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October 25, 2010

California Energy Commission
Attn: Docket Office, 08-AFC-13
1516 Ninth Street
Sacramento, CA 95814

Re: Calico Solar; Docket No. 08-AFC-13

Dear Docket Clerk:

Please process the enclosed CURE's ADDITIONAL COMMENTS ON THE PRESIDING MEMBER'S PROPOSED DECISION, conform the copy of the enclosed CURE's ADDITIONAL COMMENTS ON THE PRESIDING MEMBER'S PROPOSED DECISION, and return the copy in the envelope provided.

Thank you.

Sincerely,

/s/

Valerie Stevenson

:vs
Enclosures

2309-116v

STATE OF CALIFORNIA

Energy Resources Conservation and Development Commission

In the Matter of: The Application for Certification for the Calico Solar Power Project (formerly SES Solar One Project)	Docket No. 08-AFC-13

CALIFORNIA UNIONS FOR RELIABLE ENERGY AND WILLIAM PEREZ ADDITIONAL COMMENTS ON THE PRESIDING MEMBER'S PROPOSED DECISION

October 25, 2010

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Attorneys for the CALIFORNIA UNIONS FOR RELIABLE ENERGY

I. Introduction

We are writing on behalf of California Unions For Reliable Energy ("CURE") and Mr. William Perez to provide additional comments on the Presiding Member's Proposed Decision ("PMPD") for the Calico Solar Power Project ("Project"). These comments incorporate and supplement CURE's initial comments submitted to the Commission on September 19, 2010.

CURE is a coalition of unions whose purpose is to help solve the State's energy problems by building, maintaining and operating conventional and renewable energy power plants in a sustainable manner. Environmental degradation jeopardizes future jobs by causing construction moratoriums, eliminating protected species and habitat, using limited fresh water, and putting added stresses on the environmental carrying capacity of the state. This reduces future employment opportunities. In contrast, well designed projects that reduce environmental impacts of electricity generation improve long-term economic prospects.

CURE's individual members work on private and public lands in San Bernardino County that would be affected by industrial development in and around the Project site. Individual members also live, recreate and work in the communities and region that will suffer impacts related to the Project, including noise and visual intrusion, water and soil pollution, and destruction of archaeological resources and wildlife habitat areas.

Mr. William Perez owns land near the proposed Project site and recreates in the region. Mr. Perez has a personal interest in protecting the Mojave Desert, including the proposed Project site, from unnecessary adverse impacts related to the Project in order to protect the area for recreation and enjoyment of the area's natural resources for current and future generations. Mr. Perez enjoys camping and hiking with his family in the project region.

II. Desert Tortoise Translocation

On October 22, 2010, the Applicant filed a significantly revised version of its desert tortoise translocation plan. This plan would allow the Applicant to construct around hibernating desert tortoises:

> If occupied burrows are detected after October 31, the tortoises will be left in their burrows and a fenced quarantine pen will be constructed around each burrow; the pen will encompass the entire burrow, including the front apron and allow room for DETO to exit the burrow;

> approximately 3 square feet of open area extending from the outer edge of the burrow apron.[1]

This plan to allow the Applicant to actively construct a power plant around hibernating desert tortoises has not been analyzed by Commission Staff. This plan was not even provided to the Committee prior to the release of the PMPD. In fact, the Commission has not authorized construction to proceed around hibernating tortoises in any other fast track solar project that has been approved by the Commission to date.[2] To authorize such an activity now, without any environmental review of significant impacts, would clearly violate CEQA and the Commission's own regulations.

According to expert comments attached to this letter[3], the Applicant's recent desert tortoise translocation plan will have significant unanalyzed and unmitigated impacts on desert tortoises that remain in the active construction area. As explained in our previous comments, the Commission must also analyze offsite impacts to the species. These significant impacts must be analyzed by Commission Staff and included in a Staff Analysis pursuant to the Commission's regulations (20 CCR §1742.5):

> The staff shall review the information provided by the applicant and other sources and assess the environmental effects of the applicant's proposal, the completeness of the applicant's proposed mitigation measures, and the need for, and feasibility of, additional or alternative mitigation measures.
>
> (b) The staff shall present the results of its environmental assessments in a report (or exhibit) to be offered as evidence at the hearings held under Section 1748.
>
> (c) The staff report shall be written to inform interested persons and the commission of the environmental consequences of the proposal, and to assist the presiding member in preparing the presiding member's proposed decision required by Section 1749. The staff report shall indicate the staff's positions on the environmental issues affecting a decision on the applicant's proposal.

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[1] Desert Tortoise Translocation Plan, docketed October 22, 2010.

[2] See Ivanpah Solar Electric Generating System Biological Opinion, p. 18; Beacon Solar Energy Project, Final Decision, pp. 265-269 (08-AFC-02); Abengoa Solar Project PMPD, pp. 286-289; Blythe Solar Project, PMPD, pp. 261-264; Genesis Solar Energy Project, Final Decision p. 68 (09-AFC-8). See, i.e. Attachment A.

[3] See attached comments of Scott Cashen (Attachment B).

(d) The staff shall monitor the assessment of environmental factors by interested agencies and shall assist and supplement the agencies' assessment to ensure a complete consideration of significant environmental issues in the proceeding.

(e) The staff shall distribute a notice of availability of the staff report to all interested persons.

As we have commented previously, the offsite impacts to desert tortoise have not been adequately analyzed or mitigated. New information in the desert tortoise translocation plan filed less than one working day ago, sheds new light on the significant unknowns associated with the magnitude of offsite impacts to desert tortoises in tortoise preserves as a result of the Project. According to the new plan,

> To meet recently developed disease criteria developed by USFWS, BLM, CDFG and the DTRO (personal communication, BLM 2010), a sample of the resident population of the Ord-Rodman DWMA translocation site will be blood tested prior to moving tortoises into that translocation area. The purpose is to ensure, with a 95% confidence level, that the resident population of the Ord-Rodman DWMA recipient site has a 5% or less occurrence of disease. It is anticipated that the disease testing in the DWMA recipient site will occur in Spring 2011 prior to implementation of Phase 1b clearance of the Project. Based on the population estimates of the Ord-Rodman DWMA, it is estimated that it will be necessary to disease-test approximately 100-115 tortoise to meet the 95% confidence levels. To minimize harassment of the tortoises on the DWMA recipient site, if the 5% threshold is passed in the Ord-Rodman DWMA before all animals have been tested, disease testing will stop and a new translocation area will be proposed. This approach would be followed for all other proposed recipient sites. (Desert Tortoise Translocation Plan p. 2-20.)

The Commission has not provided the public or CURE, as an intervenor, sufficient time to review the desert tortoise translocation plan, but it is clear from our initial review that the offsite impacts to desert tortoise will be significant and are unmitigated.

The Project's proposal to move tortoises to tortoise preserves must be clearly and carefully described as part of the project under CEQA. Once clarified, the Commission must analyze the significant impacts. The Commission cannot leave the analysis or mitigation for these impacts to other agencies or post-approval processes. The Commission has an obligation now to independently analyze the Applicant's proposal, the U.S. Fish and Wildlife Services Biological Opinion to the

extent that it provides impact analysis and mitigation and independently determine whether the impacts are adequately identified and mitigated pursuant to CEQA.

According to the Commission's regulations, the Commission must direct Staff to analyze this new information and prepare a report, hold a hearing for Staff to present the results of this report and to inform interested persons and the commission of the environmental consequences of the proposal, and distribute a notice of availability of this new Staff report. CEQA requires the Commission to circulate this new information about significant impacts to desert tortoises for a 30-day comment period, provide public notice that specifies the period during which comments will be received, consider comments it receives on the draft assessment and prepare a written response.[4]

III. On-Site Construction in 2010 Is Not Required To Obtain ARRA Funding

California is experiencing an unprecedented wave of new alternative energy power plant development throughout its territory. As of January 2010, 244 renewable projects have been proposed in California.[5] This Project, as well as numerous other pending renewable energy projects, seeks funding through the American Recovery and Reinvestment Act of 2009.[6] While these plants will employ solar thermal, solar photovoltaic, or wind technology, each one will unavoidably tax the state's limited air, water, land, and biological resources to a potentially significant cumulative extent. The final toll taken by this historic energy boom on California's environment, public health, and natural resource base may not be known for several years or longer, but currently available and substantial evidence shows that the effects will be severe.

A significant number of these projects will have direct impacts to federally and state listed desert tortoises. Under these unprecedented circumstances, it is even more imperative that this environmental document identify and analyze all foreseeable direct, indirect, and cumulative project impacts to desert tortoises and other fragile and nonrenewable resources with the utmost degree of accuracy, care and detail. The PMPD for the Calico Project fails to conduct this careful analysis.

There is no reason for the Commission to hurry its approval of the Project without the required analysis. The Applicant is no doubt aware that recently published Program Guidance for the American Recovery and Reinvestment Act of

---

[4] Public Resources Code § 21091 and § 21092.

[5] Press Release, Office of the Governor, Governor Schwarzenegger Announces 244 Proposed Renewable Energy Projects Throughout the State (Dec. 29, 2009), available at http://gov.ca.gov/press-release/14092/. (Attachment C).

[6] See ARRA guidelines, attached to this comment (Attachment D).

2009 ("ARRA")[7] eliminates the Applicant's need to begin physical on-site construction by the end of the year.[8] According to the Program Guidance, "[c]onstruction begins when physical work of a significant nature begins," and "physical work of a significant nature" may be "when more than 5 percent of the total cost of the property has been paid or incurred."[9] The five percent can be spent solely on ***purchasing equipment*** without ***any*** site disturbance, and thus there is no need to disregard the Commission's legal obligations under CEQA and the Warren-Alquist Act to allow construction prior to the end of the year.

Dated: October 25, 2010

Respectfully submitted,

/s/

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[7] http://www.ustreas.gov/recovery/docs/guidance.pdf, revised March, 2010. Attachment C.
[8] Id. pp. 6-7.
[9] Id. pp. 6-7.

Calico Solar – 08-AFC-13
DECLARATION OF SERVICE

I, Valerie Stevenson, declare that on October 25, 2010, I served and filed copies of the attached CURE's ADDITIONAL COMMENTS ON THE PRESIDING MEMBER'S PROPOSED DECISION, dated October 25, 2010. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at www.energy.ca.gov/sitingcases/calicosolar/CalicoSolar_POS.pdf. 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 electronically to all email addresses on the Proof of Service list; and by depositing in the U.S. mail at South San Francisco, CA, with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list to those addresses NOT marked "email preferred."

AND

By sending an original paper copy and one electronic copy, mailed and emailed respectively to:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-13
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. Executed at Sacramento, CA, on October 25, 2010

/s/
Valerie Stevenson

CALIFORNIA ENERGY COMMISSION
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ATTACHMENT A

IVANPAH SOLAR ELECTRIC GENERATING SYSTEM

Commission Decision

CALIFORNIA
ENERGY COMMISSION
Arnold Schwarzenegger, Governor

SEPTEMBER 2010
CEC-800-2010-004 CMF

DOCKET NUMBER 07-AFC-5

Throughout the licensing process, members of the Committee, and ultimately the Commission, serve as fact-finders and decision-makers. Other parties, including the Applicant, Commission staff, and formal intervenors, function independently with equal legal status. An "ex parte" rule prohibits parties in the case, or other persons with an interest in the case, from communicating on substantive matters with the decision-makers, their staffs, or assigned hearing officer unless these communications are made on the public record. The Office of the Public Adviser is available to assist the public in participating in all aspects of the certification proceeding.

C. PROCEDURAL HISTORY

Public Resources Code, sections 25500 et seq. and Energy Commission regulations (Cal. Code Regs., tit. 20, § 1701, et seq.) mandate a public review process and specify the occurrence of certain procedural events in which the public may participate. The key procedural events that occurred in the present case are summarized below.

On August 31, 2007, Solar Partners I, LLC, Solar Partners II, LLC, Solar Partners IV, LLC and Solar Partners VIII, LLC (Solar Partners), submitted a single Application for Certification (AFC) to the California Energy Commission to develop three solar thermal power plants and shared facilities in close proximity to the Ivanpah Dry Lake, in San Bernardino County, California on federal land managed by the Bureau of Land Management (BLM). The initially proposed Ivanpah Solar Electric Generating System (ISEGS) project would generate 400 megawatts (MW).

On October 31, 2007, the Energy Commission deemed the AFC data adequate (sufficient data to proceed) and assigned a Committee of two Commissioners to conduct proceedings.

The formal parties included the Applicant, the Energy Commission staff (Staff), California Unions for Reliable Energy ("CURE"), Western Watersheds Project, Sierra Club, Defenders of Wildlife, Basin and Range Watch, Center for Biological Diversity, California Native Plant Society, and the County of San Bernardino

On December 10, 2007, the Committee issued a Notice of "Informational Hearing and Site Visit" to be held in Primm, Nevada, on January 4, 2009. The Notice was mailed to local agencies and members of the community who were known to be interested in the project, including the owners of land adjacent to or in the vicinity

of the project. In addition to property owners and persons on the general project mail-out list, notification was provided to local, state and federal public interest and regulatory organizations with an expressed or anticipated interest in this project. The Committee and other members of the Energy Commission staff were unable to attend the Informational Hearing as scheduled due to flight cancellations caused by a massive rain storm in Sacramento, necessitating the rescheduling to January 25, 2009. Those who were able to make it to the site on January 4 were able to attend an informal site visit.

The Public Adviser's Office of the Energy Commission (PAO) also identified and similarly notified local officials with jurisdiction in the project area. The PAO placed a notice in *The Desert Press and the Daily Dispatch*

On Friday, January 25, 2008, the Committee conducted a Site Visit to tour the proposed ISEGS site and then convened a public Informational Hearing at the Primm Valley Golf Club in San Bernardino County. At that event, the Committee, the parties, interested governmental agencies, and other public participants discussed issues related to development of the project, described the Commission's review process, and explained opportunities for public participation. On January 31, 2008, the Committee issued the Initial Scheduling Order for the proceedings.

On April 24, 2008, The Committee issued an Order Extending Deadline For Data Request. The Applicant, Staff, and Intervenor California Unions for Reliable Energy, jointly stipulated and the Committee concurred that additional time for requests for information without a required showing of good cause is consistent with facilitating further public participation in this proceeding.

The Staff of the Energy Commission and the Bureau of Land Management (BLM) conducted a workshop on Monday, June 23, 2008 in Primm Nevada. The purpose of the workshop was to discuss Applicant's responses to the Energy Commission's data requests for the following technical areas: air quality, alternatives, biological resources, closure and restoration plan, cultural resources, land use, project description, traffic and transportation, transmission system engineering, waste management, soil and water soil resources, and visual resources, and to facilitate the resolution of related issues and concerns. All interested agencies and members of the public were invited to participate.

The Committee issued its first Revised Committee Scheduling Order on September 26, 2008. Subsequent Revised Committee Scheduling Orders were

issued on October 29, 2008, June 2, 2009, July 15, 2009, The Committee also held a series of Committee Conferences. The first Conference was held on Wednesday, October 15, 2008, to consider the progress of the AFC to date and allow the Committee and parties to discuss ways in which the matter may most efficiently proceed to evidentiary hearings and to discuss any other matters relevant to the application. Additional Conferences were held on October 27, 2008, and May 18, 2009.

The Preliminary Staff Assessment (PSA) was published on December 11, 2008. The Staff provided notification by letter and held a PSA Workshop on January 9, 2009 in Primm, Nevada. The Final Staff Assessment (FSA) was released on November 4, 2009. Workshops were held on December 14, 15, and 22, 2009 to receive comments on the FSA/DEIS and to resolve outstanding issues among the parties. On March 17, 2010, Staff released its Final Staff Assessment Addendum.

