



January 27, 2010

California Energy Commission
 Dockets Office, MS-4
 Re: Docket No. 09-Renew EO-01
 1516 Ninth Street
 Sacramento, CA 95814-5512

DOCKET	
09-RENEW EO-1	
DATE	<u>JAN 27 2010</u>
RECD.	<u>JAN 27 2010</u>

**Re: Docket Number 09-Renew EO-01, “Renewable Energy Executive Order”
 Comments on “Best Management Practices and Guidance Manual: Desert
 Renewable Energy Projects, Revised Draft Staff Report,” Publication # CEC-
 700-2009-016-SD-REV**

Dear Renewable Energy Action Team (REAT):

Ormat Nevada, Inc. (Ormat) respectfully submits the following comments on the *Best Management Practices and Guidance Manual: Desert Renewable Energy Projects, Revised Draft Staff Report*, dated December 2009. Thank you for the opportunity to comment on this revised draft document.

Thank you for revising the document. It appears that many of our comments, both general and specific, were incorporated into the revised document. We appreciate how you incorporated new language or revised some sections to emphasize that these are guidelines and BMPs, not requirements. We also greatly appreciate how you clarified that using “non-freshwater” in geothermal plants is a BMP, not a requirement. However, there were still many of our recommendations that were not included. Pertinent comments/recommendations we had that were not incorporated into the revised document are repeated below, with updated page and line numbers and some of them were slightly revised as well. New comments and recommendations are also listed below.

NEW COMMENTS AND RECOMMENDATIONS

Page 12, Lines 32 – 36

Comment: As stated previously, transmission interconnection studies are not usually performed at the time of permit application. These studies are not the critical items that are needed, but it is general information of the transmission line routes. The routes and general information would serve the purpose of providing data needed to address CEQA and/or NEPA environmental reviews of the proposed project; the actual interconnection studies are not needed.

Recommendation: Remove the requirements for transmission interconnection studies on Item 9 on pages 4 and 16 and elsewhere where included.

Page 22, Lines 5 – 27 (Items 3 – 9)

Comment: These items are not normally required for renewable energy projects. Most of them are not necessary or applicable.

Recommendation: If you leave these items in, please put a qualifier in each item with, “as or if required by the local Air Pollution Control District, or by CEC if a CEC-applicable project.”

ORMAT Nevada

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Pages 46 – 47, the Added Environmental Justice Section

Comment: Due to the economic situation of Imperial County, these requirements would apply to ALL of the County. Imperial County has the highest unemployment rate in the country. This is a significant economic benefit of renewable energy projects in Imperial County, brings much needed direct and indirect jobs, income, and taxes to the County.

Recommendation: Remove or soften the Environmental Justice section for projects in Imperial County.

Page 54, Lines 5 – 9, Paleontological Resources BMPs

Comment: These BMPs are not appropriate nor applicable to all projects within the Desert region.

Recommendation: Add the qualifier, “if appropriate” to the end of the first sentence.

Page 76, Lines 4 – 14

Comment: This paragraph was mistakenly misplaced – it should be below Line 23.

Recommendation: Move this paragraph to below Line 23.

Page 76, Lines 37 – 38 through Page 77 , Lines 1 - 3 (Item 2)

Comment: We appreciate how you revised this section. We would like to reiterate as we pointed out in our previous comment letter that these technologies listed have not yet been successfully demonstrated on a binary plant or any other cooling tower that we are aware of; they are not yet proven technologies.

Recommendation: For clarification and understanding, please add the following sentence to the end of the paragraph (on Line 3 on page 77): “These are BMPs; however, these BMPs are not mature or practical as the technologies listed in the previous sentence have not yet been successfully demonstrated on binary plants, so these should only be recommended if they can be demonstrated to be technologically and economically effective for the specific application.”

Page 64 - 65, New Introductory Paragraphs on Water Supply and Quality Guidance

Comment: We appreciate this expanded section on water. An emphasis of this section is regarding requirements/regulations pertaining to waters of the state. We would like to point out that water from the Imperial Irrigation District is not a water of California; it is an imported water from the Colorado River in Arizona before it goes into Mexico.

Recommendation: Add a sentence in this section that the guidance and BMPs of this section do not apply to imported water from the Colorado River.

