DOCKET
11-CAI-02
DATE Dec. 05 2011
RECD. Dec. 05 2011

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

IN THE MATTER OF COMPLAINT AGAINST ORMAT NEVADA, INC. *BROUGHT BY* CALIFORNIA UNIONS FOR RELIABLE ENERGY	Docket No. 11-CAI-02 Order No. 11-1130-4

COMMISSION ADOPTION ORDER

By this **ORDER**, the Commission adopts as its own Decision the November 8, 2011 Proposed Decision which was issued by the Committee assigned to the above-captioned matter and the Errata to the Proposed Decision dated November 16, 2011. The Decision addresses the Verified Complaint and Request for Investigation by California Unions for Reliable Energy (CURE).

The Commission Decision is based upon the pleadings, evidentiary record of these proceedings, and the briefs of the parties.

This **ORDER** adopts by reference the November 8, 2011 Proposed Decision along with the Errata to the Proposed Decision dated November 16, 2011 which, together, contain a summary of the proceedings, evidence presented, and the underlying rationale for the resolution of these proceedings.

ORDER

Therefore, the Commission **ORDERS** the following:

1. The Verified Complaint and Request for Investigation by California Unions for Reliable Energy is dismissed with prejudice.

2. The Commission Decision is adopted, issued, effective, and final when docketed.

3. We order that the docket file for this proceeding be closed on the effective date of the Decision, with the exception that the docket file shall remain open for 30 additional days solely to receive material related to a petition for reconsideration of the Decision.

4. Reconsideration of the Commission Decision is governed by Public Resources Code, section 25530.

5. Judicial review of the Commission Decision is governed by Public Resources Code, section 25901.

CERTIFICATION

The undersigned Secretariat to the Commission does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the California Energy Commission held on November 30, 2011.

AYE: Weisenmiller, Boyd, Douglas, Peterman
NAY: None
ABSENT: None
ABSTAIN: None

Dated: November 30, 2011, at Sacramento, California.

Harriet Kallemeyn
Secretariat
California Energy Commission

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IN THE MATTER OF THE COMPLAINT AGAINST ORMAT NEVADA, INC. ***BROUGHT BY CALIFORNIA UNIONS FOR RELIABLE ENERGY***	**DOCKET NO. 11-CAI-02**

COMMISSION DECISION

I. Introduction and Summary

A Complaint and Request for Investigation was filed alleging that the North Brawley Geothermal Project and the East Brawley Geothermal Project jointly and severally violated section 25500 of the Warren-Alquist Act by exceeding the 50 Megawatt (MW) minimum jurisdictional threshold without applying for or obtaining a certificate from the California Energy Commission. After evidentiary hearing and consideration of the parties' briefs, we find dismissal of the complaint and termination of any further investigation is warranted due to insufficiency of the evidence.

II. Identification of the Parties

The Complainant is California Unions for Reliable Energy (CURE). As set forth in the verified Complaint, CURE is a coalition of labor unions whose members live, work, recreate, and raise their families in Imperial County, including the vicinity of the North Brawley and the East Brawley facilities. According to documents filed in opposition to Respondent's Motion to Dismiss, CURE is neither a corporation or business association and, therefore, the Complaint could not be dated, signed, and attested to by an officer thereof. The verified Complaint was signed by Elizabeth Klebaner, attorney for CURE.

The Respondent is Ormat Nevada, Inc., (Ormat), a Delaware corporation (Ex. 200, App. G, p. 1), and sole owner of ORNI 18, LLC and ORNI 19, LLC which own the North Brawley Geothermal Project and the East Brawley Geothermal Project, respectively.

Energy Commission Staff represents the technical staff assigned to a project, including the project manager and staff counsel. Energy Commission Staff does not include the commissioners, their advisers, the hearing adviser, or the public adviser.

The only Intervenor is Imperial County.