On November 4, 2009, the Committee issued a Notice of Prehearing Conference and Evidentiary Hearing. The first prehearing conference was held on November 18, 2009, and the second prehearing conference was conducted on January 4, 2010. Evidentiary hearings were held on December 14, 15, 2009, and on January 11, 12, 13, and 14, 2010. All hearings were held at the Energy Commission headquarters in Sacramento.

On February 12, 2010, the Applicant filed a "Biological Mitigation Proposal ('Mitigated Ivanpah 3') for the Ivanpah Solar Electric Generating System (07·AFC·5)". The Applicant proposed "Mitigated Ivanpah 3" in an attempt to accommodate Commission Staff's suggestion, and those of some Intervenors, to reduce the botany and other biological resource impacts in Ivanpah 3 by avoiding construction in the northern-most section of the site, as well as to reduce botany impacts within the Construction Logistics Area. The following are key changes to the project as a result of "Mitigated Ivanpah 3":

- Removes approximately 433 acres from the northern portion of the Ivanpah 3 site and more than 40,000 heliostats;
- Reduces the number of power towers in Ivanpah 3 from five to one, and of the entire Ivanpah project from seven to three;
- Relocates the power block for Ivanpah 3;
- Realigns the boundary between Ivanpah 2 and 3 and the heliostat fields;

- Realigns some roads and utilities within the project footprint;
- Relocates the administration building and water supply wells within the Construction Logistics Area; and
- Removes approximately 109 acres from construction use within the Construction Logistics Area.

(Ex. 88, p. 2-1.)

An additional evidentiary hearing was held on March 22, 2010 on the "Mitigated Ivanpah 3" in Sacramento.

The Committee published the PMPD on August 3, 2010. The 30-day comment period on the PMPD expired on September 2, 2010. On August 24, 2010, the Committee held a PMPD comment hearing and evidentiary hearing at which further evidence was taken.

D. COMMISSION OUTREACH

Several entities within the Energy Commission provide various notices concerning power plant siting cases. Staff provides notices of staff workshops and the release of the Preliminary and Final Staff Assessments. The Hearing Office notices Committee-led events such as the informational hearing and site visit, status conferences, the prehearing conference, and evidentiary hearings. The Public Adviser's Office provides additional outreach for critical events as well as provides information to interested persons that would like to become more actively involved in a power plant siting proceeding. Further, the Media Office provides notice of events to local and regional press through press releases. The public may also subscribe to the proceeding's e-mail List Server offered on the web page for each project which gives an immediate notification of documents posted to the project web page. Through the activities of these entities, the Energy Commission has made every effort to ensure that interested persons are notified of activities in this proceeding.

E. PUBLIC COMMENT

The record contains public comments from concerned individuals and organizations. Throughout these proceedings, as reflected in the transcribed record, the Committee provided an opportunity for public comment at each Committee-sponsored conference and hearing.

Approximately 89 parties, individuals, and organizations commented on the PMPD. Their names are listed below. Those comments which raised substantial new environmental issues as well as selected other comments, are addressed throughout the remainder of this Decision. For substantively similar comments made by multiple commenters, our responses address the comment as a group, rather than individually. General comments to the effect that the Energy Commission should or should not approve the project were considered by the Commission but are not responded to individually.

Parties: Applicant, Basin & Range Watch, California Native Plant Society, CEC Staff, Center for Biological Diversity, San Bernardino County, Sierra Club, Western Watersheds

Non-Party Organizations: American Lung Association, CA Dept of Fish and Game, Southern California Edison, Californians for Reliable Energy, Inc., Western Lands Project

Individuals: Janeen Armstrong, Arvind Baddepudi, John Beetham, Tom Budlong, Chris Clarke, Craig Deutsche, David Dills, Amanda Finger, Jared Fuller, Kelly Fuller, Shaun Gonzales, Eric Hamburg, Richard Haney, Larry Hogue, Brendan Hughes, Timothy Ingalls, William C. McDonald, Thomas Meister, James Moody, LeRoy Murray, Susan Murray, Mary Ann Schroder, Rachel Shaw, Charlie Shrimplin, Michael and Joan Simmons, Charlotte Smith, Katherene Smith, Kim Snyder, Rebecca Swan

Saint Leo University Students: Monica Alvarez, Brittany Brasseur, Marquetta Brown, Chris Cappuccilli, Allison Cary, Michael Castronuovo, Julia Cavallo, Zhen Feng Chen, Elise Clyburn, Karen Coradin, Jessyca Daniel, Erin Davis, Chamel Dayaa, Nick Dublino, Sarah Eade, Nicoletta Everett, Anella Garness, Heather Gick, Brittany Groubert, Jeraldine Guaba, Stephen Hallet, Luke Haniford, Laquida Jennings, Kelvin Justiniano, Joe Kaman, Matthew Kendrick, Brooke King, Bryan Komorowski, Leah MacPherson, Megan Mancuso, Ryan McArdell, Richie Miller, JiHae Moon, Courtney Murphy, Chelsea Olivero, John M. Peterson, Ryan Popovich, Konstantin Pyankov, Ryan Regidor, Catherine Sands, Sara Schmalz, Kevin Sullivan, Andre Swain, Jamal Thompson, Preston Walsh, Terry Whitted, Sarah Young.

I. PROJECT DESCRIPTION AND PURPOSE

On August 31, 2007, the Applicant, BrightSource Energy, Inc. (BrightSource), filed an Application for Certification (AFC) with the Energy Commission seeking permission to construct and operate the Ivanpah Solar Electric Generating System (ISEGS) Project. The Applicant proposes to develop the ISEGS project as three power plants sharing some common infrastructure in separate and sequential phases that are designed to generate a total of 370 megawatts (MW) of electricity. Ivanpah 1 would have an electrical generation capacity of 120 MW, and Ivanpah 2 and 3 a capacity of 125 MW each. (Ex. 88, p. 2-2, Ex. 300, p. 3-1 to 3.3; Ex. 315, p. 2-4.)

SUMMARY AND DISCUSSION OF THE EVIDENCE

1. Project Location

The ISEGS project would be located on approximately 3,582 acres of public land administered by the BLM in the Mojave Desert near the Nevada border 4.5 miles southwest of Primm, Nevada and 0.5 mile west of the Primm Valley Golf Club, which is located just west of the Ivanpah Dry Lake. Access to site is from the Yates Well Road Interchange on Interstate 15 (I-15) via Colosseum Road. See **Project Description Figure 1** – Regional Setting and **Project Description Figure 2** – Local Setting, below. (Ex. 300, p. 3-3.)

2. Project Construction and Operation

Project construction will take place over approximately 42 months with an average and peak workforce of 474 and 959, respectively, of construction craft people, supervisory, support, and construction management personnel on-site during construction. The peak construction site workforce level is expected to occur in Month 32. (Ex. 1, § 2.2-15.) There will be an estimated 90 full time positions at the completion of construction. Development and construction is expected to cost approximately $1.8 billion. Construction could begin during the fourth quarter of 2010 and be completed by the first quarter of 2013. The facility will be operated 7 days a week, up to 14 hours per day.

ISEGS anticipates that construction would take place as follows: 1) the Construction Logistics Area; 2) Ivanpah 1 (the southernmost site) and other shared facilities; 3) Ivanpah 2 (the middle site); and 4) Ivanpah 3 (the northernmost plant on the north). It is possible, however, that the order of

suggest the California populations appear to be confined to the eastern portion of the California desert, and the current distribution is apparently a function of summer rainfall. Throughout their range, Gila monsters appear to be most active during or following summer rain events. Gila monsters have been recorded in the adjacent Mojave National Preserve and the Clark Mountains. The closest confirmed observation of a Gila monster to the project area is likely an animal collected within the Mojave National Preserve in 1962 on the eastern slope of the Clark Mountains near Ivanpah Springs. Another incidental observation from the area includes finding Gila monster remains beneath a red-tail hawk nest near Primm, Nevada.

Like most areas of the desert, rain fall within the Ivanpah Valley is variable but mean annual precipitation is approximately 4 to 7 inches. The distribution of rainfall is also bi-modal with winter peak precipitation typically in February and summer peak rain falls in August. Runoff from the steep surrounding mountains is rapid and flash floods are common events as most of the storm water in the Ivanpah Valley drains across the alluvial fan to Ivanpah and Roach Dry Lakes. Although the Mojave is the driest of the North American deserts, the east Mojave does receive a large percentage of its annual precipitation from summer "monsoon" rains. The relative abundance of cacti, many yuccas, agaves, and agave-like plants tend to be greater where warm-season rainfall is abundant. This is true of the ISEGS project area where cacti are extremely abundant. Although the project area does not receive near the amount of the rainfall as the Sonoran Desert where Gila monsters are more prevalent, the Ivanpah Valley does mimic the climatic conditions that appear to be favorable to Gila monster presence.

Gila monsters have the potential to occur in the ISEGS project area, particularly near the metamorphic hill, immediately adjacent to the southeastern boundary of Ivanpah 3. They could also occur at the northeastern corner of Ivanpah 2 as well as the utility interconnections south of the base of the Clark Mountains. Gila monsters may venture from those rockier areas adjacent to the project area where they would likely take refuge in small crevices and caves to forage within the spreading arroyo on which the proposed project is located.

Desert Tortoise. The desert tortoise's range includes the Mojave Desert region of Nevada, southern California, and the southwest corner of Utah and the Sonoran Desert region of Arizona and northern Mexico. The range is divided into Mojave and Sonoran populations. The Ivanpah Valley supports the Mojave

population, which is primarily found in creosote bush-dominated valleys with adequate annual forbs for forage.

Desert tortoises have been known to live up to 70 years or more but the typical adult likely lives 25 to 35 years. Like many long-lived species, the tortoise has a relatively slow rate of reproduction, and achieves breeding status at 15 to 20 years of age. Egg-laying occurs primarily from April to July; the eggs typically hatch 90 to 120 days later, between August and October.

Desert tortoise activity is seasonally variable, and in California peak adult and juvenile activity typically coincides with the greatest annual forage availability during the early spring and summer. However, tortoises will emerge from their burrows at any time of year when the weather is suitable. Hatchling desert tortoises typically become active earlier than adults do and their greatest activity period can be expected between late winter and spring. During active periods, tortoises feed on a wide variety of herbaceous plants, including cactus, grasses, and annual flowers.

Annual home ranges have been estimated between 10 and 450 acres and are age, sex, seasonal, and resource density dependent. Although adult males can be aggressive toward each other during the breeding season, there can be a great deal of overlap in individual home ranges. More than 1.5 square miles of habitat may be required to meet the life history needs of a tortoise and individuals have been known to travel as much or more than 7 miles at a time. In drought years, tortoises can be expected to wander farther in search of forage. During their active period, desert tortoises retreat to shallow burrows and aboveground shade to escape the heat of the day, and will also retire to burrows at nighttime. Desert tortoises are primarily dormant in winter in underground burrows and sometimes congregate in communal dens.

Desert tortoise populations have declined throughout their range because of loss and degradation of habitat caused by urbanization, agricultural development, military training, recreational use, mining, and livestock grazing. Increased predation by common ravens, collection by humans for pets or consumption, collisions with vehicles on paved and unpaved roads, and mortality resulting from diseases also contributed to declines.

The ISEGS project area provides high quality habitat for this species, with low levels of disturbance and high plant species diversity. The desert tortoise population in this part of the Ivanpah Valley is also unique because it is the

highest elevation at which this species is known to reside in the state. The 2007/2008 protocol desert tortoise surveys found 25 live desert tortoises, 97 desert tortoise carcasses, 214 burrows, and 50 other tortoise sign. Tortoise sign and density was greatest in Ivanpah 1 at the southern boundary of the project site and was less dense as the survey moved towards the Clark Mountains and Ivanpah 3.

Desert tortoises also occur along the ISEGS linear facilities. Surveys of the fiber optic route confirmed that the entire route is within desert tortoise habitat. Protocol level surveys were not conducted. However, in surveying for the fiber optic route, EPG, Inc. found three tortoise burrows and a tortoise shell. (Ex. 300, pp. 6.2-27 – 6.2-29.)

Desert Tortoise Recovery Plan. The desert tortoise recovery plan recommends implementation of reserve level protection of desert tortoise populations and habitat within Desert Wildlife Management Areas (DWMAs), while maintaining and protecting other sensitive species and ecosystem functions. Critical habitat was designated to identify areas containing key biological and physical attributes that are essential to the desert tortoise's survival and conservation, such as space, food, water, nutrition, cover, shelter, and reproductive sites. As part of the actions needed to accomplish the recovery of this species, land management goals within all DWMAs include restriction of human activities that adversely affect desert tortoises. The ISEGS project does not fall within any DWMA (EX. 300, p. 6.2-75).

The USFWS 1994 and Draft 2008 Desert Tortoise Recovery Plans (USFWS 1994, 2008), emphasize aggressive management within "tortoise conservation areas" a term that encompasses critical habitat, Desert Wildlife Management Areas, Areas of Critical Environmental Concern, and other conservation areas or easements managed for desert tortoises. While the recovery plans suggest that land managers focus the most aggressive recovery efforts toward tortoise conservation areas, they also emphasize that land managers should strive to limit the loss of desert tortoise habitat outside conservation areas as much as possible. The recovery plans recognize that activities occurring on lands beyond the boundaries of existing tortoise conservation areas can affect tortoise populations and the effectiveness of conservation actions occurring within the conservation area boundaries. While recovery efforts may be prioritized within existing desert tortoise conservation areas, populations, habitats, and actions outside of these areas may also contribute to, or hamper, recovery of the species. (Ex. 300, pp. 6.2-29 – 6.2-30.)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003

IN REPLY REFER TO:
81440-2010-F-0096
8-8-10-F-24

October 1, 2010

Memorandum

To: District Manager, California Desert District, Bureau of Land Management, Moreno Valley, California

From: Field Supervisor, Ventura Fish and Wildlife Office, Ventura, California

Subject: Biological Opinion on BrightSource Energy's Ivanpah Solar Electric Generating System Project, San Bernardino County, California [CACA-48668, 49502, 49503, 49504] (8-8-10-F-24)

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the Bureau of Land Management's (Bureau) proposed issuance of a right-of-way grant to Solar Partners I, LLC, Solar Partners II, LLC, and Solar Partners VIII, LLC for the Ivanpah Solar Electric Generating System (ISEGS) and its effects on the federally threatened desert tortoise (*Gopherus agassizii*) in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). Because BrightSource Energy is a parent company for all Solar Partner Companies, this biological opinion refers to the project proponents collectively as BrightSource. The proposed project involves construction, operation, maintenance, and decommissioning of a 370-megawatt solar thermal power plant and associated infrastructure and facilities on 3,582 acres of public land managed by the Bureau. Your December 7, 2009 request for formal consultation was received on December 8, 2009.