COMMENTS FROM PREVIOUS LETTER THAT WERE NOT INCORPORATED, BUT ORMAT STILL REQUESTS CHANGES (SOME ARE REVISED FROM PREVIOUS LETTER)

All of the comments below were in our previous letter but were not incorporated into the current revision. There are several others that were not incorporated, but these were not as pertinent. We feel the comments below are pertinent and request that REAT incorporate them. Some of the recommendations below are revised from the originals, so we request that you review them again for consideration. The page and line numbers are updated to reflect the current document.

Page 3, Line 31-39 (Item 9)

Comment: Given the current cost and time delays with the utilities completing interconnection requests it is not practical that the interconnection study will be complete prior to submitting applications for a project. Developers start working on project prior to completing the CAISO studies and not all projects

involve the CAISO. This requirement is unnecessary and could delay all projects by months. See also related comments below on Page 16, Lines 18-22.

Recommendation: Delete this sentence entirely.

Page 8, Line 25-35

Comment: The BMP provides guidance for applications from Project Developers and regulatory agencies for new projects. However, Page 5, Line 11-13, and other places (some addressed below) state that the BMPs are for the post-application phases (permitting/ pre-construction, construction, operation, repowering, or retrofitting, and decommissioning) of desert renewable energy facilities.

Recommendation: Clarify and remove these contradictory statements, that the BMP Manual is not applicable to existing operations.

Page 16, Lines 18-22 (Item 9)

Comment: Given the transmission planning currently underway via RETI and the Federal government it is not possible for an individual project to know if it will negatively impact the system. Additionally, how would “negatively impact” be determined? The delay in the interconnection studies by the utilities is only adding to this problem. There is obviously not adequate transmission capacity in California to accommodate the renewable energy required by either the RPS or AB 32 goals. The industry is trying to help the state meet its goals but requirements like this are not helpful. All project sites will require transmission capacity and would want to be located near transmission corridors to minimize interconnect costs. See also related comments above on Page 3, Item 9.

Recommendation: Remove this item completely, as it is prohibitive to the industry.

Page 22, Lines 15-24 (Items 6 and 7)

Comment: Computer modeling of cooling tower drift and of other emission sources (including fugitive dust) has not been required of geothermal projects under the the authority of the Imperial County Air Pollution Control District, as it is recognized that it would be overkill. These modeling requirements appear to be duplicated from CEC requirements for large power plants and do not apply to renewable energy plants, including geothermal. The purpose of geothermal plants, especially binary plants, is to have far less emissions than combustion-oriented power plants (such as coal, gas, biomass, waste). Additionally, Item 6 would require extensive site-specific cooling tower engineering that is not normally available 12 months before an application is submitted.

Recommendation: Delete Items 6 and 7 completely, as they are overkill, not necessary or applicable for renewable energy projects (geothermal, wind, and solar), and some of the information is not available 12 months before an application is submitted.

Page 22, Line 27 (Item 9)

Comment: This implies there will be a cooling tower source test requirement, and not clear if it also implies continuous monitoring (which there is no continuous monitor for H₂S from geothermal cooling towers). This could be a significant burden on older cooling towers. Additionally, similar to the comment above, none of Ormat’s plants currently have sampling monitors as they are unnecessary on our types of plants.

Recommendation: Delete this item (#9).

Page 27, Lines 28 - 38 (Item 10)

Comment: Raven management plans are not necessary in areas that do not support ravens or desert tortoises.

Recommendation: Change the wording on Line 28 to, “If in an area of raven and desert tortoise habitat, submit a draft common raven ...”

Page 28, Lines 23 – 25 (Item 12)

Comment: Geothermal injection should be considered a ZLD. Other types of ZLD still have solid byproducts.

Recommendation: Add “, including geothermal injection” to the end of the sentence.

Page 46, Lines 4 – 13

Comment: Adequate information on the proposed transmission interconnect should be provided for the lead and responsible agencies to analyze the project under CEQA and/or NEPA. However, the entire Interconnection Study is not needed. Additionally, given the delays with interconnection requests the approval of a control agency may not come until the project siting process is well under way. This will delay projects even more.

Recommendation: Remove the requirement for the Interconnection Study to be submitted with project applications and the approval letter from the appropriate control agency. Also remove all areas referencing CAISO leaving only “the appropriate control agency.”

