, and shall allow the CPM at its discretion to recover funds immediately if the CPM, in consultation with CDFG, determines there has been a default. Security shall include an amount equal to the final cost estimate for implementation of the Desert Wash Revegetation Plan, as described above in Item 2. In addition, security shall include the **sufficient** costs of purchasing land to ensure acquisition of a minimum of 16 acres of desert wash state jurisdictional waters plus the immediate watershed and floodplain.

Prior to initiation of ground disturbance, the security shall be approved by the CPM, in consultation with CDFG, to ensure funding for the required mitigation (onsite restoration or offsite acquisition). The amount of the security shall be based on the amount of the final estimated cost of implementing the Desert Wash Revegetation Plan over a ten year period. The security deposit shall be no less than $230,000, as estimated for the cost of sufficient acreage to ensure acquisition of 16 acres of desert wash state jurisdictional waters. The required acreage may be less than 50 acres, and will depend on the area of adjacent watershed and floodplain needed to adequately protect and manage the 16 acres of waters of the state. The minimum security amount is based on 50 acres, an estimated amount of acreage needed for acquisition of 16 acres of state jurisdictional waters. Security costs for land acquisition were calculated as follows and may be revised upon completion of a Property Analysis Record (PAR) or PAR-like analysis of the proposed compensation lands:

- Land acquisition costs for compensation lands, calculated at $3,000/acre for 50 acres: $150,000;
- Costs of enhancing compensation lands, calculated at $250/acre for 50 acres: $12,500; and
- Costs of establishing an endowment for long-term management of compensation lands, calculated at $1,350/acre for 50 acres: $67,500.

7. **Long-Term Biological Monitoring and Management**: Long-term biological monitoring and management of the channel shall begin at the end of the 10-year revegetation period and shall continue for the life of the project as described in SOIL & WATER-B, and shall occur regardless of the success or failure of the revegetation effort. The goals of the long-term monitoring shall be to:

   a. Maintain percent cover of noxious weeds (defined as non-native species that pose a “moderate” or “high” threat to California wildlands as defined by CAL-IPC (2006) within the channel) below 2 percent within the channel bottom (less than 0.8 total within the 41.5-acre channel bottom).

   b. Maintain the channel as safe for desert tortoise and other wildlife **by maintaining slopes at 3:1 or less where accessible to desert tortoise or wildlife**. No time shall the channel pose an entrapment hazard to desert tortoise and other wildlife. An entrapment hazard is defined as a depression, pit or trench with a depth of one foot or greater and a slope steeper than 3:1.

Inspections to assess percent weed cover within the channel shall be conducted by the Designated Biologist no less than once per year and only within the peak growing season for weedy annual herbs (February 1 through April 30th). Inspections to assess entrapment **wildlife safety** hazards for desert tortoise and other wildlife shall occur within 1 day of major storm.
events. The same remedial actions for managing weeds and entrapment wildlife safety hazards described in the Desert Wash Revegetation Plan shall be employed during the long-term monitoring. Entrapment Wildlife safety hazards shall be corrected immediately upon detection. The Designated Biologist shall prepare an annual report describing the methods and results of the inspections, as well as any remedial actions taken, and shall submit these annual reports to the CPM and CDFG no later than January 31st.

8. Equipment Laydown Plan: The project owner shall develop a Storm Water Pollution Prevention Plan for construction activities that includes an engineered plan for the proposed equipment laydown area within the existing wash, as described in Soil&Water 3. This engineered plan shall describe protective structures, procedures for moving equipment, fuels and materials, and plan for conveyance of stormflows, during a rainfall event. Prior to initiation of any project activities in jurisdictional areas and no later than 60 days after publication of the Energy Commission Decision, the project owner shall submit this plan for review and approval by the CPM in consultation with CDFG.

9. Right of Access and Review for Compliance Monitoring: The CPM reserves the right to enter the project site and/or allow CDFG to enter the project site at any time to ensure compliance with these conditions. The project owner herein grants to the CPM and to CDFG employees and/or their representatives the right to enter the project site at any time, to ensure compliance with the terms and conditions and/or to determine the impacts of storm events, maintenance activities, or other actions that might affect the restoration and revegetation efforts. The CPM and CDFG may, at the CPM’s discretion, review relevant documents maintained by the operator, interview the operator’s employees and agents, inspect the work site, and take other actions to assess compliance with or effectiveness of mitigation measures.