This biological opinion is based on information that accompanied your December 7, 2009 request for consultation and additional information regarding changes in the project description and translocation strategy obtained from Bureau staff during the formal consultation process. This information includes the biological assessment (CH2MHill 2009a), revised biological assessment (CH2MHill 2010a), draft environmental impact statement and final staff assessment (Bureau and California Energy Commission 2009), supplemental draft environmental impact statement (Bureau 2010), desert tortoise survey report for the project site (CH2MHill 2008a), biological survey report for the proposed desert tortoise translocation areas (SNEI 2009), desert tortoise translocation plan (CH2MHill 2009b), the management plan for common ravens (CH2MHill 2008b), project site reclamation plan (CH2MHill 2009c), the site plan for management of weeds (CH2MHill 2008c), and additional correspondences regarding modifications to the desert tortoise translocation strategy and mitigation framework (Fesnock

Within 24 hours prior to the initiation of construction of the desert tortoise-exclusion fence, BrightSource will conduct 2 complete desert tortoise clearance surveys of the fence line segment and associated disturbance right-of-way that will be fenced that day. During these surveys, an authorized biologist will inspect all burrows to determine occupancy and collapse all unoccupied burrows. To the extent feasible, BrightSource will make modifications in fence line alignment to fence occupied burrows out of the ISEGS project areas. If the fence line cannot avoid a given burrow, an authorized biologist will remove the desert tortoise and place it in a sheltered location outside of the ISEGS project area being fenced. If BrightSource fences a given project phase and does not plan on immediate clearing of that phase, it will leave gaps in the fence in locations where desert tortoise burrows are found in the path of the fence line right-of-way. These gaps will buffer the burrow by a distance of 54.6 yards (i.e., 27.3 yards on each side) and will remain open until the time that BrightSource is ready to commence with clearance surveys. BrightSource will not excavate and clear these burrows until it is ready to perform clearance surveys.

Following construction of the desert tortoise exclusion fence around a given portion of the ISEGS projects site (i.e., Ivanpah 1, 2, and 3 project sites, the CLA, or Colosseum Road), BrightSource will perform a full clearance survey of the fenced area during the spring (i.e., April 1 to May 31) or fall (i.e., September 1 to October 15). For fall clearance surveys, BrightSource may extend this survey window until October 31 for phases in which all desert tortoises will be placed into a quarantine facility (e.g., Ivanpah1 and the CLA) rather than translocated. Regardless of the method used to fence project site boundaries (i.e., at one time versus phased), clearance surveys would proceed according to the schedule described below.

In the fall of 2010, BrightSource intends to clear all desert tortoises from the CLA and Ivanpah 1. In fall 2010, BrightSource also intends to construct temporary desert tortoise exclusion fencing around the Ivanpah 2 power block and the power block access road and clear desert tortoises from these areas. BrightSource would place desert tortoises moved from the Ivanpah 2 power block and power block access route into adjacent habitat on the remainder of Ivanpah 2. BrightSource would not clear desert tortoises from the remainder of Ivanpah 2 or from Ivanpah 3 until construction is ready to commence on those phases.

When performing clearance surveys, authorized biologists and supervised desert tortoise monitors will conduct at least 3 complete clearance sweeps over a given phase with transects no wider than 30 feet. Surveyors will conduct transects for each sweep in different directions to allow for opposing angles of observation. BrightSource will consider the site clear after two complete passes have discovered no new desert tortoises. Authorized biologists will excavate all potential desert tortoise burrows by hand to confirm occupancy status. BrightSource will collect data on all desert tortoises handled and examine all individuals for clinical signs of disease. A detailed list of data that BrightSource will collect on each desert tortoise is provided in its translocation plan.

7. An authorized biologist will hydrate all desert tortoises scheduled for translocation within 12 hours prior to release.

8. An authorized biologist will assess all desert tortoises on the project site for clinical signs of disease prior to translocation regardless of whether these animals will receive additional ELISA testing. The authorized biologist will remove and temporarily quarantine any desert tortoises with clinical signs of disease that are encountered on the ISEGS project sites. Authorized biologists will use the descriptions of clinical signs of disease described in the available scientific literature (Berry and Cristopher 2001, Origgi et al. 2004, Ritchie 2006; all in CH2MHill 2009a), unless the Service provides more appropriate guidance. BrightSource will contact the Ventura Fish and Wildlife Office within 24 hours of collection of an animal to determine the appropriate disposition of animals showing clinical signs of disease. These animals may require more extensive disease testing (e.g., ELISA, Western Blot) prior to determination of their final disposition.

9. BrightSource will only perform clearance surveys during the spring (April 1 to May 31) and fall (September 1 to October 15). If all desert tortoises from a given phase would be placed in a quarantine facility, BrightSource may extend its fall clearance window until October 31 if conditions (i.e., air temperatures) allow. BrightSource will only perform release of cleared desert tortoises into a translocation area during the spring (April 1 to May 31) or early-fall (September 1 and October 1).

10. BrightSource will consider ELISA testing results valid for a period of 1 year on any individual desert tortoise. BrightSource will coordinate with the Service to determine the necessity for re-testing of individuals based on the circumstances of their quarantine and their proposed plan for disposition of the individual. BrightSource will only draw blood for ELISA testing between May 15 and October 31 to ensure accurate ELISA testing results.

11. BrightSource will maintain a record of all desert tortoises encountered and translocated during project surveys and monitoring. The record will include the following information for each desert tortoise: the location (narrative, vegetation type, and maps) and dates of observations, burrow data, general conditions and health, measurements, any apparent injuries and state of healing, the location from which it was captured and the location in which it was released, whether animals voided their bladders, diagnostic markings (i.e., identification numbers), results of health assessments, and ELISA-test results.

12. During temporary quarantine (i.e., desert tortoises held for less than one week), an authorized biologist will provide adequate food and water and a temperature-controlled holding area away from other desert tortoises.

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COMMISSION DECISION

CALIFORNIA
ENERGY COMMISSION
Arnold Schwarzenegger, Governor

AUGUST 2010
CEC-800-2010-005 CMF

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and staging areas) with slopes toward a drainage shall be stabilized to reduce erosion potential.

17. Monitor Ground Disturbing Activities Prior to Pre-Construction Site Mobilization. If pre-construction site mobilization requires ground-disturbing activities such as for geotechnical borings or hazardous waste evaluations, a Designated Biologist or Biological Monitor shall be present to monitor any actions that could disturb soil, vegetation, or wildlife.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures will be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed.

DESERT TORTOISE RECLOCATION 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 specifications and installation, tortoise handling, artificial burrow construction, egg handling and other procedures shall be consistent with those described in the current USFWS guidelines, the Desert Tortoise Field Manual (USFWS 2009) (http://www.fws.gov/ventura/speciesinfo/protocols_guidelines) 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 shall be fenced with permanent desert tortoise-exclusion fence. To avoid impacts to desert tortoise during fence construction, the proposed fence alignment and limits of the fence-construction disturbance area 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. Disturbance associated with fence construction shall not exceed 30 feet on either side of the proposed fence alignment. Prior to the

surveys the project owner shall provide to the CPM, CDFG and USFWS a figure clearly depicting the limits of construction disturbance for the proposed fence installation. The fence line survey area shall be 90 feet wide centered on the fence alignment. Where construction disturbance for fence line installation can be limited to 15 feet on either side of the fence line, this fence line survey area may be reduced to 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 installed per USFWS specifications (USFWS 2009).

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 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 shall be temporarily fenced with tortoise exclusion fencing to prevent desert tortoise entry during construction. Alternatively, site mobilization activities, construction-related ground disturbance, grading, boring or trenching activities may occur at unfenced utility corridors and tower locations if the Designated Biologist is present at all times in the immediate vicinity of such activities.

e. Fence Inspections. Following installation of the desert tortoise exclusion fencing and any temporary 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 under the supervision of the Designated Biologist. Clearance surveys shall adhere to the current USFWS clearance survey protocols described in the Desert Tortoise Field Manual (USFWS 2009).

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 project owner shall develop and implement a desert tortoise Relocation/Translocation Plan. The Relocation/Translocation Plan shall be consistent with current USFWS approved guidelines (USFWS 2009), 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 provides suitable conditions for long-term survival of the relocated/translocated desert tortoise.

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 and consistent with the most current USFWS guidelines (USFWS 2009).

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 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 Designated Biologist, or Biological Monitor supervised by the Designated Biologist shall be onsite 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 *current USFWS guidelines, the Desert Tortoise Field Manual (USFWS 2009) (http://www.fws.gov/ventura/speciesinfo/protocols_guidelines)* 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 submit to Energy Commission Staff, USFWS and CDFG a draft Desert Tortoise Relocation/Translocation Plan. At least 60 days prior to start of any construction-related ground disturbance activities, the project owner shall provide the CPM with the final version of a Relocation/Translocation Plan that has been approved by Energy Commission staff in consultation with USFWS and CDFG. The CPM will determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved Desert Tortoise Relocation/Translocation Plan must be made only after approval by the Energy Commission staff in consultation with USFWS and CDFG. The project owner shall notify the CPM no fewer than 5 working days before implementing any CPM-approved modifications to the Relocation/Translocation Plan.

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.

MOHAVE GROUND SQUIRREL CLEARANCE SURVEYS

BIO-10 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 Mohave ground squirrel. These measures include, but are not limited to, the following:

1. Clearance Survey. After the installation of the desert tortoise exclusion fence and prior to any construction-related ground disturbance on the plant site, the Designated Biologist(s) shall examine the area to be disturbed for Mohave ground squirrels and their burrows. The survey shall provide 100 percent coverage of the Project limits. Potentially occupied burrows shall be fully excavated by hand by the Designated Biologist(s).

2. Translocation Plan. The project owner shall develop and implement a Mohave ground squirrel translocation plan to address the handling and disposition of any Mohave ground squirrels encountered during the clearance surveys. The Translocation Plan shall be approved by Energy Commission staff in consultation with

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Commission Decision

CALIFORNIA
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Arnold Schwarzenegger, Governor

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Within 30 days after completion of project construction, the project owner shall provide to the CPM for review and approval, a written report identifying which items of the Revegetation Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which items are still outstanding.

As part of the Annual Compliance Report, each year following construction until the completion of the revegetation monitoring specified in the Revegetation Plan, the Designated Biologist shall provide a report to the CPM that includes: a summary of revegetation activities for the year, a discussion of whether revegetation performance standards for the year were met; and recommendations for revegetation remedial action, if warranted, are planned for the upcoming year.

If loud construction activities are proposed between February 15 and April 15 which would result in noise levels over 65 dBA in nesting habitat, the project owner shall submit nest survey results (as described in 8a) to the CPM no more than seven days before initiating such construction. If an active nest is detected within this survey area the project owner shall submit a Nesting Bird Monitoring and Management Plan to the CPM for review and approval no more than seven days before initiating noisy construction.

DESERT TORTOISE CLEARANCE SURVEYS AND FENCING

BIO-9 The project owner shall undertake appropriate measures to manage the project site and related facilities in a manner to avoid or minimize impacts to desert tortoise**.** Methods for clearance surveys, fence specification and installation, tortoise handling, artificial burrow construction, egg handling and other procedures shall be consistent with those described in the USFWS' Desert Tortoise Field Manual (USFWS 2009) <http://www.fws.gov/ventura/speciesinfo/protocols_guidelines> or more current guidance provided by CDFG and USFWS. The project owner shall also implement all terms and conditions described in the Biological Opinion prepared by USFWS. The project owner shall implement the following measures:

1. Desert Tortoise Exclusion Fence Installation. To avoid impacts to desert tortoises, permanent exclusion fencing shall be installed along the permanent perimeter security fence (boundaries) as phases are constructed. Temporary fencing shall be installed along any subset of the plant site phasing that does not correspond to permanent perimeter fencing. Temporary fencing shall be installed along linear features unless a Biological Monitor is present in the immediate vicinity of construction activities for the linear facility. All fencing shall be flagged and surveyed within 24 hours prior to the initiation of fence construction. Clearance surveys of the desert tortoise exclusionary fence and utility rights-of-way alignments shall

be conducted by the Designated Biologist(s) using techniques outlined in the *Desert Tortoise Field Manual* (USFWS 2009) and may be conducted in any season with USFWS and CDFG approval. Biological Monitors may assist the Designated Biologist under his or her supervision. These fence clearance surveys shall provide 100-percent coverage of all areas to be disturbed and an additional transect along both sides of the fence line. Disturbance associated with desert tortoise exclusionary fence construction shall not exceed 30 feet on either side of the proposed fence alignment. Prior to the surveys the project owner shall provide to the CPM, CDFG and USFWS a figure clearly depicting the limits of construction disturbance for the proposed fence installation. The fence line survey area shall be 90 feet wide centered on the fence alignment. Where construction disturbance for fence line installation can be limited to 15 feet on either side of the fence line, this fence line survey area may be reduced to an area approximately 60 feet wide centered on the fence alignment. Transects shall be no greater than 15 feet apart. Desert tortoise located within the utility ROW alignments shall be moved out of harm's way in accordance with the USFWS *Desert Tortoise Field Manual* (USFWS 2009). Any desert tortoise detected during clearance surveys for fencing within the project site and along the perimeter fence alignment shall be translocated and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan (**BIO-10**). Tortoise shall be handled by the Designated Biologist(s) in accordance with the USFWS' *Desert Tortoise Field Manual* (USFWS 2009).

a. Timing, Supervision of Fence Installation. The exclusion fencing shall be installed in any area subject to disturbance prior to the onset of site clearing and grubbing in that area. 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. All desert tortoise exclusionary fencing shall be constructed in accordance with the USFWS' *Desert Tortoise Field Manual* (USFWS 2009) (Chapter 8 – Desert Tortoise Exclusion Fence).

c. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises. The gates may be electronically activated to open and close immediately after the vehicle(s) have entered or exited to prevent the gates from being kept open for long periods of time.

d. Fence Inspections. Following installation of the desert tortoise exclusion fencing for both the permanent site fencing and temporary fencing in the utility corridors, the fencing

shall be regularly inspected. If tortoise were moved out of harm's way during fence construction, permanent and temporary fencing shall be inspected at least two times a day for the first 7 days to ensure a recently moved tortoise has not been trapped within the fence. Thereafter, permanent fencing shall be inspected monthly and during and within 24 hours following all major rainfall events. A major rainfall event is defined as one for which flow is detectable within the fenced drainage. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within 48 hours of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing shall be inspected weekly and, where drainages intersect the fencing, during and within 24 hours 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 area for tortoise.

2. Desert Tortoise Clearance Surveys within the Plant Site. Clearance surveys shall be conducted in accordance with the USFWS *Desert Tortoise Field Manual* (USFWS 2009) (Chapter 6 – Clearance Survey Protocol for the Desert Tortoise – Mojave Population) and shall consist of two surveys covering 100 percent the project area by walking transects no more than 15-feet apart. If a desert tortoise is located on the second survey, a third survey shall be conducted. Each separate survey shall be walked in a different direction to allow opposing angles of observation.—Clearance surveys for non-linear areas of Phase 1A may be conducted outside the active season. Clearance surveys of the remaining portions of the power plant site may only be conducted when tortoises are most active (April through May or September through October) unless the project receives approval from CDFG and USFWS. Clearance surveys of linear features may be conducted during anytime of the year. Surveys outside of the active season in areas other than Phase 1A require approval by USFWS and CDFG. Any tortoise located during clearance surveys of the power plant site and linear features shall be translocated or relocated and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan:

    a. Burrow Searches. During clearance surveys all desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined by the Designated Biologist, who may be assisted by the Biological Monitors, to assess occupancy of each burrow by desert tortoises and handled in accordance with the USFWS *Desert Tortoise Field Manual* (USFWS 2009). To prevent

reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined in accordance with the Desert Tortoise Relocation/Translocation Plan. Tortoises taken from burrows and from elsewhere on the power plant site shall be relocated or translocated as described in the Desert Tortoise Relocation/Translocation Plan.

b. Burrow Excavation/Handling. All potential desert tortoise burrows located during clearance surveys would be excavated by hand, tortoises removed, and collapsed or blocked to prevent occupation by desert tortoises in accordance with the Desert Tortoise Relocation/Translocation Plan. All desert tortoise handling, ~~and~~ removal, and burrow excavations, including nests, would be conducted by the Designated Biologist, who may be assisted by a Biological Monitor in accordance with the USFWS *Desert Tortoise Field Manual* (USFWS 2009).