Page 51, Lines 8 – 12

Comment: The avoidance of Williamson Act Lands by geothermal projects may not be possible since geothermal resources cannot be moved. It is possible to develop geothermal resources in and around Williamson Act Lands without impacting them and thus, requiring termination of the contract by the landowner. It is important to know what lands are under contract in designing the well field and to work with the landowners to mitigate any concerns.

Recommendation: Line 8 change the work “must” to “may.”

Page 47, Lines 32 – 36 (Item 1)

Comment: A Phase I site assessment shouldn't be required for projects on greenfields/undeveloped land.

Recommendation: Clarify that site assessments should be done only for projects on previously developed or disturbed lands, if necessary and appropriate.

Page 52, Lines 2 – 4 (Item 1)

Comment: Locating facilities more than 0.5 miles from sensitive receptors is not necessary if it is determined there is no significant noise impact to those receptors.

Recommendation: Delete this item (#1).

Page 52, Lines 7 – 12 (Item 3)

Comment: Should not define what a significant noise level is, as this (significance criteria) should be determined on a site-specific basis and in conjunction with the local agencies (if on private land) or with the BLM (if on BLM lands). The 5 – 10 dBA increase is not always applicable as the significance threshold especially in the rural or remote areas of the desert.

Recommendation: Remove the clause, “(no more than a five to 10 dBA increase above ambient levels)” and possibly replace with “(per applicable significance criteria and/or as determined with the responsible planning agency).”

Page 53, Line 5 (Item 1)

Comment: There are not paleontological resources “everywhere” throughout the desert area and some

projects may not involve significant earthwork, so hiring a paleontologist is not necessary for some project locations.

Recommendation: Clarify in this sentence to retain the services if applicable, if the project site is in an area known to have paleontological resources and the scale of the project could possibly impact these resources.

Page 53, Line 18 (Item 3)

Comment: This is all overkill at least for geothermal projects (they have a minimal footprint on soils, minimal disturbance to soils). Soils information can be obtained from the Resource Conservation Service' Soil Survey.

Recommendation: Delete Items 1 – 4, or at least state they are not applicable to geothermal projects and/or clarify types of projects and geographic areas where they are appropriate.

Page 56, Lines 19 -22 (Item 2)

Comment: Projects are required to create and operate under a Fugitive Dust Control Plan to mitigate dust. Given the number of dirt roads in the desert either used for agriculture or Off-road vehicle use, the amount of dust generated by these renewable energy projects is minimal as compared to existing conditions.

Recommendation: Remove this requirement if a Fugitive Dust Control Plan is developed and approved by the APCD.

Page 56, Line 25 (Item 4)

Comment: It is expensive to prepare a complete grading plan for a conceptual project that may change during the CEQA/NEPA review including the site location.

Recommendation: In Line 25, add the word “conceptual” before “site grading plan.”

Page 56, Lines 29 – 31 (Item 5)

Comment: Neither the SWRCB nor the RWQCBs require submittal of a draft or final SWPPP. The SWPPP is only required to be present for review when and if the site is visited by these agencies.

Recommendation: In the first sentence, delete the phrase, “and a draft Storm Water Pollution Prevention Plan.”

Page 64, Lines 4 – 15 (Item 19)

Comment: Section includes a lot of design criteria that needs to be adjusted. One area of significance, is the requirement of burying cables. We have previously used cable tray at many sites. This area needs clarification.

Recommendation: Remove the requirement for burying cables, and provide more clarification to this section.

Page 66, Lines 14-16

Comment: Developers should identify wastewater treatment and pre-treatment measures to be included as part of the facility's NPDES Permit.

Recommendation: Water treatment is controlled by the Regional Water Quality Control Board via the facility's Waste Discharge Order (WDO). A facility will not have a NPDES Permit if it does not discharge or if it is at zero Liquid discharge.

Page 67, Lines 21 – 24 (Item f)

Comment: One year of data collection prior to groundwater collection could be too lengthy for some projects that are currently in the planning and permitting stages, and could also be too long for other newly proposed projects.

Recommendation: Delete the requirement of “a minimum of one year of data.”

Page 68, Lines 5 – 6 (Item 5)

Recommendation: Add the qualifier, “...when economical and feasible” at the end of the sentence.