III. Allegations of the Complaint and Answer

The material allegations of CURE's verified Complaint are:

1. Respondent is developing a 150 MW geothermal facility in the North Brawley Known Geothermal Resource Area.
2. The North Brawley Geothermal Development Project and East Brawley Geothermal Development Project are one facility with a combined generating capacity of 150 MW.
3. The generating capacity of the North Brawley Geothermal Development Project is equal to or in excess of 50 MW.
4. The generating capacity of the East Brawley Geothermal Development Project is equal to or in excess of 50 MW.
5. Respondent intends to sell 50 MW of generation from the East Brawley Geothermal Development Project to Southern California Edison (SCE) under the ORNI 18, LLC (North Brawley) power purchase agreement (PPA).
6. Respondent has executed a PPA for the sale of up to 100 MW of generation from the North Brawley Geothermal Development Project and the East Brawley Geothermal Development Project.
7. Respondent segmented permitting and development of North Brawley and East Brawley for the purpose of environmental review.

IV. Discussion of the Applicable Law

California Public Resources Code, section 25500 gives the California Energy Commission "exclusive power to certify all sites and related facilities in the state, whether a new site and related facility or a change or addition to an existing facility" and "no construction of any facility or modification of any existing facility shall be commenced without first obtaining certification for any such site and related facility by the commission, as prescribed in this division."

California Public Resources Code, section 25110 defines a "facility" as "any electric transmission line or thermal powerplant, or both electric transmission line and thermal powerplant, regulated according to the provisions of this division."

California Public Resources Code, section 25120 defines "thermal powerplant" as "any stationary or floating electrical generating facility using any source of thermal energy, with a generating capacity of 50 MW or more, and any facilities appurtenant thereto. Exploratory, development, and production wells, resource transmission lines, and other related facilities used in connection with a geothermal exploratory project or a

geothermal field development project are not appurtenant facilities for the purposes of this division."

California Code of Regulations, title 20, section 1702 (n) defines "related facility" as "a thermal powerplant, electric transmission line, or any equipment, structure, or accessory dedicated to and essential to the operation of the thermal powerplant or electric transmission line. These facilities include, but are not limited to, transmission and fuel lines up to the first point of interconnection, water intake and discharge structures and equipment, access roads, storage sites, switchyards, and waste disposal sites. Exploratory, development, and production wells, resource conveyance lines, and other related equipment used in conjunction with a geothermal exploratory project or geothermal field development project, and, absent unusual and compelling circumstances, the thermal host of a cogeneration facility, are not related facilities."

Accordingly, if either the North Brawley or the East Brawley projects have greater than a 50 MW generating capacity, then jurisdiction would vest in the Energy Commission. Likewise, if the two facilities are to be treated as a single power plant because they are "related facilities" and their joint generating capacity exceeds 50 MW, then they would be subject to Energy Commission jurisdiction as well.

California Code of Regulations, title 20, section 2003(a) defines the "generating capacity" of an electric generating facility as "the maximum gross rating of the plant's turbine generator(s), in megawatts ("MW"), minus the minimum auxiliary load."

California Code of Regulations, title 20, section 2003(b) specifies that "if there is more than one turbine generator, the maximum gross rating of all turbine generators shall be added together to determine the total maximum gross rating of the plant's turbine generator(s)."

California Code of Regulations, title 20, section 2003(b)(1) specifies the maximum gross rating of a steam turbine generator shall be the output, in MW, of the turbine generator at those steam conditions and at those extraction and induction conditions which yield the highest generating capacity on a continuous basis.

California Code of Regulations, title 20, section 2003(b)(3) spells out that "the maximum gross rating cannot be limited by an operator's discretion to lower the output of the turbine generator(s) or by temporary design modifications that have no function other than to limit a turbine generator's output."

California Code of Regulations, title 20, section 2003(b)(4) further directs that the maximum gross ratings specified in the overall plant heat and mass balance

calculations shall be subject to verification by Energy Commission review of the steam or combustion turbine generator manufacturer's performance guarantee, specifications and procurement contract, if available.

Finally, California Code of Regulations, title 20, section 2003(c) defines the “minimum auxiliary load” as “the electrical rating (in MW) of the sum of the minimum continuous and the average intermittent on-site electrical power requirements necessary to support the maximum gross rating as defined in subsection (b) of this regulation and which are supplied directly by the power plant. For geothermal projects, the minimum auxiliary load includes the minimum electrical operating requirements for the associated geothermal field which are necessary for and supplied directly by the power plant. Discretionary loads, i.e., those which can be curtailed without precluding power generation, are not included in minimum auxiliary loads.” (*Id.*)

CURE’s discussion of the legal basis for its Complaint included reliance on the *Staff Investigation of Possible Energy Commission Power Facility Licensing Jurisdiction over 5 30MW Units Known as Luz SEGS III – VII* (California Energy Commission case no. 86-CAI-3, hereinafter, “*Luz SEGS*”).