3. Monitoring Following Clearing. Following the desert tortoise clearance and removal from the power plant site and utility corridors, workers and heavy equipment shall be allowed to enter the project site to perform clearing, grubbing, leveling, and trenching activities. A Designated Biologist or Biological Monitor shall be onsite for clearing and grading activities to move tortoises missed during the initial tortoise clearance survey. Should a tortoise be discovered, it shall be relocated or translocated as described in the Desert Tortoise Relocation/Translocation Plan.

4. 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. Desert tortoise moved from within project areas shall be marked and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures shall be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to BLM, the CPM, USFWS, and CDFG describing implementation of each of the mitigation measures listed above. The report shall include the desert tortoise survey results, capture and release

ABENGOA MOJAVE SOLAR PROJECT

Presiding Member's Proposed Decision

CALIFORNIA
ENERGY COMMISSION
Arnold Schwarzenegger, Governor

AUGUST 2010
CEC-800-2010-008 PMPD

DOCKET NUMBER 09-AFC-5

16, United States Code, sections 668-668d). This shall include documentation from the USFWS in the form of written or electronic transmittal indicating the status of the permit, if required, and any follow up actions required by the project owner. Any additional actions shall be added to the BRMIMP and implemented.

Desert Tortoise Exclusion Fencing, Clearance Surveys, and Translocation Plan

BIO-11 A Desert Tortoise Exclusion Fencing, Clearance Surveys, and Translocation Plan (Desert Tortoise Plan) shall be developed in consultation with the CPM, CDFG, and USFWS. This plan shall include detailed measures to avoid and minimize impacts to desert tortoise in and near the construction areas as well as methods for clearance surveys, fence installation, tortoise handling, artificial burrow construction, egg handling and other procedures, which shall be consistent with those described in the USFWS Desert Tortoise Field Manual (www.fws.gov/ventura/speciesinfo/protocols_guidelines) or more current guidance provided by CDFG and USFWS. At a minimum, the following measures shall be included in the plan and implemented by the project owner to manage their construction site, and related facilities, in a manner to avoid, minimize, or mitigate impacts to desert tortoise.

1. Fence Installation. Prior to ground disturbance, the entire project site shall be fenced with 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% 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 90 feet wide centered on the fence alignment. Transects shall be no greater than 30 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 and Supervision of Fence Installation. The exclusion fencing shall be installed prior to 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. The permanent tortoise exclusionary fencing shall consist of galvanized hard wire cloth

1 by 2 inch mesh sunk 12 inches into the ground, and 24 inches above ground (refer to parameters for USFWS-approved tortoise exclusion fencing at www.fws.gov/ventura/speciesinfo/protocols_guidelines). For temporary exclusion fencing, a "folded bottom" technique shall be implemented. This method follows the same guidelines as installation of permanent fencing except instead of burying the bottom 12 inches of the fencing, it is bent at a approximately 90 degree angle (to follow the contour of the ground) and spikes or other retaining methods are driven into the ground every two linear feet in such a manner as to "anchor" the bottom of the fence. This method eliminates the need for trenching, which for short-term temporary impacts may be more beneficial to the recovery of the landscape, and thus the species.

C. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises. 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 open gates, which might lead to a tortoise entering.

D. Stormwater Drainage Fencing. The onsite stormwater drainage channels, including the headwalls, outlet, and road crossings, shall be permanently fenced to ensure exclusion of desert tortoise during AMS operation.

E. Fence Inspections. Following installation of the desert tortoise exclusion fencing for the permanent site and stormwater drainage fencing and temporary fencing (if required), the fencing shall be regularly inspected. Permanent fencing shall be inspected monthly and during/immediately 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 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 area enclosed by the fence 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. A minimum of two, 100 percent

coverage protocol clearance surveys with negative results must be completed and these must coincide with heightened desert tortoise activity from April through May and September through October. Non-protocol clearance surveys may be conducted in areas of certainly unsuitable habitat (e.g., developed) with prior approval of specific areas by USFWS and CDFG (these proposed areas shall be identified in the draft Desert Tortoise Plan). Clearance survey transects shall be followed as described in the Final Desert Tortoise plan. Additional clearance survey guidelines area provided in the USFWS *Desert Tortoise Field Manual* (www.fws.gov/ventura/speciesinfo/protocols_guidelines).

Translocation of Desert Tortoise. If desert tortoises are detected during clearance surveys within the project impact area, the Designated Biologist shall safely translocate the tortoise the shortest possible distance to the nearest suitable habitat. Any handling efforts shall be in accordance with techniques described in the final Desert Tortoise Plan, which shall be consistent with the USFWS *Desert Tortoise Field Manual* (www.fws.gov/ventura/speciesinfo/protocols_guidelines). If a visibly diseased tortoise is encountered onsite, procedures shall be implemented in accordance with the approved final Desert Tortoise Plan.

3. Burrow Inspection. All potential desert tortoise burrows within the fenced area shall be searched for presence. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined, in accordance with the final Desert Tortoise Plan. Immediately following excavation and if environmental conditions warrant immediate translocation, tortoises excavated from burrows shall be translocated to unoccupied natural or artificial burrows within the location approved by USFWS and CDFG per the final Desert Tortoise Plan.

4. 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, in accordance with the final Desert Tortoise Plan. 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 *Desert Tortoise Field Manual* (www.fws.gov/ventura/speciesinfo/protocols_guidelines).

5. Monitoring During Clearing. Following the installation of exclusionary fencing and after ensuring desert tortoises are absent from the project 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 onsite at all times during initial clearing and grading activities. Should a tortoise be discovered, it shall be relocated as described above in accordance with the final Desert Tortoise Plan.

6. 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 USFWS *Desert Tortoise Field Manual* (www.fws.gov/ventura/speciesinfo/protocols_guidelines). Digital photographs of the carapace, plastron, and fourth costal scute shall be taken. Scutes shall not be notched for identification.

Verification: At least 45 days prior to start of any pre-construction site mobilization, the project owner shall provide the CPM with the final version of the Desert Tortoise Translocation Plan that has been approved by Energy Commission staff, USFWS, and CDFG. The CPM will determine the plan's acceptability within 15 working days of receipt of the final plan. All modifications to the approved final Desert Tortoise Translocation Plan must be made only after approval by the Energy Commission staff, USFWS, and CDFG. The project owner shall notify the CPM no fewer than five working days before implementing any CPM-approved modifications to the Translocation Plan.

Within 30 days of completing 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 translocated desert tortoises, and any other information needed to demonstrate compliance with the measures described above.

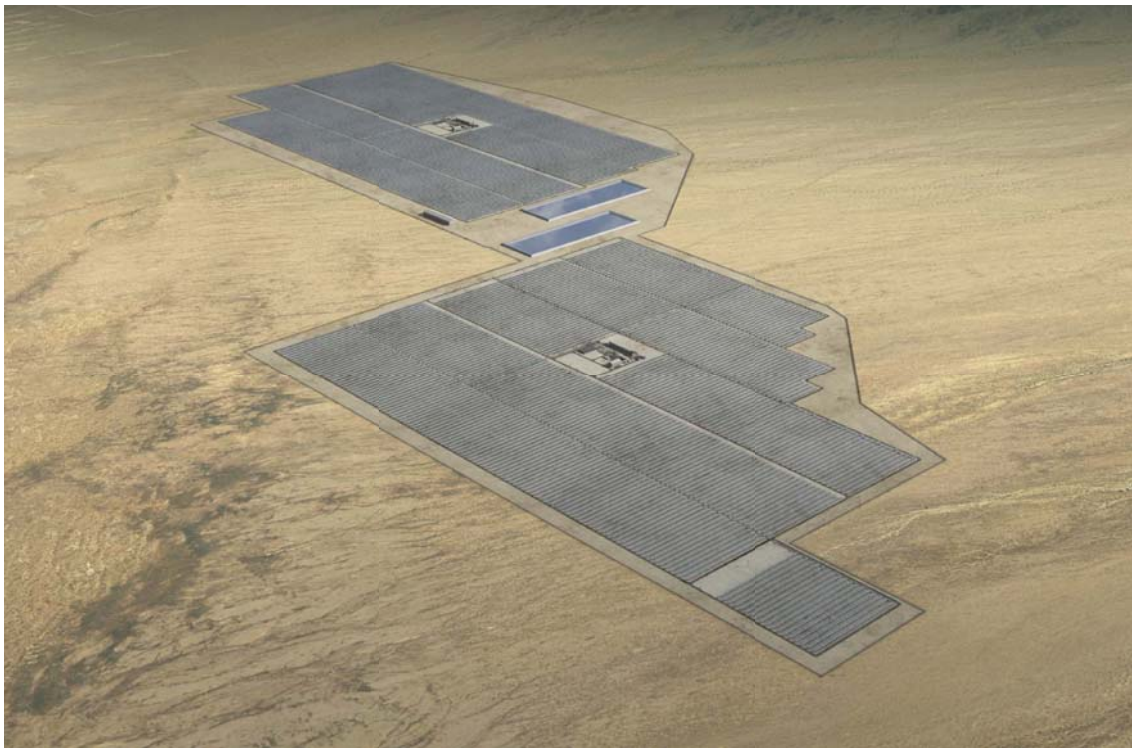
Mohave Ground Squirrel Clearance Surveys

BIO-12 The project owner shall implement the following measures to manage their construction site, and related facilities, in a manner to avoid or minimize impacts to Mohave ground squirrels (MGS):

1. Clearance Survey. After the installation of the desert tortoise exclusion fence and immediately prior to any ground disturbance, the Designated Biologist(s) shall examine the construction disturbance area for MGS and their burrows. The survey shall

GENESIS SOLAR ENERGY PROJECT

Commission Decision



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day for the first 7 days to ensure a recently moved tortoise has not been trapped within the fence. Thereafter, permanent fencing shall be inspected monthly and during and within 24 hours following all major rainfall events. A major rainfall event is defined as one for which flow is detectable within the fenced drainage. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within 48 hours of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing shall be inspected weekly and, where drainages intersect the fencing, during and within 24 hours 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 area for tortoise.

2. Desert Tortoise Clearance Surveys within the Plant Site. Following construction of the permanent perimeter security fence and the attached tortoise exclusion fence, the permanently fenced power plant site shall be cleared of tortoises by the Designated Biologist, who may be assisted by the Biological Monitors. Clearance surveys shall be conducted in accordance with the USFWS' 2009 *Desert Tortoise Field Manual* (Chapter 6 – Clearance Survey Protocol for the Desert Tortoise – Mojave Population) and shall consist of two surveys covering 100 percent of the project area by walking transects no more than 15-feet apart. If a desert tortoise is located on the second survey, a third survey shall be conducted. On each subsequent pass surveyors shall attempt to view all shrubs and the terrain from as many angles as possible. To achieve this, transects programmed into GPS units shall be either perpendicular, parallel but offset from transect on the previous pass, and/or approached from the opposite direction on each subsequent pass. Clearance surveys of the power plant site may only be conducted when tortoises are most active (April through May or September through October). Surveys outside of these time periods require approval by USFWS and CDFG. Any tortoise located during clearance surveys of the power plant site shall be relocated and monitored in accordance with the Desert Tortoise Translocation Plan

   a. Burrow Searches. During clearance surveys all desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined by the Designated Biologist, who may be assisted by the Biological Monitors, to assess occupancy of each burrow by

desert tortoises and handled in accordance with the USFWS' 2009 *Desert Tortoise Field Manual*. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined, in accordance with the Desert Tortoise Translocation Plan. Tortoises taken from burrows and from elsewhere on the power plant site shall be relocated or translocated as described in the Desert Tortoise Translocation Plan.

b. Burrow Excavation/Handling. All potential desert tortoise burrows located during clearance surveys shall be excavated by hand, tortoises removed, and collapsed or blocked to prevent occupation by desert tortoises, in accordance with the Desert Tortoise Translocation Plan. All desert tortoise handling and removal, and burrow excavations, including nests, shall be conducted by the Designated Biologist, who may be assisted by a Biological Monitor in accordance with the USFWS' 2009 *Desert Tortoise Field Manual.*

3. Monitoring Following Clearing. Following the desert tortoise clearance and removal from the power plant site and utility corridors, workers and heavy equipment shall be allowed to enter the Project site to perform clearing, grubbing, leveling, and trenching activities. A Designated Biologist or Biological Monitor shall be on site during clearing and grading activities to move tortoises missed during the initial tortoise clearance survey. Should a tortoise be discovered, it shall be relocated or translocated as described in the Desert Tortoise Translocation Plan.

4. 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. Desert tortoise moved from within Project areas shall be marked and monitored in accordance with the Desert Tortoise Translocation Plan.

ATTACHMENT B

October 25, 2010

Subject: Desert Tortoise Mitigation for the Calico Solar Project

I am an environmental biologist with 18 years of professional experience in wildlife ecology, forestry, and natural resource management. For the past 10 years I have served as an environmental consultant focusing on biological resource investigations. I have additional professional experience as a wildlife researcher, consulting forester, and instructor of wildlife management for the Pennsylvania State University. My educational background includes a B.S. in Resource Management from the University of California at Berkeley, and a M.S. in Wildlife and Fisheries Science from the Pennsylvania State University.

The comments contained herein are based on my knowledge and experience, my review of environmental documents pertaining to the Project, information presented in scientific literature, and the testimony provided during the evidentiary hearings.

This letter contains my comments on the proposed habitat compensation for the Calico Solar Project (Project), and the proposed fate of desert tortoises with Phase 1a of the Project area. My comments are directed specifically at the Energy Commission's conclusion that Project impacts to the desert tortoise would be fully mitigated by improving the carrying capacity at acquired properties such that more desert tortoises will survive and reproduce on the acquired lands.[1]

The proposed Project would permanently eliminate 4,613 acres of desert tortoise habitat and impact an estimated 181 tortoises.[2] The Energy Commission's inadequate proposal to mitigate for these impacts consists of: (A) acquisition of off-site compensation lands; (B) habitat enhancement activities at the acquisition lands; and (C) translocation of tortoises off the Project site. The Energy Commission improperly concluded that Project impacts to desert tortoise would be fully mitigated by implementing these proposed measures. This conclusion is faulty because it relies on the premise that habitat enhancement actions would increase the carrying capacity of the acquired lands for desert tortoise, and subsequently increase their population numbers by enhancing survivorship and reproduction.[3] Whereas there are certain instances in which this approach may be a reliable mitigation strategy for other species, scientific evidence has demonstrated that it is not an appropriate strategy for the desert tortoise. As a result, and due to the Energy Commission's failure to incorporate any scientific rigor into the formulation of mitigation measures, it is my conclusion that Project mitigation would not fully mitigate impacts to the desert tortoise. Justification for my conclusion is outlined below:

[1] SSA, p. C.2-75.
[2] PMPD, p. 45.
[3] Staff's Second Errata to the Supplemental Staff Assessment, p. 19.