10. Reporting of Special-Status Species: If any special status species are observed on or in proximity to the project site, or during project surveys, the project owner shall submit California Natural Diversity Data Base (CNDDB) forms and maps to the CNDDB within five working days of the sightings and provide the regional CDFG office with copies of the CNDDB forms and survey maps. The CNDDB form is available online at: www.dfg.ca.gov/ehab/krdfs/natspec.pdf. This information shall be mailed within five days to: California Department of Fish and Game, Natural Diversity Data Base, 1807 13th Street, Suite 202, Sacramento, CA 95814, (916) 324-3812. A copy of this information shall also be mailed within five days to CDFG and the CPM.

11. Notification: The project owner shall notify the CPM and CDFG, in writing, at least five days prior to initiation of project activities in jurisdictional areas as noted and at least five days prior to completion of project activities in jurisdictional areas. The project owner shall notify the CPM and CDFG of any change of conditions to the project, the jurisdictional impacts, or the mitigation efforts. If the conditions at the site of a proposed project change in a manner which changes risk to biological resources that may be substantially adversely affected by the proposed project, The notifying report shall be provided to the CPM and CDFG no later than seven days after the change of conditions is identified. As used here, change of condition refers to the process, procedures, and methods of operation of a project, the biological and physical characteristics of a project area, or the laws or regulations pertinent to the project as defined below. A copy of the notifying change of conditions report shall be included in the annual reports.

a. Biological Conditions: a change in biological conditions includes, but is not limited to, the following: 1) the presence of biological resources within or adjacent to the project area, whether native or non-native, not previously known to occur in the area, or 2) the presence of biological resources within or adjacent to the project area, whether native or non-native, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.
b. **Physical Conditions**: a change in physical conditions includes, but is not limited to, the following: 1) a change in the morphology of a river, stream, or lake, such as the lowering of a bed or scouring of a bank, or changes in stream form and configuration caused by storm events; 2) the movement of a river or stream channel to a different location; 3) a reduction of or other change in vegetation on the bed, channel, or bank of a drainage, or 4) changes to the hydrologic regime such as fluctuations in the timing or volume of water flows in a river or stream.

c. **Legal Conditions**: a change in legal conditions includes, but is not limited to, a change in Regulations, Statutory Law, a Judicial or Court decision, or the listing of a species, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.

12. **Code of Regulations**: The project owner shall provide a copy of the Energy Commission License Decision to all contractors, subcontractors, and the applicant's project supervisors. Copies shall be readily available at work sites at all times during periods of active work and must be presented to any CDFG personnel or personnel from another agency upon demand. The CPM reserves the right to issue a stop work order or allow CDFG to issue a stop work order after giving notice to the project owner and the CPM, if the CPM in consultation with CDFG, determines that the project owner has breached any of the terms or conditions or for other reasons, including but not limited to the following:

a. The information provided by the applicant regarding streambed alteration is incomplete or inaccurate;

b. New information becomes available that was not known to it in preparing the terms and conditions;

c. The project or project activities as described in the Final Staff Assessment have changed;

d. The conditions affecting biological resources changed or the CPM, in consultation with CDFG, determines that project activities will result in a substantial adverse effect on the environment.

13. **Construction Schedule**: Pine Tree Creek and the unnamed desert wash shall not be altered until the new channel is constructed and deemed by the CPM ready to accept stormwater flows.

14. **Best Management Practices**: The applicant shall also comply with the following conditions:

a. The project owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter a lake or flowing stream or be placed in locations that may be subjected to high storm flows.

b. The project owner shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws, and it shall be the responsibility of the operator to ensure compliance.

c. Spoil sites shall not be located within a drainage or locations that may be subjected to high storm flows, where spoil shall be washed back into a drainage or lake.

d. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from...
contaminating the soil and/or entering waters of the state. These materials, placed within or where they may enter a drainage or lake, by project owner or any party working under contract or with the permission of the project owner shall be removed immediately.

e. No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the state.

f. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.

g. No equipment maintenance shall occur within or near any stream channel where petroleum products or other pollutants from the equipment may enter these areas under any flow.