Page 72, Lines 6 – 6 (Item 1)

Comment: The exact location of wells is not always known during the early stages of permitting a power plant. The proposed locations and well construction and drilling program for the project can be given but if this is a complete "green field" the exact locations and drilling program may change as wells are drilling and more information is gained on the resource. Well information is usually held confidential by CDOGGR, SLC or BLM when the permit application is submitted for the period of time allowed by the regulations. Additionally, for geothermal wells on Federal Geothermal Leases, Geothermal Drilling Permit (GDP) applications are submitted to the U. S. Department of the Interior, Bureau of Land Management (BLM) for approval, not the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR).

Recommendation: Submit proposed well locations and construction methodology in permit applications but not actual permit applications.

Page 72, Line 9 (Item 2)

Comment: For binary plants, these should be called “brine lines.”

Recommendation: “...for the steam supply or brine pipelines.”

Page 72, Lines 9-11 (Item 2)

Comment: Building Permit applications for construction of a pipeline are not usually submitted until CEQA and/or NEPA is complete as well as preconstruction environmental studies. Pipeline locations for either brine or injection fluids may change as the wells are drilled and the resource is defined.

Recommendation: Permit applications should show proposed routes and construction but not actual building permit applications.

Page 72, Lines 12 – 13 (Item 3)

Comment: The EPA protocols rely on factors developed at refineries, which are not necessarily representative of geothermal conditions.

Recommendation: Remove the requirement to use USEPA developed protocols, as they are not representative of geothermal projects. Instead, indicate that where possible, geothermal projects should use actual or estimated data from similar projects.

Page 21, Lines 32 - 34

Comment: This sentence implies that BMPs may be applied to repowering retrofit and operation which could then affect current facilities, which is not the intent of this manual.

Recommendation: Delete this sentence, or at least remove “repowering/retrofitting” part of the sentence, and clarify the BMPs are for new projects, not existing and/or retrofitted projects.

Page 25, Lines 14 - 24 (Item 8)

Comment: “Use off-road construction diesel equipment that has a rating of 100 hp to 750 hp and that

meets the Tier 3 California Emission Standards for Off-Road Compression Ignition engines.” The actual regulations require that all new equipment meet these requirements, but many construction contractors use older equipment that has less restrictive requirements. If taken literally, this measure would require that all construction equipment meet the newest standards which is not required and not feasible.

Recommendation: Delete this item or at least clarify it is only for NEWLY purchased equipment.

Page 30, Lines 16 – 18 (Item 9)

Comment: This item seems to require total designation of project area, it is impractical to confine project vehicles to this area as access areas may extend outside.

Recommendation: Clarify that this is only applicable to the actual construction site, and not extend to areas outside of it.

Page 31, Lines 30 – 32 (Item f)

Comment: This sounds like a new reporting requirement. Because this is under a section regarding a qualified biologist, does it mean constantly contracting someone to do our reports? It seems to imply even during operation, not just construction.

Recommendation: Delete this BMP or clarify when and where it is applicable.

Page 33, Line 18 – 20 (Item 21d)

Comment: to clarify that topsoil does not have to be certified weed free, also.

Recommendation: Reclamation of all areas of temporarily disturbed soil using topsoil salvaged from all excavations and construction activities and using certified weed free native vegetation.

Page 35, Line 13 – 14 (Item g)

Comment: There is no standard for revegetation cited here. If there is no standard, it will be difficult to know when revegetation is complete.

Recommendation: Insert that revegetation means that about 40% of original vegetation density as determined in a baseline survey made prior to disturbance is performed.

Page 35, Lines 21 - 23 (Item 27)

Comment: This line (“project modifications or expansions and the closure/decommissioning phase ...”) clearly states that all items under biological resources section that are done during construction should also apply to all phases of the project except operation.

Recommendation: Delete this line, as this document applies to new projects, not to modifications and expansions.

Page 48, Lines 43 – 45 (Item 2)

Comments: The term “nonhazardous product substitutes” is vague and this requirement is not feasible.

Recommendation: Delete “nonhazardous product substitutes” or at a minimum replace with “...use of nonhazardous products when feasible...”

Page 53, Lines 1 – 3 (Items 9 and 10)

Comment: These are not always feasible or even necessary.

Recommendation: Provide more flexibility such as “when necessary and feasible and practical.”