1. Predicting carrying capacity is extremely complicated and cannot be accomplished through simple visual analysis of habitat features.[4] The Energy Commission does not require the Applicant to estimate the current carrying capacity at the acquisition lands, nor the carrying capacity at some future date after habitat enhancement measures have been completed. Consequently, the mitigation measure lacks a verifiable performance standard from which to gauge, or even infer, success.
2. The Energy Commission has identified some of the habitat enhancement activities (e.g., invasive plant control, eliminating livestock and burro grazing, fencing to exclude livestock and vehicles) that might be required at the acquisition lands. However, it has not identified which activities *would* be required, the extent to which the activities would be implemented (e.g., how much fencing would be installed), or any success standards for the enhancement activities. Desert habitat enhancement costs can be expensive. In 1999, "modest" rehabilitation techniques implemented to expedite natural recovery reportedly cost $500 to $2,000 an acre.[5] Recent fencing projects in the Desert Tortoise Natural Area cost $5.25 a linear foot (> $4,300/acre).[6] The cost of comprehensive desert rehabilitation may exceed $10,000 per acre.[7] These costs suggest the $250 per acre that the Energy Commission has earmarked for clean-up, enhancement, and restoration are inadequate and would result in very few specific habitat enhancement measures.
3. Scientific evidence suggests desert tortoise populations are limited by several "threats", and that the synergistic interaction of two or more threats is likely the causal factor in population declines. Research further indicates the threats affecting desert tortoise populations vary across space and time. The Energy Commission's mitigation strategy ignores this scientific information by failing to incorporate any means of identifying the specific threats affecting desert tortoises at the acquisition sites. To conclude a habitat enhancement action might increase carrying capacity, the Energy Commission must first have reliable scientific evidence linking the converse habitat degradation activity with population decline (or a limited carrying capacity). For example, although fencing to exclude livestock might improve habitat conditions, it would do nothing to increase carrying capacity if the population is limited by disease or predation.

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[4] Morrison ML, BG Marcot, and RW Mannan. 2006. Wildlife-Habitat Relationships: Concepts and Applications. 3rd ed. Washington (DC): Island Press. 493 p.

[5] Ibid.

[6] 4,200 linear feet of 4-foot high fencing with 32-inch graduated field fence and two 12-foot wide pipe gates.

[7] Hailey J, and D Bainbridge. 1999. Desert Restoration: Do something or wait a thousand years? [abstract] Mojave Desert Science Symposium; 1999 Feb 25-27, Las Vegas. USGS, Western Ecological Research Center [internet]. Available from: http://www.werc.usgs.gov/mojave-symposium/

4. The concept that increasing carrying capacity on one parcel offsets the impacts to the tortoises lost on another parcel ignores the well-established scientific knowledge that desert tortoise populations are subject to a tremendous amount of environmental stochasticity. Environmental stochasticity pays a role in affecting population viability where external factors influencing mortality or fecundity randomly vary over time, such as food levels or suitability of nest sites affected by weather.
5. Finally, perhaps the most unequivocal evidence that the Energy Commission's mitigation strategy would not fully mitigate Project impacts to desert tortoises, is in the fact that *there is no evidence that the mitigation strategy (i.e., increasing carrying capacity) has ever been implemented successfully in the past.* To the contrary, recent monitoring data collected by the U.S. Fish and Wildlife Service suggests tortoise populations are declining across most of their range, despite the many management actions that have been implemented since the species was listed. The Energy Commission has provided absolutely no evidence to suggest that tortoise populations would respond any differently to whatever management actions it imposes at the Applicant's acquisition lands.

In sum, it is my professional opinion that the proposed land acquisition strategy will not reduce impacts to desert tortoises to a level that is less than significant. The Energy Commission's conclusion that such measures are adequate is flawed and unsupported. In fact, the evidence before the Commission supports a finding that habitat acquisition and management activities is not likely to mitigate the impacts to desert tortoises on the Project site.

Clearance Surveys of Phase 1a

According to the Applicant's Final Desert Tortoise Translocation Plan:

"One juvenile desert tortoise was observed within the boundary of Phase 1a area during the 2010 surveys. Prior to construction of Phase 1a, 100% clearance surveys will be conducted within the area that is enclosed by exclusionary fencing to remove all tortoises from the impact area or exclusion fencing will be built around the burrow. Tortoises found in the Phase 1a footprint will be placed in quarantine pens in the adjacent area on the Calico Project site, depending on the date that the clearance survey is conducted. The flow chart below will be followed to determine the process. If occupied burrows are detected after October 31, the tortoises will be left in their burrows and a fenced quarantine pen will be constructed around each burrow; the pen will encompass the entire burrow, including the front apron and allow room for DETO to exit the burrow; approximately 3 square feet of open area extending from the outer edge of the burrow apron. The tortoises will be monitored and cared for during the winter based on the Animal Husbandry Plan prepared for this

> Project. If the tortoise comes out during the winter, it will be moved into the adjacent quarantine pen outside the Phase 1a boundary and held until spring; if it does not come out of the burrow it will be held until spring, when it will be disease-tested and translocated."[8]

Desert tortoises may begin hibernating as early as late August. Research by Nussear et al. (2007) indicates approximately 25% of a given population is in hibernation by approximately October 15th. The research further indicated the timing of hibernation was independent of weather conditions. Therefore, tortoises are likely to be hibernating when the Applicant conducts its clearance surveys.

Energy Commission Staff has not provided any analysis on the Applicant's current proposal for the fate of tortoises within the Phase 1a Project area. Based on my extensive review of the scientific literature, I have developed the following comments related to the Applicant's current proposal:

1. The decision on whether to move tortoises from occupied burrows should not be based on the artificially imposed date of October 31st. Rather, it should be based on the physiology of the animal (i.e., whether it is hibernating or not). Research conducted by Nussear et al. (2007) indicates tortoises are likely to be hibernating by October 31st. The Desert Tortoise Translocation Guidelines issued by the U.S. Fish and Wildlife Service indicate translocation should not occur past October 15th. The impacts associated with translocating hibernating tortoises have not been analyzed.
2. In contrast to summer burrows, winter burrows used by desert tortoises are generally quite deep, and are often convoluted. Identifying whether winter burrows are occupied may be quite difficult, and the Applicant has not proposed a reliable strategy for identifying occupation. As a result, the Applicant's proposal is likely to result in unnecessary mortality to tortoises in occupied burrows perceived to be vacant.
3. The Applicant has not provided any information on the techniques that would be used to determine when tortoises exit their burrows (for tortoises determined to be hibernating and left on-site within a fenced enclosure). Research indicates some tortoises are active during the winter (Wilson et. al 1999), although the reason for activity during the winter is unknown. Remaining active may enable tortoises to capitalize on sporadic food resources, or remain vigilant on the possible influx of rain. Whatever the reason, one should assume evolutionary theory dictates there is some advantage to survivorship. By providing only three square feet of space outside the burrow, the Applicant would be preventing activities that are potentially essential to survival. These include the ability to procure food resources, seek cover from predators, or relocate to higher grounds during extreme flood events.

[8] Final Translocation Plan, p. 2-20.

4. The Applicant has not provided an Animal Husbandry Plan that describes the monitoring and care of tortoises.
5. Neither the Applicant nor Staff has provided any analyses on the effects of construction activities surrounding hibernating tortoises. Research on other reptiles has concluded that loud noise (e.g., from construction activity) can damage hearing, and that noise and vibration can artificially trigger emergence from winter hibernacula.

It is my expert opinion that the Applicant's proposal to leave tortoises in their burrows and begin construction in the areas immediately adjacent to the burrows, while severely restricting the movement of these tortoises with fencing, poses new significant and unmitigated impacts on desert tortoises in Phase 1a of the Project site.

ATTACHMENT C

Office of the Governor ARNOLD SCHWARZENEGGER THE PEOPLE'S GOVERNOR

PRESS RELEASE

12/29/2009 GAAS:780:09 FOR IMMEDIATE RELEASE

Governor Schwarzenegger Announces 244 Proposed Renewable Energy Projects Throughout State

State-Federal Partnership Expediting Hundreds of Projects Proposed to meet Governor's 2020 Renewable Energy Goal

Governor Arnold Schwarzenegger today announced the first comprehensive list of 244 proposed renewable energy projects that could produce up to almost 70,000 megawatts (MW) of clean energy annually, building on California's aggressive renewable energy goals. These proposed projects throughout the state include solar, wind, geothermal, biomass and small hydro facilities and will help move California towards achieving the Governor's renewable energy goal of 33 percent by 2020. Currently California facilities produce just over 8,000 MW of renewable energy annually.

"California is a pioneer in renewable energy, green jobs and environmental protection. Today's announcement is proof we have a bright renewable energy future that will both fight climate change and drive our green economy," said Governor Schwarzenegger. "This list of nearly 250 projects is great news for our state because not only will these projects help us meet our long-term environmental goals they will also create green jobs and new, clean investment in our economy now. My Administration will continue to work with our federal partners to expedite renewable energy projects to help meet our aggressive renewable energy goals while ensuring they comply with all state and federal environmental regulations."

In October, Governor Schwarzenegger signed a Memorandum of Understanding (MOU) with U.S. Department of the Interior Secretary Ken Salazar to expedite the permitting process for renewable energy projects in California and appointed a special advisor to oversee the fast-tracking of the permitting process for renewable energy facilities. California was the first state to sign an MOU with the Department of the Interior to cooperatively develop long-term renewable energy plans and to usher eligible projects through state and federal permitting processes that can receive 30 percent federal tax credits under the American Reinvestment and Recovery Act (Recovery Act).

Of the 244 proposed projects, up to 53 have indicated they will apply for Recovery Act funds and will break ground by the end of 2010. For those proposed projects looking for federal stimulus support, 22 could generate power at utility-sized levels of larger than 200 MW, totaling more than 9,000 MW. Many of the proposed projects are currently moving through a state, federal or local permitting process.

"I am very encouraged by the Governor's renewable energy goals and his vision that development in California should occur on private and state lands, as well as on federal public lands," said Secretary of the Interior Salazar. "Moving forward together on all these fronts will help ensure that we all can make responsible decisions on where to site these large projects while still protecting sensitive lands and resources in California."

Governor Schwarzenegger established California's Renewable Portfolio Standard (RPS) by executive order calling for 33 percent renewable energy by 2020. The California Air Resources Board will adopt regulations to increase California's RPS and provide clear and permanent direction for the creation, delivery and servicing of California's renewable energy projects, which will help avoid another energy crisis while increasing the state's renewable energy use.

In November 2008, the Governor signed Executive Order S-14-08 (EO) to streamline California's renewable energy

permitting process and increase the state's renewable energy goals. Following this EO, the California Energy Commission (CEC) and the California Department of Fish and Game formed a cooperative relationship with the U.S. Bureau of Land Management and the U.S. Fish and Wildlife Service, called the Renewable Energy Action Team (REAT). This was a first-of-its-kind agreement to move California's renewable energy development forward. The REAT agencies are working closely with the California Public Utilities Commission and the California Independent System Operator to further coordinate and streamline renewable energy development and permitting. The REAT is reviewing the proposed facilities that have submitted their applications to help meet the Recovery Act deadline. The CEC has also prioritized renewable projects that are not on federal lands and is moving quickly to review their applications.

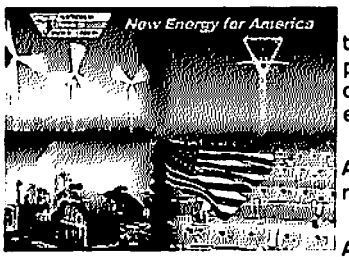
In addition to the permitting work of the REAT, the agencies are working together on a long-term conservation strategy for the Colorado and Mojave Deserts. At the direction of the EO, the Desert Renewable Energy Conservation Plan (DRECP) was also formed to create a science-based, stakeholder driven process to identify geographic areas designated for renewable energy development, and conservation and declining species management. DRECP, in coordination with the Bureau of Land Management's multi-state Solar Development Programmatic Environmental Impact Statement process, is using independent scientific review, stakeholder input, the best available biological data and an integrated planning process for the Mojave and Colorado Desert regions and parts of six Southern California counties. This plan is currently scheduled to be completed in 2012 and is meant to provide a long-term road map to development and conservation in the California desert.

A list of the 244 proposed projects that are currently in review or have been approved is available at www.energy.ca.gov/33by2020/documents/index.html. The projects are separated by those seeking Recovery Act funding. The project list is subject to change since some may lack financing, fail to meet strict environmental standards, or adequately address land use issues as part of the project approval process.

U.S. DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**
National

Fast-Track Renewable Energy Projects

Last Updated: October 25, 2010.



Fast-track projects are those where the companies involved have demonstrated to the BLM that they have made sufficient progress to formally start the environmental review and public participation process. These projects are advanced enough in the permitting process that they could potentially be cleared for approval by December 2010, thus making them eligible for economic stimulus funding under the American Recovery and Reinvestment Act of 2009.

A number of other renewable energy projects also are on fast-track status and could soon be ready for environmental study and public review.

All renewable energy projects proposed for BLM-managed lands will receive the full environmental reviews required by the National Environmental Protection Act and will include the same opportunities for public involvement as are required for all other land-use decision making by the BLM.

The table below includes BLM fast-track renewable energy projects as of October 2010 and links to related BLM and state web pages. Listings include the project name, size, acreage or length, and permitting status. If a formal "Notice of Intent" has been published in the *Federal Register*, a link is provided to the notice.

Maps of the Fast Track projects are now available through the BLM's Geocommunicator system. Click on the MAP links below to open a link to an interactive map of each site.

Solar Energy Projects

State	County	Project Name	Potential Output*	Acreage	Status of Notice of Intent
AZ	Maricopa	NextEra (Boulevard), Sonoran Solar Project MAP	375 MW (parabolic trough)	4,000	Published July 8, 2009. Draft EIS published April 19, 2010
CA	Imperial	Tessera Solar Imperial Valley (Formerly SES, Solar Two) MAP	750 MW (solar engine)	6,140 on BLM, additional 360 on private land	Published Oct. 17, 2008. Draft EIS published Feb. 22, 2010. Final EIS published July 28, 2010 Record of Decision signed Oct. 5, 2010
CA	San Bernardino	BrightSource, Ivanpah SEGS MAP	400 MW (power tower)	4,073	Published Nov. 6, 2007. Draft EIS published Nov. 10, 2009. Supplemental DEIS published April 16, 2010 Final EIS published Aug. 6, 2010 Record of Decision signed Oct. 17, 2010
CA	Riverside	OptiSolar (First Solar), Desert Sunlight MAP	350 MW (thin film PV)	7,040	Published Jan. 13, 2010 Draft EIS published Sept. 3, 2010
CA	Riverside	Solar Millennium, Chevron 1 (Blythe) MAP	986 MW (parabolic trough)	6300 in 9,560 Right of Way	Published Nov. 23, 2009. Draft EIS published April 6, 2010 Final EIS published August 20, 2010
CA	Riverside	Solar Millennium, Chevron 2 (Palen) MAP	484 MW (parabolic trough)	3,800 in 5,176 Right of Way	Published Nov. 23, 2009. Draft EIS published April 7, 2010
CA	Kern	Solar Millennium, Ridgecrest MAP	745 MW (parabolic trough)	1,760 in 3,920 Right of Way	Published Nov. 23, 2009. Draft EIS published April 7, 2010

CA	San Bernardino	Calico Solar (formerly SES Solar One) **MAP**	850 MW (solar engine)	8,230	Published June 8, 2009. Draft EIS published April 19, 2010 Final EIS published Aug. 6, 2010 Record of Decision signed Oct. 20, 2010
CA	Riverside	Nextera Genesis, Ford Dry Lake **MAP**	250 MW (parabolic trough)	4,640	Published Nov. 23, 2009. Draft EIS published April 19, 2010 Final EIS published Aug. 30, 2010
CA	San Bernardino	Chevron, Lucerne Valley Solar Project **MAP**	45 MW (thin film PV)	516	Published July 23, 2009; Draft EIS Published Feb. 5, 2010 Final EIS Published Aug. 13, 2010. Details on comment period. Record of Decision signed Oct. 5, 2010
NV	Clark	NextLight, Silver State South **MAP**	267 MW (PV)	7,840 for South and North	Published June 30, 2009. Draft EIS published April 16, 2010 Final EIS published Sept. 20, 2010 Record of Decision signed Oct. 12, 2010
NV	Clark	NextLight, Silver State North **MAP**	140 MW (PV)	See above	Published June 30, 2009. Draft EIS published April 16, 2010 Final EIS published Sept. 20, 2010 Record of Decision signed Oct. 12, 2010
NV	Nye	Tonopah Solar (Solar Reserve), Crescent Dunes **MAP**	180 MW (power tower)	1,600	Published Nov. 24, 2009. Draft EIS published Sept. 3, 2010
NV	Nye	Solar Millenium, Amargosa Farm Road **MAP**	484 MW (parabolic trough)	4,350	Published July 13, 2009. Draft EIS published March 19, 2010

* Potential output may change depending on the analysis and review of each project.