Verification: Within 60 days prior to any construction-related ground disturbance activities of publication of the Energy Commission Decision, the project owner shall submit to the CPM and CDFG a draft Desert Wash Revegetation Plan and a draft estimate of costs to fully implement the plan. Within 30 days prior to any construction-related ground disturbance activities within waters of the State, the project owner shall submit to the CPM a final Desert Wash Revegetation Plan and a final cost estimate for implementation of revegetation monitoring and management activities that reflects review and approval by Energy Commission staff in consultation with CDFG.

No later than 60 days prior to any construction-related ground disturbance activities of start of site mobilization, the project owner shall submit channel design and construction drawings for review and approval by the CPM in consultation with CDFG, as described in Soil&Water-5.

No fewer than 30 days prior to the start of any construction-related ground disturbance activities of related facilities mobilization activities, the project owner shall implement the mitigation measures described above. No fewer than 30 days prior to the start of work in jurisdictional areas potentially affecting waters of the state, the project owner shall provide written verification (i.e., through incorporation into the BRMIMP) to the CPM that the above best management practices will be implemented and provide a discussion of work in jurisdictional areas waters of the state in Compliance Reports for the duration of the project. Compliance reports shall be monthly for the first five years following completion of construction of the channel, and thereafter shall be submitted every six months annually per COMPLIANCE-4. The annual compliance report, per COMPLIANCE-4, shall include information describing wash revegetation and mitigation efforts.

No less than 90 days prior to acquisition of the desert wash compensation acreage the project owner, or a third-party approved by the CPM, in consultation with CDFG, shall submit a formal acquisition proposal to the CPM and CDFG describing the parcel(s) intended for purchase.

After completion of the 10-year monitoring period for the Desert Wash Revegetation Plan, the project owner shall thereafter include related information in the submit an annual compliance report to the CPM and CDFG. The information to be included in the report shall describe the methods and results of the long term biological monitoring inspections for weed and entrapment hazards within the channel as well as. The report also shall include a discussion of any remedial actions taken, if any, and shall be included in the annual compliance report submitted no later than January 31st of every year for the life of the project. If any entrapped animals/carcasses are detected CDFG and USFWS shall be notified in writing within 48 hours.

The project owner shall notify the CPM and CDFG, in writing, at least five days prior to initiation of project activities in jurisdictional areas noted and at least five days prior to completion of project activities in jurisdictional areas. The project owner shall notify the CPM and CDFG of any change of conditions to the
project, the jurisdictional impacts, or the mitigation efforts, if the conditions at the site of a proposed project change in a manner which changes risk to biological resources that may be substantially adversely affected by the proposed project. The notifying report shall be provided to the CPM and CDFG no later than seven days after the change of conditions is identified. As used here, change of condition refers to the process, procedures, and methods of operation of a project; the biological and physical characteristics of a project area; or the laws or regulations pertinent to the project as defined below. A copy of the notifying change of conditions report shall be included in the annual reports.

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RATIONALE

General – Consistency with General Conditions Definitions, page 7-1. Consistency was also added by replacing “mitigation lands” with “compensation lands” throughout.

General – Language has been deleted from the introduction to reflect that the rerouted wash is intended to mitigate for impacts to the existing washes, and not to achieve conditions that are equivalent to a natural desert wash.

General – All references to off-site compensation lands exceeding 16-acres have been removed. The project is being required to attempt onsite mitigation that includes success criteria for the wash. If these conditions are not met, the applicant is being required to acquire offsite compensation for those onsite impacts. Offsite compensation therefore should mitigate onsite impacts to 16-acres of state waters (of which only 2.4 is vegetated). The text has been updated to differentiate between the mitigation requirement and the need for funding that would support the acquisition of sufficient land to meet the potential offsite mitigation requirement.

Point Nos. 3, 7, and 11 – These have been moved to the verification because they relate to timing of the measures. In addition, reporting requirements have been modified to reflect the annual compliance report, as required per COMPLIANCE-4, to consolidate compliance information in a single report.

Point No. 7b – The language regarding entrapment has been deleted and the text rewritten to address wildlife safety hazards.