Page 55, Lines 21 – 23 (Item 2)

Comment: The last sentence is not relevant.

Recommendation: Change, “All equipment access doors should be locked to limit public access” to “When equipment is outside of perimeter fencing or controlled barriers, all equipment access doors should be locked to limit public access.”

Page 74, Lines 7 – 14 (Item 4)

Comment: The local APCD’s usually have a requirement to sample the well fluids and gases once they are drilled and tested. However, this information is not available at the early stages of permitting a project such that an actual emission inventory could be prepared. If available, historical data is used or data is estimated based on what the resource is expected to be based on the geology of the area.

Recommendation: Add a sentence that the data may be hypothetical based on the data currently available, and delete the last sentence (in Lines 13 – 14), “Quantify the pollutants contained in the geothermal fluids and steam by testing well venting.”

Page 81, Lines 28 - 29

Comment: This is not the most current reference for California Burrowing Owl.

Recommendation: Add the following reference: CDFG Memorandum, Staff Report on Burrowing Owl Mitigation, 1995

Page 82, Line 13 - 16

Comment: The Imperial Irrigation District has recently completed an Interim Water Resource Plan allocating water for industrial users. This is a more recent water supply document for Imperial County than this reference.

Recommendation: Replace this reference with the more current Imperial Irrigation District Plan.

Page A-2, Line 10 (Item C)

Comment: Geothermal wells may also be permitted by the California State Lands Commission or Bureau of Land Management depending on the land owner. Additionally, EPA has jurisdiction for Class V injection wells on federal lands. There is an MOU between EPA and CDOGGR giving them oversight on injection wells on non-federal lands.

Recommendation: Add CSLC and BLM to this sentence.

Page A-2, Line 12 - 13 (Item C)

Comment: For geothermal wells on Federal Geothermal Leases, Geothermal Drilling Permit (GDP) applications are submitted to the U. S. Department of the Interior, Bureau of Land Management (BLM) for approval, not the California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR).

Recommendation: After the word “fluids” insert the words “not applicable to BLM Lands”.

Page A-2, Item C

General Comment: In Imperial County, the Imperial County Planning and Development Department will be the lead agency on the permitting of any Power Plant in this Valley below 50 megawatts due to the Geothermal Element granted to the County by the CEC to permit locally any project below 50 megawatts. We hope that this permitting process will continue the same manner, as some of the projects mention in the BMP’s are large projects like Unit #6 in the Salton Sea.

Page B-6, Lines 19 - 20

Comment: Given that the largest operating geothermal field in the world is The Geysers which is steam

dominated this is an incorrect statement.

Recommendation: Delete the sentence

Page B-8, Line 5

Comment: Because binary plants do not consume geothermal resource water as flash or steam plants, binary plants require more make-up water for cooling. The amount of make-up water stated here is likely for flash plants, as it is low compared to our data for binary projects specifically in the extreme heat of the Imperial Valley area. Our data for Ormat's four binary plants at the Ormesa geothermal complex in Imperial County show that 2009 average water usage ranged from 3,360 to 4,200 gallons per megawatt hour.

Recommendation: Use our data above to add to the paragraph, stating that make-up water required for binary geothermal plants in the extreme heat of the desert areas are higher than the estimates of your other references, for the reasons above.

Page B-9, Lines 1 – 2

Comment: This appears to be a Salton Sea-specific measure and does not apply to other geothermal projects in the State. Surface impoundments are not normally used for hydroblasting runoff.

Recommendation: Clarify that that these practices apply only to projects in the Salton Sea.

Page B-9, Lines 23 – 26

Comment: The BLM, CSLC, EPA and RWQCB's may also have oversight on what is injected. CDOGGR only has jurisdiction on fee lands. The RWQCB's have jurisdiction from the power plant to the well head. EPA has oversight for Class V wells on other federal lands.

Recommendation: Clarify this section with the information above.

Thank you again for the opportunity to comment on the revised draft BMP and guidance document. If you have any questions or comments about any items in this letter, please contact either Ron Leiken at (775) 336-0173 (or e-mail at rleiken@ormat.com) or Charlene Wardlow at (775) 336-0155. We are also open to meeting with you in person to go over our comments and any questions you may have.

Thank you for your assistance.

Respectfully,

Signed, hard copy submitted to CEC

Ohad Zimron
Vice President, Operations