Wind Energy Projects

State	County	Project Name	Potential Output*	Acreage	Status of Notice of Intent
CA	San Diego	Iberdrola, Tule Wind Project **MAP**	200 MW	15,493	Published Dec. 29, 2009
CA	San Bernardino	AES, Daggett Ridge	82.5 MW	1,577 on BLM and 380 on private land	Published Nov. 23, 2009
CA	San Bernardino	Granite Wind, Granite Mountain **MAP**	Up to 74 MW	1,968	Published Dec. 6, 2007. Draft EIS published April 2, 2010
NV	Clark	Duke Energy, Searchlight **MAP**	200 MW	24,382	Published Dec. 16, 2008
NV	White Pine	Spring Valley Wind, Spring Valley **MAP**	150 MW	8,320	Pending
					Published Jan. 19,

OR	Crook and Deschutes	West Butte Wind Power, West Butte MAP	60 MW	Private land	2010. Draft EIS published April 2, 2010. Final EIS published Sept. 30, 2010
WY	Albany	Shell Wind Energy, Sand Hills Ranch MAP	50 MW	1,835	Pending

* Potential output may change depending on the analysis and review of each project.

Geothermal Energy Projects

State	County	Project Name	Potential Output*	Acreage	Status of Notice of Intent
NV	Humboldt	Blue Mountain Geothermal Power Plant and transmission line MAP	45MW and 120 kV	5,262 on BLM and 5,732 on private land	Project in operation
NV	Pershing and Lander	Ormat, Jersey Valley MAP	30 MW	7,460 on BLM, 220 on private land	Pending
NV	Lander	Ormat, McGinness Hills MAP	30 MW	7,190 on BLM only	Pending
NV	Churchill	Terragen Dixie Meadows MAP	62 MW	4,720 on BLM land	EA being prepared
NV	Churchill	Terragen Coyote Canyon MAP	62 MW	3,960 on BLM, 760 on private land	EA being prepared
NV	Pershing	Terragen New York Canyon MAP	62 MW	15,135 on BLM land	EA being prepared

* Potential output may change depending on the analysis and review of each project.

Energy Transmission Projects

State	County	Project Name	Voltage	Total Miles	BLM Miles	Status of Notice of Intent
CA	Los Angeles and Kern	Los Angeles Department of Water and Power, Barren-Ridge	230 kV	75	4	Published April 8, 2009
CA	Riverside	Southern CA Edison, Devers-Palo Verde II	500 kV	169	58	Published Dec. 7, 2005
ID	Caribou	Lower Valley Energy, (New Name: Hooper Springs)	115 kV	20	3	Pending
ID	Oyyhee	Idaho Power, Hemingway-Butte	500 kV	1	1	Right of Way grant issued June 4, 2009
ID	Bingham and Bonneville County	BPA, Palisades-Goshen	230 kV	52	1.7	Right of Way grant issued July 14, 2009
ID	Numerous NV and IO Counties	LS Power, Southwest Intertie Project	500 kV	523	447	Notices to Proceed issued (South Portion)
NV	White Pine	NV Energy, One Nevada Line (ON Line)	500 kV	236	236	Published July 29, 2009. Draft EIS published Nov. 20, 2009.

Related Links

BLM Concentrating on Renewable Energy Projects That Could Meet Stimulus Funding Deadline (BLM News Release, December 29, 2009)

Salazar Highlights Fast-Frack Renewable Energy Projects (News Release from the Department of the Interior, November 5, 2009)

BLM California Facts on Fast-Track Projects Includes information on the above project as well as six other projects that have started through environmental review.

BLM California Solar Energy Projects--Links to maps and other documents relating to solar energy projects and applications.

ATTACHMENT D

Payments for Specified Energy Property in Lieu of Tax Credits

under the

AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

U.S. Treasury Department
Office of the Fiscal Assistant Secretary
July 2009/ Revised March 2010

Payments for Specified Energy Property in Lieu of Tax Credits
under the
American Recovery and Reinvestment Act of 2009

Program Guidance

Under Section 1603 of the American Recovery and Reinvestment Tax Act of 2009 (Section 1603), the United States Department of the Treasury (Treasury) makes payments to eligible persons who place in service specified energy property and apply for such payments. The purpose of the payment is to reimburse eligible applicants for a portion of the expense of such property. Eligible property under this program includes only property used in a trade or business or held for the production of income. Nonbusiness energy property described in section 25C of the Internal Revenue Code (IRC) and residential energy efficient property described in section 25D of the IRC do not qualify for payments under this program but may qualify for tax credits under those provisions.

By receiving payments for property under section 1603, applicants are electing to forego tax credits under sections 48 and 45 of the IRC with respect to such property for the taxable year in which the payment is made or any subsequent taxable year. Applicants must agree to the terms and conditions applicable to the Section 1603 program.

This guidance establishes the procedures for applying for payments under the Section 1603 program and is intended to clarify the eligibility requirements under the program. Treasury welcomes questions about the program and the application process at 1603Questions@do.treas.gov.

I. Overview

On February 17, 2009, President Obama signed the American Recovery and Reinvestment Act of 2009 (Public Law 111-5). The purpose of the Recovery Act is to preserve and create jobs and promote economic recovery in the near term and to invest in infrastructure that will provide long-term economic benefits.

Section 1603 of the Act's tax title, the American Recovery and Reinvestment Tax Act, appropriates funds for payments to persons who place in service specified energy property during 2009 or 2010 or after 2010 if construction began on the property during 2009 or 2010 and the property is placed in service by a certain date known as the credit termination date (described more fully below in the Property and Payment Eligibility section). Treasury will make Section 1603 payments to qualified applicants in an amount generally equal to 10% or 30% of the basis of the property, depending on the type of property. Applications will be reviewed and payments made within 60 days from the later of the date of the complete application or the date the property is placed in service. Applicants who receive payments for property under Section 1603 are not eligible for the

production or investment tax credit under sections 45 and 48 of the IRC with respect to the same property for the taxable year of the payment or subsequent years. In addition, any credit under section 48 previously allowed with respect to progress expenditures for the property will be recaptured.

It is expected that the Section 1603 program will temporarily fill the gap created by the diminished investor demand for tax credits. In this way, the near term goal of creating and retaining jobs is achieved, as well as the long-term benefit of expanding the use of clean and renewable energy and decreasing our dependency on non-renewable energy sources.

II. Application Procedures

Applicants interested in receiving payments under Section 1603 may submit an application on-line by going to www.treasury.gov/recovery. Applications may only be submitted after the property to which the application relates is placed in service, or is under construction. A completed application will include the signed and complete application form; supporting documentation; signed Terms and Conditions; and complete payment information. All applications must be received before the statutory deadline of October 1, 2011.

For property placed in service in 2009 or 2010, applications must be submitted after the property has been placed in service and before October 1, 2011. Treasury will review the applications and make payment to qualified applicants within 60 days from the date the completed application is received by Treasury.

For property not placed in service in 2009 or 2010 but for which construction began in 2009 or 2010, applications must be submitted after construction commences but before October 1, 2011. If the property has been placed in service at the time of the application, Treasury will make payments to qualified applicants within 60 days from the date the completed application is received. For property not yet placed in service at the time of the application, Treasury will review such applications and notify the applicant if all eligibility requirements that can be determined prior to the property being placed in service have been met. If so notified, applicants must then submit, within 90 days after the date the property is placed in service, supplemental information sufficient for Treasury to make a final determination. Treasury will conduct a final review of the application at that time and make payment to qualified applicants within 60 days after the supplemental information is received by Treasury. Instructions provided on the application will indicate which portions of the application must be completed at the time the application is initially submitted and which portions must be completed at the time the application is supplemented.

If an applicant is applying for Section 1603 payments for multiple units of property that are treated as a single, larger unit of property (see Section IV. D. below), all such units may be included in a single application.

The application form requests, among other identifying data elements, the applicant's Data Universal Numbering System (DUNS) number from Dun and Bradstreet. If the applicant does not already have a DUNS number, it may request one at no cost by calling the dedicated toll-free DUNS Number request line at 1-866-705-5711.

Applicants must also register with the Central Contractor Registration (CCR). To register, go to www.ccr.gov/startregistration.aspx. The registration must be completed before a payment can be made.

When Treasury determines that an application is approved, it will send a notice to the applicant. The notice informs the applicant that the payment will be made and incorporates the information contained in the applicant's completed application form and the Terms and Conditions. Treasury makes payment to the applicant no later than five days from the date of the notice. Payment will be made by Electronic Funds Transfer based upon the banking information in the CCR.

In cases where an applicant has not submitted sufficient information upon which a determination can be based, the applicant will be so notified and given 21 days from the date of the notice to submit additional information. If additional information is not received within the 21 day period, the application will be denied.

When Treasury determines that the application does not qualify for payment, the applicant will be so notified. Such notification will include the reasons for the determination and will be considered the final agency action on the application.

III. Applicant Eligibility

Certain persons are not eligible to receive Section 1603 payments. These include:

- any Federal, state or local government, including any political subdivision, agency or instrumentality thereof
- any organization that is described in section 501(c) of the IRC and is exempt from tax under section 501(a) of the IRC
- any entity referred to in paragraph (4) of section 54(j) of the IRC or
- any partnership or other pass-thru entity, any direct or indirect partner (or other holder of an equity or profits interest) of which is an organization or entity described above unless this person only owns an indirect interest in the applicant through a taxable C corporation.

As long as each direct and indirect partner in the partnership or shareholder or similar interest holder in any other pass-thru entity is eligible to receive Section 1603 payments, the partnership or pass-thru entity is eligible to receive Section 1603 payments. Having as a direct or indirect partner, shareholder, or similar interest holder a taxable C corporation any of whose shareholders are not eligible to receive Section 1603 payments does not affect the eligibility of the partnership or pass-thru entity. Neither a Real Estate Investment Trust, nor a cooperative organization described in section 1381(a) of the IRC is a pass-thru entity for this purpose.

For an applicant to be eligible to receive a Section 1603 payment it must be the owner or lessee of the property and must have originally placed the property in service. Lessees are eligible to apply for Section 1603 payments only if the conditions described in Section VI of this Guidance are met.

A foreign person or entity may be eligible for a Section 1603 payment if the person or entity qualifies for the exception in section 168(h)(2)(B) of the IRC.

Applicant eligibility will be determined as of the time the application is received.

IV. Property and Payment Eligibility

A. Placed in Service

Qualified property must be originally placed in service between January 1, 2009, and December 31, 2010, (regardless of when construction begins) or placed in service after 2010 and before the credit termination date (see below) if construction of the property begins between January 1, 2009, and December 31, 2010. Qualified property includes expansions of an existing property that is qualified property under section 45 or 48 of the IRC.

Placed in service means that the property is ready and available for its specific use.

B. Credit Termination Date and Applicable Payment Percentage

The following chart lists the Credit Termination Date and the applicable percentage of eligible cost basis used in computing the payment for each specified energy property.

Specified Energy Property	**Credit Termination Date**	**Applicable Percentage of Eligible Cost Basis**
Large Wind	Jan 1, 2013	30%
Closed-Loop Biomass Facility	Jan 1, 2014	30%
Open-loop Biomass Facility	Jan 1, 2014	30%
Geothermal under IRC sec. 45	Jan 1, 2014	30%
Landfill Gas Facility	Jan 1, 2014	30%
Trash Facility	Jan 1, 2014	30%
Qualified Hydropower Facility	Jan 1, 2014	30%
Marine & Hydrokinetic	Jan 1, 2014	30%
Solar	Jan 1, 2017	30%
Geothermal under IRC sec. 48	Jan 1, 2017	10%*
Fuel Cells	Jan 1, 2017	30%**
Microturbines	Jan 1, 2017	10%***
Combined Heat & Power	Jan 1, 2017	10%
Small Wind	Jan 1, 2017	30%
Geothermal Heat Pumps	Jan 1, 2017	10%

*Geothermal Property that meets the definitions of qualified property in both § 45 and § 48 is allowed either the 30% credit or the 10% credit but not both.
** For fuel cell property the maximum amount of the payment may not exceed an amount equal to $1,500 for each 0.5 kilowatt of capacity.
*** For microturbine property the maximum amount of the payment may not exceed an amount equal to $200 for each kilowatt of capacity.

C. Beginning of Construction

Construction begins when physical work of a significant nature begins. Work performed by the applicant and by other persons under a written binding contract is taken into account in determining whether construction has begun. An applicant may elect the safe harbor described below to determine when construction begins.

Physical work of a significant nature. Both on-site and off-site work may be taken into account for purposes of demonstrating that physical work of a significant nature has begun. For example, in the case of a facility for the production of electricity from a wind turbine, on-site physical work of a significant nature begins with the beginning of the excavation for the foundation, the setting of anchor bolts into the ground, or the pouring of the concrete pads of the foundation. If the facility's wind turbines and tower units are to be assembled on site from components manufactured off site and delivered to the site, physical work of a significant nature begins when the manufacture of the components begins at the off-site location. If a manufacturer produces components for multiple facilities, reasonable methods must be used to associate individual components with particular facilities. Physical work of a significant nature does not include preliminary activities such as planning or designing, securing financing, exploring, researching, clearing a site, test drilling of a geothermal deposit, test drilling to determine soil condition, or excavation to change the contour of the land (as distinguished from excavation for footings and foundations).

Self construction. If an applicant manufactures, constructs, or produces property for use by the applicant in the applicant's trade or business (or for the applicant's production of income), the work performed by the applicant is taken into account in determining when physical work of a significant nature begins.

Construction by contract. For property that is manufactured, constructed, or produced for the applicant by another person under a written binding contract (as described below) that is entered into prior to the manufacture, construction, or production of the property for use by the applicant in the applicant's trade or business (or for the applicant's production of income) the work performed under the contract is taken into account in determining when physical work of a significant nature begins. A contract is binding only if it is enforceable under State law against the applicant or a predecessor, and does not limit damages to a specified amount (for example, by use of a liquidated damages provision). For this purpose, a contractual provision that limits damages to an amount equal to at least 5 percent of the total contract price will not be treated as limiting damages to a specified amount. If a contract provides for a full refund of the purchase

price in lieu of any damages allowable by law in the event of breach or cancellation, the contract is not considered binding. A contract is binding even if the contract is subject to a condition, as long as the condition is not within the control of either party or a predecessor. A contract will continue to be binding if the parties make insubstantial changes in its terms and conditions or any term is yet to be determined by a standard beyond the control of either party. For example, minor modifications to the design specifications of property to be produced under a contract, such as a cold weather package for wind turbines, do not affect the binding nature of the contract. A contract that imposes significant obligations on the applicant or a predecessor will be treated as binding notwithstanding the fact that certain terms remain to be negotiated by the parties to the contract. An option to either acquire or sell property is not a binding contract. A binding contract does not include a supply, or similar, agreement if the amount and design specifications of the property to be purchased have not been specified.