Point No. 10 – This point has been deleted because the language has been revised and moved to BIO-7.
**Before the Energy Resources Conservation and Development Commission of the State of California**

**Application for Certification for the Beacon Solar Energy Project**

**Docket No. 08-AFC-2**

**Proof of Service**
(Revised 1/26/10)

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<th>Applicant</th>
<th>Counsel for Applicant</th>
<th>Energy Commission</th>
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<td>Scott Busa&lt;br&gt;Kenneth Stein, J.D.&lt;br&gt;Meg Russell&lt;br&gt;Duane McCloud&lt;br&gt;Guillermo Narvaez, P.E.&lt;br&gt;NextEra Energy Resources&lt;br&gt;700 Universe Blvd.&lt;br&gt;Juno Beach, FL 33408&lt;br&gt;<a href="mailto:Scott.busa@nexteraenergy.com">Scott.busa@nexteraenergy.com</a>&lt;br&gt;<a href="mailto:Kenneth.stein@nexteraenergy.com">Kenneth.stein@nexteraenergy.com</a>&lt;br&gt;<a href="mailto:Meg.Russell@nexteraenergy.com">Meg.Russell@nexteraenergy.com</a>&lt;br&gt;<a href="mailto:Duane.mccloud@nexteraenergy.com">Duane.mccloud@nexteraenergy.com</a>&lt;br&gt;<a href="mailto:Guillermo.narvaez@nexteraenergy.com">Guillermo.narvaez@nexteraenergy.com</a>&lt;br&gt;Diane Fellman, Director West Region&lt;br&gt;NextEra Energy Resources&lt;br&gt;234 Van Ness Avenue&lt;br&gt;San Francisco, CA 94102&lt;br&gt;<a href="mailto:Diane.fellman@nexteraenergy.com">Diane.fellman@nexteraenergy.com</a></td>
<td>Jane Luckhardt, Esq.&lt;br&gt;Downey Brand, LLP&lt;br&gt;621 Capitol Mall, 18th Floor&lt;br&gt;Sacramento, CA 95814&lt;br&gt;<a href="mailto:jluckhardt@downeybrand.com">jluckhardt@downeybrand.com</a></td>
<td>Karen Douglas&lt;br&gt;Commissioner and Presiding Member&lt;br&gt;<a href="mailto:kldouga@energy.state.ca.us">kldouga@energy.state.ca.us</a>&lt;br&gt;Jeffrey D. Byron&lt;br&gt;Commissioner &amp; Associate Member&lt;br&gt;<a href="mailto:jbyron@energy.state.ca.us">jbyron@energy.state.ca.us</a>&lt;br&gt;Kenneth Celli&lt;br&gt;Hearing Officer&lt;br&gt;<a href="mailto:kcelli@energy.state.ca.us">kcelli@energy.state.ca.us</a>&lt;br&gt;Kristy Chew&lt;br&gt;Advisor to Commissioner Byron&lt;br&gt;<a href="mailto:kchew@energy.state.ca.us">kchew@energy.state.ca.us</a></td>
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<tr>
<th>Applicant Consultant</th>
<th>Interested Agencies</th>
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<tr>
<td>Sara Head, Vice President&lt;br&gt;AECOM Environment&lt;br&gt;1220 Avenida Acaso&lt;br&gt;Camarillo, CA 93012&lt;br&gt;<a href="mailto:Sara.head@aecom.com">Sara.head@aecom.com</a></td>
<td>California ISO&lt;br&gt;<a href="mailto:e-recipient@caiso.com">e-recipient@caiso.com</a></td>
<td>Tanya A. Gulessarian&lt;br&gt;Marc D. Jacobs&lt;br&gt;Adams Broadwell Joseph &amp; Cardozo&lt;br&gt;601 Gateway Boulevard, Suite 1000&lt;br&gt;South San Francisco, CA 94080&lt;br&gt;E-mail Preferred&lt;br&gt;<a href="mailto:tgulessarian@adamsbroadwell.com">tgulessarian@adamsbroadwell.com</a></td>
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Bill Pietrucha, Project Manager<br>Jared Foster, P.E.<br>Worley Parsons<br>2330 E. Bidwell, Suite 150<br>Folsom, CA 95630<br>Bill.Pietrucha@worleyparsons.com<br>Jared.Foster@worleyparsons.com |
Declaration of Service

I, Lois Navarrot, declare that on February 4, 2010, I served and filed copies of the attached Beacon Solar Energy Project’s Revised Post-Workshop Revisions to Biological Resources Conditions of Certification. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: www.energy.ca.gov/sitingcases/beacon. The document has 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 e-mailed respectively, to the address below (preferred method);

OR

_____ depositing in the mail an original and 12 paper copies as follow:

California Energy Commission
Attn: Docket No. 08-AFC-2
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.

____________________________________
Lois Navarrot