Safe Harbor. An applicant may treat physical work of a significant nature as beginning when more than 5 percent of the total cost of the property has been paid or incurred and may treat physical work of a significant nature as not having begun until more than 5 percent of the total cost of the property has been paid or incurred. In the case of property constructed by the applicant, costs of the property are treated as paid or incurred when paid or incurred by the applicant. In the case of property manufactured, constructed, or produced for the applicant by another person under a binding written contract that is entered into prior to the manufacture, construction, or production of the property (i) the cost of the property under the contract is treated as paid or incurred when the property is provided to the applicant, and (ii) for periods before the property is provided to the applicant, costs paid or incurred with respect to the property by such other person are treated as costs of the property that are paid or incurred when paid or incurred by such other person. If the property includes both self-constructed components and components constructed under a contract, the costs relating to the self-constructed components and the costs relating to the components constructed under a contract are combined in determining if the 5 percent of total costs has been exceeded. All costs included in the eligible basis (as described in section V) of the specified energy property and only such costs are taken into account in determining if 5 percent of total costs has been exceeded. If the applicant is a lessee of property for which the lessor has elected to pass-through the credit to the lessee, this safe harbor must be met by the lessor (unless the applicant sold and leased back the property). An applicant may elect to use this safe harbor by stating in section 2F of the application that the applicant is electing this safe harbor and describing the costs that satisfy the requirements for this election. See also section 6B of the application regarding supporting documentation.

Reliance on prior guidance. An applicant may determine when construction begins under the program guidance in effect before March 15, 2010. This guidance can be found at http://treas.gov/recovery/docs/Prior_Guidance_on_Beginning_Construction.pdf.

D. Units of Property

For purposes of determining the beginning of construction of property or the date property is placed in service, all the components of a larger property are a single unit of

property if the components are functionally interdependent. Components of property that are produced by, or for, the applicant are functionally interdependent if the placing in service of one component is dependent on the placing in service of the other component. For example, on a wind farm for the production of electricity from wind energy, the electricity generating wind turbine, its tower, and its supporting pad are the single unit of property. Each wind turbine on the wind farm can be separately operated and metered and can begin producing electricity individually. A control system on a wind farm that optimizes the operation of the farm is a unit of property that is separate from the wind turbines.

The owner of multiple units of property that are located at the same site and that will be operated as a larger unit may elect to treat the units (and any property, such as a computer control system, that serves some or all such units) as a single unit of property for purposes of determining the beginning of construction and the date the property is placed in service. In such a case, the entire cost of such larger unit of property is taken into account in applying the safe harbor. The owner may not include within this larger unit any property that was placed in service before January 1, 2009. For example, the owner of a wind farm may treat as a single unit a wind farm that will consist of fifty turbines, their associated towers, their supporting pads, a computer system that monitors and controls the turbines, and associated power condition equipment. In cases where the applicant treats multiple units of property as a single unit, failure to complete the entire planned unit will not preclude receipt of a Section 1603 payment. For example, in the example noted above if only 40 of the planned 50 turbines were placed in service by the credit termination date, an otherwise eligible applicant would be eligible for a payment based on the 40 turbines placed in service.

E. Specified Energy Property Installed on Other Property

Only the portion of a facility that is described in section 48 of the IRC is taken into account in computing the Section 1603 payment. For example, in the case of a building with solar property on its roof, only the cost of the solar property (including the cost of mounting the solar property on the roof) qualifies for a Section 1603 payment; the cost of the building does not qualify. In the case of a truck on which solar energy property is mounted, the cost of the solar energy property and the cost of mounting the property may be eligible for a Section 1603 payment. However, the truck on which the property is mounted is not specified energy property. Likewise, in the case of a forklift powered by a fuel cell power plant, the fuel cell power plant may be eligible for a Section 1603 payment. However, the forklift in which it is used is not specified energy property.

F. Location of Property

Property which is used predominantly outside the United States does not qualify for a payment under section 1603. The determination of whether property is used predominantly outside the United States is made by comparing the period of time during which the property is physically located outside the United States with the period of time during which the property is physically located within the United States in a given year. If the property is located outside the United States during more than 50% of the year, such property is considered to be used predominantly outside the United States during

that year. This limitation does not apply to property described in section 168(g)(4) of the IRC.

G. Original Use

The original use of the property must begin with the applicant. If the cost of the used parts contained within a facility is not more than 20 percent of the total cost of the facility (whether acquired or self-constructed), an applicant will not fail to be considered the original user of property because the facility contains used parts.

If new property is originally placed in service by a person and is sold to an applicant and leased back to the person by the applicant within three months after the date the property was originally placed in service by the person, unless the lessor and lessee elect otherwise, the applicant-lessor is considered the original user of the property and the property is considered to be placed in service not earlier than when it is used under the lease back.

H. Required Documentation

Applicants must submit supporting documentation demonstrating that the property is eligible property and that it has been placed in service, and if placed in service after December 31, 2010, that construction began in 2009 or 2010 (See section V below for documentation required to support costs). The following documents are required as indicated below:

Eligible Property – the following documentation must be provided, as applicable, to demonstrate that the property is eligible (for further details on property eligibility, see sections 45 or 48 of the IRC):

Design plans (required of all applicants). Final engineering design documents, stamped by a licensed professional engineer.

Documentation demonstrating that the property is designed to have a nameplate capacity that meets required minimums or maximums (see Section 4A of the Application for properties with minimum or maximum nameplate capacity requirements) : [open-loop biomass facility (livestock waste nutrients), marine and hydrokinetic renewable energy facility, fuel cell property, microturbine property, combined heat and power system property, and small wind energy property only]. This documentation can be included within the required design plans or commissioning report, or with the original equipment manufacturer (OEM)/equipment vendor specification sheets.

Documentation demonstrating that the property is designed to meet the electricity-only generation efficiency requirements described in Section 4A of the Application (fuel cell property and microturbine property only). The system efficiency is typically calculated as a ratio of the electrical energy output from the device to the amount of fuel consumed to produce the electricity divided by the lower heating value (LHV) of the fuel (if alternating current, be sure to include conversion losses). OEM/equipment vendor specification sheets that specify the above values can be used as supporting documentation for nameplate capacity and system efficiency. This documentation can

also be included within the required design plans or commissioning report, as long as it specifies the above values.

For combined heat and power system property only, documentation demonstrating that the system is designed to meet the requirements described in Section 4A of the Application. See IRC section 48(c)(3)(C) for calculation of the system energy efficiency percentage. This documentation can be included within the required design plans or commissioning report, or with OEM/equipment vendor specification sheets.

For a closed-loop biomass facility modified to use closed-loop biomass to co-fire with coal, other biomass, or both, documentation demonstrating approval under the Biomass Power for Rural Development Program or documentation demonstrating that the facility is part of a pilot project of the Commodity Credit Corporation.

FERC certification (applicable to incremental hydropower production projects only). Certification provided by the Federal Energy Regulatory Commission that certifies the baseline and incremental increase in energy production for incremental hydropower production.

FERC license (applicable to hydropower facility installed on a qualifying nonhydroelectirc dam only)

Placed in Service - the following documentation must be provided, as applicable, to demonstrate that the property is placed in service:
Commissioning report (required for all properties placed in service). A report provided by the project engineer, or the equipment vendor, or an independent third party that certifies that the equipment has been installed, tested, and is ready and capable of being used for its intended purpose.

Interconnection agreement (required only for properties placed in service that are interconnected with a utility). A formal document between the applicant and the local utility that establishes the terms and conditions under which the utility agrees to interconnect with the applicant's system. Applicants must also submit any subsequent documentation to demonstrate that the interconnection agreement has been placed in effect.

Under Construction but not yet Placed in Service - the following documentation must be provided, as applicable, to demonstrate that construction has begun on the property:
Paid invoices and/or other financial documents demonstrating that physical work of a significant nature has begun on the property as described in Section IV.C. If beginning of construction is based on the safe harbor, these documents must demonstrate that more than 5 percent of the total cost of the property (excluding the cost of any land and preliminary activities such as planning, designing, securing financing, exploring, or researching) has been incurred or paid by the applicant.

Binding contract (required for property not yet placed in service that is being manufactured, constructed or produced for the applicant by another person). The binding contract for the manufacture, construction or production of the property as described in section IV.C above.

Leased Property - the following documentation must be provided where the applicant is the lessee of the property to demonstrate that the lessor and lessee have entered into the agreement required by section VI of this guidance.
The written agreement with the lessor described in Section VI of this Guidance.

I. Types of Property

Property eligible to receive Section 1603 payments is "specified energy property." Specified energy property includes only tangible property (not including a building) that is an integral part of the facility. The tangible property is tangible personal property and other tangible property as defined in sections 1.48-1(c) and (d) of the Income Tax Regulations. Specified energy property is property for which depreciation (or amortization in lieu of depreciation) is allowable.

Qualified property must be placed in service in 2009 or 2010 or, in the case of property placed in service after 2010 for which construction begins in 2009 or 2010, before the credit termination date. Property that satisfies this placed-in-service requirement may be qualified property even if it is an addition to or expansion of a qualified facility placed in service before 2009.

Qualified property includes only tangible property that is both used as an integral part of the activity performed by qualified facility and located at the site of the qualified facility. Qualified property does not include a building but may include structural components of a building. Property is an integral part of a qualified facility if the property is used directly in the qualified facility, is essential to the completeness of the activity performed in that facility, and is located at the site of the qualified facility. Roadways and paved parking areas located at the qualified facility and used for transport of material to be processed at the facility or equipment to be used in maintaining and operating the facility are integral to the activity preformed there, but roadways or paved parking lots that provide solely for employee and visitor vehicle traffic are not an integral part a qualified facility. Property is considered used as an integral part of a qualified facility if so used either by the owner of the property or by the lessee of the property.

In the case of an open-loop biomass, closed-loop biomass, or municipal solid waste facility, an integral part of the qualified facility includes property used at the plant site for unloading, transfer, storage, reclaiming from storage, or preparation (shredding, chopping, pulverizing, or screening) of the material to be processed at the plant. However, similar equipment located away from the plant site is not an integral part of the qualified facility. Similarly, slurry pipelines, trucks, railroad cars, and barges that transport to the qualified facility open-loop biomass, closed-loop biomass, or municipal solid waste are not an integral part of a qualified facility. Property that is integral to a geothermal facility includes equipment that transports geothermal steam or hot water

from a geothermal deposit to the site of ultimate use. This includes components of a heating system, such as pipes and ductwork that distribute within a building the energy derived from the geothermal deposit and, if geothermal energy is used to generate electricity, includes equipment that transports hot water from the geothermal deposit to a power plant.

For qualified property that generates electricity, qualified property includes storage devices, power conditioning equipment, transfer equipment, and parts related to the functioning of those items but does not include any electrical transmission equipment, such as transmission lines and towers, or any equipment beyond the electrical transmission stage, such as transformers and distribution lines.

Specified energy property, within the meaning of Section 1603, consists of two broad categories of property - certain property described in IRC section 45 and certain property described in IRC section 48. The following types of property are specified energy property within the meaning of Section 1603[1]:

Generally, a qualified facility must be capable of operating as an independent unit even though the property is installed at the site of an existing facility. Certain modifications to property installed on an existing facility qualify as specified energy property even if the facility was placed in service before 2009.

Qualified Facilities described under IRC section 45:
A qualified facility is a facility as described in IRC section 45(d)(1), (2), (3), (4), (6), (7), (9), or (11), but only if no credit has been allowed under section 45 for the facility. This guidance does not address the placed-in-service requirements of IRC section 45.

> *Wind facility:* A wind facility is a facility using wind to produce electricity (wind turbines 100kW or less may also qualify as qualified small wind energy property, but only one payment is allowed with respect to the property).
>
> *Closed-loop biomass facility:* A closed-loop biomass facility uses closed-loop biomass to produce electricity. Closed-loop biomass is any organic material from a plant that is planted exclusively for purposes of being used at a qualified facility to produce electricity. A closed loop biomass facility includes the modifications to a facility that was originally placed in service and modified to use closed-loop biomass to co-fire with coal, with other biomass, or with both, but only if the modification is approved under the Biomass Power for Rural Development Programs or is part of a pilot project of the Commodity Credit Corporation as described in 65 Fed. Reg. 63052.
>
> *Open-loop biomass facilities:* An open-loop biomass facility uses open-loop biomass to produce electricity. Open-loop biomass is any agriculture livestock

[1] The property descriptions included in this Guidance are intended to assist applicants in determining if a property qualifies for funding. They are not intended to change the meaning of the terms as they are used in sections 45 or 48 of the IRC.

waste nutrients or any solid, nonhazardous, cellulosic waste material or any lignin material that is derived from qualified sources.

- Agricultural livestock waste nutrients are agriculturale livestock manure and litter, including wood shavings, straw, rice hulls, and other bedding material for the disposition of manure. Agricultural livestock includes bovine, swine, poultry, and sheep.
- The qualified sources from which solid, nonhazardous, cellulosic waste material or any lignin material must be derived are:
    1. Any of the following forest-related resources: mill and harvesting residues, precommercial thinnings, slash, and brush;
    2. Solid wood waste materials, including waste pallets, crates, dunnage, manufacturing and construction wood wastes (other than pressure-treated, chemically-treated, or painted wood wastes), landscape or right-of-way tree trimmings, but not including municipal solid waste, gas derived from the biodegradation of solid waste, or paper that is commonly recycled; and
    3. Agriculture sources, including orchard tree crops, vineyard, grain, legumes, sugar, and other crop by-products or residues.

An open-loop biomass facility does not include:

- A facility that burns fossil fuel (co-firing) beyond such fossil fuel required for startup and flame stabilization; or
- A facility using agricultural livestock waste nutrients that has a nameplate capacity rating of less than 150 kilowatts.

Geothermal facility: A geothermal facility uses geothermal energy to produce electricity. Geothermal energy is energy derived from a geothermal deposit. A geothermal deposit is a geothermal reservoir consisting of natural heat that is stored in rocks or in an aqueous liquid or vapor (whether or not under pressure).

Landfill gas facilities: A landfill gas facility is a facility producing electricity from gas derived from the biodegradation of municipal solid waste.

Trash facilities: A trash facility is a facility, other than a landfill gas facility, that uses municipal solid waste to produce electricity. In the case of a new unit placed in service in connection with a trash facility placed in service before October 23, 2004, only property related to the new unit can qualify as specified energy property that is eligible for a Section 1603 payment.

Qualified hydropower facility:

Incremental hydropower: A facility that produces incremental hydropower production described in IRC section 45(c)(8)(B). The percentage of incremental hydropower and baseline must be certified by the Federal Energy Regulatory Commission. The determination of incremental hydropower production shall not be based on any operational changes at such facility not directly associated with the efficiency improvements or additions of capacity. Only property related to the efficiency improvements and additions to capacity to

which the incremental hydropower production is attributable can qualify as specified energy property that is eligible for a Section 1603 payment.

Nonhydroelectric dam: Qualified hydropower facilities also include any hydropower producing facility described in IRC section 45(c)(8)(C) (relating to hydroelectric projects installed on a nonhydroelectric dams that were placed in service before August 8, 2004, and did not produce hydroelectric power on August 8, 2004). The hydroelectric project must be licensed by the Federal Energy Regulatory Commission and must meet all other applicable environmental, licensing, and regulatory requirements. The hydroelectric project must be operated so that the water surface elevation at any given location and time that would have occurred in the absence of the hydroelectric project is maintained, subject to any license requirements imposed under applicable law that change the water surface elevation for the purpose of improving environmental quality of the affected waterway. The Secretary of the Treasury, in consultation with the Federal Energy Regulatory Commission, shall certify that the hydroelectric project licensed at a nonhydroelectric dam meets these criteria. Only property related to the turbines or other generating devices added to the facility to produce hydroelectric power can qualify as specified energy property that is eligible for a Section 1603 payment.

Marine and hydrokinetic renewable energy facilities: A marine or hydrokinetic renewable energy facility is a facility that produces electricity from marine and hydrokinetic renewable energy and has a nameplate capacity rating of at least 150 kilowatts. Marine and hydrokinetic renewable energy is energy derived from:

- Waves, tides, and currents in oceans, estuaries, and tidal areas, free flowing water in rivers, lakes, and streams;
- Free flowing water in an irrigation system, canal, or other man-made channel, including projects that utilize nonmechanical structures to accelerate the flow of water for electric power production purposes; or
- Differentials in ocean temperature (ocean thermal energy conversion).

Marine and hydrokinetic renewable energy does not include any energy that is derived from any source that utilizes a dam, diversionary structure (except as provided above for man-made projects), or impoundment for electric power production purposes.

Energy property described under IRC section 48:
Specified energy property for purposes of Section 1603 includes, in addition to qualified property that is part of a qualified facility, any other energy property described under IRC section 48. Such energy property must meet performance and quality standards that are prescribed either in IRC section 48 or in associated Treasury Regulations and that are in effect at the time of the acquisition of the property.

Solar property: Equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat, excepting property used to generate energy for the purposes of heating a

swimming pool; equipment that uses solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight.

Geothermal property: Equipment used to produce, distribute, or use energy derived from a geothermal deposit, but only, in the case of electricity generated by geothermal power, up to (but not including) the electrical transmission stage. A geothermal deposit is a geothermal reservoir consisting of natural heat that is stored in rocks or in an aqueous liquid or vapor (whether or not under pressure).

Qualified fuel cell property: Qualified fuel cell property is a fuel cell power plant that has a nameplate capacity of at least 0.5 kilowatt of electricity using an electrochemical process and has an electricity-only generation efficiency greater than 30%. A fuel cell power plant is an integrated system comprised of a fuel cell stack assembly and associated balance of plant components that converts a fuel into electricity using electrochemical means. Payments for qualified fuel cell property cannot exceed an amount equal to $1,500 for each 0.5 kilowatt of capacity of such property.

Qualified microturbine property: Qualified microturbine property is a stationary microturbine power plant that has a nameplate capacity of less than 2,000 kilowatts and has an electricity-only generation efficiency of not less than 26% at International Standard Organization conditions. A stationary microturbine power plant is an integrated system comprised of a gas turbine engine, a combustor, a recuperator or regenerator, a generator or alternator, and associated balance of plant components which converts a fuel into electricity and thermal energy. The microturbine power plant also includes all secondary components located between the existing infrastructure for fuel delivery and the existing infrastructure for power distribution, including equipment and controls for meeting relevant power standards, such as voltage, frequency, and power factors. Payments for qualified microturbine property cannot exceed an amount equal to $200 for each kilowatt of capacity of such property.

Combined heat and power (CHP) system property: Combined heat and power system property is property comprising a system that meets the following requirements:

- The system uses the same energy source for the simultaneous or sequential generation of electrical power, mechanical shaft power, or both in combination with the generation of steam or other forms of useful thermal energy (including heating and cooling applications).
- The system--
    - Produces at least 20% of its total useful energy in the form of thermal energy that is not used to produce electrical or mechanical power (or combination thereof); and
    - Produces at least 20% of its total useful energy in the form of electrical or mechanical power (or combination thereof); and

- Has a system energy efficiency percentage in excess of 60%. This requirement does not apply to a facility designed to use biomass [within the meaning of IRC section 45(c)(2) and (3) without regard to the last sentence of paragraph (3)(A)] for at least 90% of the energy source. (See IRC section 48(c)(3)(C) for calculation of the system energy efficiency percentage and IRC section 48(c)(3)(D) for the reduction in payment for biomass systems with an energy efficiency of less than 60%.)
- Does not have a capacity in excess of 50 megawatts or a mechanical energy capacity in excess of 67,000 horsepower or an equivalent combination of electrical and mechanical energy capacities.

CHP system property does not include property used to transport the energy source to the facility or to distribute energy produced by the facility.

Qualified small wind energy property: Qualified small wind energy property is property that uses a qualifying small wind turbine to generate electricity. A qualifying small wind turbine is a wind turbine that has a nameplate capacity of not more than 100 kilowatts.

Geothermal Heat Pump Property: Equipment that uses the ground or ground water as a thermal energy source to heat a structure or as a thermal energy sink to cool a structure.

V. Eligible Basis

The basis of property is determined in accordance with the general rules for determining the basis of property for federal income tax purposes. Thus, the basis of property generally is its cost (IRC section 1012), unreduced by any other adjustment to basis, such as that for depreciation, and includes all items properly included by the taxpayer in the depreciable basis of the property, such as installation costs and the cost for freight incurred in construction of the specified energy property. If property is acquired in exchange for cash and other property in a transaction described in IRC section 1031, in which no gain or loss is recognized, the basis of the newly acquired property is equal to the adjusted basis of the other property plus the cash paid.

Costs that will be deducted for federal income tax purposes in the year in which they are paid or incurred are not includible in the basis on which the payment is determined. For example, if the applicant will take the IRC section 179 deduction for all or part of the cost of the property, then no payment is allowed for the portion of the cost of the property for which the IRC section 179 deduction will be taken. For geothermal property, if intangible drilling and development expenses will be deducted by the applicant, no payment will be allowed on the costs that will be deducted as intangible drilling and development expenses. If the applicant will capitalize intangible drilling and development expenses, only those costs that may be recovered through depreciation are includible in the basis on which the payment is allowed. However, if the applicant will elect under IRC § 59(e) to deduct intangible drilling and development costs over 60

months, the payment is based on the amount for which the election under § 59(e) applies because the effect of § 59(e) is to treat these costs as amortizable.

Only the cost basis of property placed in service after 2008 is eligible for a Section 1603 payment. Thus, if property is placed in service in 2009 at a qualified facility that was placed in service in an earlier year, only the basis of the property placed in service in 2009 is eligible for a Section 1603 payment.

Limitation on eligible basis. The eligible basis of a qualified facility does not include the portion of the cost of the facility that is attributable to a non qualifying activity. For example, for a biomass facility that burns fuel other than open-loop biomass or closed-loop biomass, the eligible cost basis is the percentage of total eligible costs that is equal to the percentage of the electricity produced at the facility that is attributable to the open-loop biomass and closed-loop biomass. This limitation does not reduce the eligible basis of a facility that qualifies as a modification of an existing facility. For example, eligible basis includes the entire cost of modifying an existing facility to use closed-loop biomass to co-fire with coal, with other biomass, or with both, if the modification is approved under the Biomass Power for Rural Development Programs or is part of a pilot project of the Commodity Credit Corporation as described in 65 Fed. Reg. 63052. Similarly, the eligible basis of a qualified hydropower facility producing incremental hydropower includes the entire costs of the modification even though only a portion of the power produced from the modification is attributable to the modification.

Applicants must submit with their application for a Section 1603 payment documentation to support the cost basis claimed for the property. Supporting documentation includes a detailed breakdown of all costs included in the basis. Other supporting documentation, such as contracts, copies of invoices, and proof of payment must be retained by the applicant and made available to Treasury upon request. For properties that have a cost basis in excess of $500,000 applicants must submit an independent accountant's certification attesting to the accuracy of all costs claimed as part of the basis of the property.

VI. Leased Property

A lessor who is eligible to receive a Section 1603 payment with respect to a property may elect to pass-through the Section 1603 payment to a lessee. The election may only be made with respect to property that would be eligible for the Section 1603 payment if owned by the lessee. Such an election will treat the lessee as having acquired the property for an amount equal to the independently assessed fair market value of the property on the date the property is transferred to the lessee and will generally follow the rules in the IRC and Treasury regulations governing elections to allow lessees to receive energy tax credits.

The lessor and lessee must agree that the lessor waives all right to a Section 1603 payment or a production or investment tax credit with respect to the eligible property, before the lessee may apply for a Section 1603 payment with respect to such property.

The lessee must agree to include ratably in gross income over the five year recapture period an amount equal to 50 % of the amount of the Section 1603 payment.

In order to make this election, both the lessor and the lessee must be persons eligible to receive a payment under Section 1603. Additionally, this election may not be made by a lessor that is a mutual savings bank or similar financial organization, a regulated investment company or a real estate investment trust.

The election of a lessor to allow the lessee to receive a Section 1603 payment may be made with respect to each property leased by the lessor to the lessee. The lessee's written consent is required. The lessor's election is made by a written agreement with the lessee that contains the following information:

- A waiver of the lessor's right to receive any payment under Section 1603 with respect to the property, as well as a waiver of the lessor's right to claim a production or investment tax credit under sections 45 and 48 of the IRC with respect to the same property for the taxable year of the payment or subsequent years;
- All information necessary to determine the amount of lessee's Section 1603 payment;
- The name, address, and employer identification number of the lessor and the lessee;
- A description of each property with respect to which the election in being made;
- The date on which possession of the property is transferred to the lessee; and
- The lessee's consent to the election.

A copy of this agreement must be included in the lessee's application for the Section 1603 payment. This election is irrevocable.

Special Rule for Sale-leaseback Transaction

In a sale-leaseback transaction, the lessee, who is not the owner of the property, may claim the Section 1603 payment, if three conditions are satisfied:

- First, the lessee must be the person who originally placed the property in service.
- Second, the property must be sold and leased back by the lessee, or must be leased to the lessee, within three months after the date the property was originally placed in service.
- Third, the lessee and lessor must not make an election to preclude application of the sale-leaseback rules.

VII. Recapture

If the applicant disposes of the property to a disqualified person or the property ceases to qualify as a specified energy property within five years from the date the property is placed in service (hereinafter "disqualifying event"), the Section 1603 payment must be repaid to the Treasury as follows: 100% of the payment must be repaid if the disqualifying event takes place within one year from the date placed in service; 80% of the payment must be repaid if the disqualifying event takes place after one year but before two years from the date placed in service; 60% of the payment must be repaid if the disqualifying event takes place after two years but before three years from the date

placed in service; 40% of the payment must be repaid if the disqualifying event takes place after three years but before four years from the date placed in service; and 20% of the payment must be repaid if the disqualifying event takes place after four years but before five years from the date placed in service.

Property is considered to have been disposed of to a disqualified person if any interest in the property or in the applicant or in any partnership or pass-thru entity that is a direct or indirect owner of an interest in the applicant is sold to: any Federal, state or local government, including any political subdivision, agency or instrumentality thereof; any organization that is described in section 501(c) of the IRC and is exempt from tax under section 501(a) of the IRC; any entity referred to in paragraph (4) of section 54(j) of the IRC; or any partnership or other pass-thru entity any partner (or other holder of an equity or profits interest) of which is a Federal, state or local government, including any political subdivision, agency or instrumentality thereof; an organization that is described in section 501(c) of the IRC and is exempt from tax under section 501(a) of the IRC; or an entity referred to in paragraph (4) of section 54(j) of the IRC. A taxable corporation some or all of whose shareholders are disqualified persons is not a disqualified person and such a corporation's ownership of an interest in a partnership or other pass-thru entity will not cause the partnership or other entity to be treated as a disqualified person.

Property ceases to qualify as a specified energy property if the use of the property changes so that it no longer qualifies as specified energy property. For example, use of property predominantly outside the United States in a year will result in recapture. Temporary cessation of energy production will not result in recapture provided the owner of the property intends to resume production at the time production ceases. Permanent cessation of production will result in recapture. Permanent cessation of production due to natural disaster will not result in recapture unless the property is replaced with property for which a Section 1603 payment is allowed. Replacement would be treated as occurring if the applicant uses IRC section 1033 to avoid gain recognition.

For a hydropower property where incremental hydropower production has been licensed by FERC, recapture will not take place if actual incremental increases in energy production do not occur that year due to environmental and/or regulatory factors. Recapture for a hydropower facility installed on a nonhydroelectric dam will occur if the Federal Energy Regulatory Commission license is surrendered or repealed based on significant changes in water surface elevation caused by operation of the facility.

If the amount of the Section 1603 payment depends on the percentage of electricity produced from biomass (in the case of closed-loop and open-loop biomass facilities) or the energy efficiency percentage (in the case of combined heat and power system property using biomass) and the percentage is reduced, a proportionate percentage of the property ceases to qualify as specified energy property. The applicable percentages will be determined on an annual basis for the year beginning on the date the property is placed in service and for each succeeding year within the recapture period. No additional grant will be allowed in a subsequent year in which the percentage increases.

Selling or otherwise disposing of the property to an entity other than a disqualified person does not result in recapture provided the property continues to qualify as a specified energy property and provided the purchaser of the property agrees to be jointly liable with the applicant for any recapture. Recapture would occur in the event the property is resold to a disqualified person or ceases to qualify as a specified energy property. The applicant remains jointly liable to the Treasury for the recapture amount even if the applicant no longer has control over the property.

Where a lessor elects to pass through the Section 1603 payment to a lessee, if the lessor sells the property to a disqualified person, the lessee is liable to the Treasury for the recapture amount even if the lessee maintains control over the property. If the lease is terminated and possession of the property is transferred by the lessee to the lessor or any other person, the lessee is liable to the Treasury for the recapture amount if the use of the property changes during the recapture period so that it no longer qualifies as specified energy property.

Applicants are not required to post a bond as a condition of receiving payment under the section 1603 program and receipt of payment does not create a lien on the property in favor of the United States. However, funds that must be repaid to the Treasury under these rules are considered debts owed to the United States and if not paid when due, will be collected by all available means against any assets of the applicant, including enforcement by the United States Department of Justice. Debts arising under these rules are not considered tax liabilities.

VIII. Miscellaneous Provisions

A. Assignment of Payment

Applicants may submit, along with their request for payment, a Notice of Assignment, assigning the payment to a third party provided the requirements of the Federal Assignment of Claims Act (31 U.S.C. 3727) are met. The Notice of Assignment will include the DUNS number for the third party. The third party will be required to register in CCR.

B. National Environmental Protection Act (NEPA)

A Section 1603 payment with respect to specified energy property does not make the property subject to the requirements of NEPA and similar laws.

C. Davis- Bacon

A 1603 payment with respect to specified energy property does not make the property subject to the requirements of the Davis-Bacon Act.

D. Treatment of Payments as Taxable Income

Except as described in Section IV of this Guidance with respect to leased property, a Section 1603 payment with respect to specified energy property is not includible in the gross income of the applicant. The basis of the property is reduced by an amount equal to 50% of the payment.

E. Real Estate Investment Trusts

A Real Estate Investment Trust (REIT) will be eligible to receive Section 1603 payments only to the extent allowed by section 50 of the IRC. IRC section 50(d)(1) specifies that rules similar to the rules of former IRC section 46(e) will apply. IRC section 46(e)(1)(B) provides that, in general, in the case of a REIT, qualified investment is limited to the REIT's ratable share of such qualified investment. The ratable share is a ratio, the numerator of which is its taxable income and the denominator of which is its taxable income computed without regard to the deduction for dividends paid (provided by IRC section 857(b)(2)(B)). For this purpose, the REIT's taxable income is determined without regard to any deduction for capital gains dividends and by excluding any net capital gain.

F. Applicability of Normalization Rules

Payments received under the Section 1603 program must be normalized. See former IRC Section 46(f).

G. Reporting

Applicants will be required to provide reports, as required by Treasury, including an annual performance report as set forth in the Terms and Conditions.