In the *Luz SEGS* Decision, the record disclosed that the five subject facilities were on contiguous parcels, that the facilities had all been designed and were being installed and operated by the same organization, and that the energy and environmental impact of the facilities was that of a 150 MW facility. All five units shared utility services for water; electrical interconnection (owned, maintained, and operated by Southern California Edison Company (SCE)); natural gas lines; and road access. Staff therefore had recommended that the Energy Commission assert its jurisdiction to license the five *Luz SEGS* facilities as a single power plant even though (1) each of the five projects had been recognized as an individual 30 MW unit for purposes of qualifying under the Public Utility Regulatory Policy Act of 1978 (PURPA) as a small power producer, (2) that each unit was separately owned by a limited partnership (with LUZ as the general partner), (3) that each unit had its own PPA with SCE, and (4) that substantial amounts of equipment (*e.g.,* generators, supplementary boilers, solar collector fields, cooling towers, etc.) were not commonly shared among units because of the need to qualify as separate projects for purposes of PURPA. (*Luz SEGS*, p.2).

The *Luz SEGS* Decision is not designated a precedential decision, however, the decision is instructive on the question of jurisdiction so we will treat it as persuasive authority.

V. Discussion of the Evidence

In order to determine whether the Energy Commission has jurisdiction over the North Brawley Geothermal Development Project and East Brawley Geothermal Development Projects, Complainant CURE has the burden of proving one of the following:

1. The generating capacity of the North Brawley Geothermal Development Project is equal to or in excess of 50 MW.
2. The generating capacity of the East Brawley Geothermal Development Project is equal to or in excess of 50 MW.
3. The North Brawley Geothermal Development Project and East Brawley Geothermal Development Projects constitute a single power plant with a combined generating capacity equal to or in excess of 50 MW.

1. <u>The Generating Capacity of the North Brawley Geothermal Development Project</u>

In the "Statement of Facts" section of CURE's verified Complaint (Exhibit 1), CURE alleges:

"In 2007, Ormat commenced developing a 150 MW geothermal facility in the North Brawley Known Geothermal Resource Area by entering into a Facility Study Agreement with the Imperial Irrigation District ("IID") and a PPA with SCE for the sale of up to 100 MW of generation from a new geothermal facility in North Brawley, California. On March 13, 2008, the CPUC authorized SCE to procure up to 100 MW from Ormat pursuant to the PPA through Resolution E-4126 on March 13, 2008." (Ex. 1, pp. 5-6.)

As support for this statement, CURE offers Attachment C to the Complaint which is a copy of California Public Utilities Commission Resolution E-4126, dated March 13, 2008 (Ex. 1, Attachment C, p. 1, Ex. 39)[1]. At page 1 and again on page 8 of Resolution E-4126, a table which "summarizes the substantive features of the PPA" indicates that the ORNI #18 (North Brawley) generating facility has a "MW Capacity" of "50 -100." (Ex. 39, pp. 1, 8; 9/26/11 RT 18:19-23.) CURE's opening statement referenced the PPA regarding an "option to increase sales to 100" MW. (9/26/11 RT 19:4-7; Confidential Ex. 203, p. 2.)

CURE also offers Exhibit 15, which is a letter from Joe Marhamati of the Department of Energy Loan Guarantee Program Office to State Historic Preservation Officer Milford Wayne Donaldson at the California Office of Historic Preservation, regarding the determination that the East Brawley generating facility will have no effect on historic resources. (9/26/11 RT 18:19-23; Ex. 15, p. 1.) The letter contains only one mention of

[1] CURE's Exhibit 1, Attachment C is identical to CURE's Exhibit 39.

North Brawley in the sentence, “The Brawley East River Plant would be adjacent to the existing 50MW North Brawley Geothermal Power Plant.” (*Id*.)

Finally, CURE offers the System Impact Study (SIS) for the North Brawley Geothermal Project which was received into evidence as part of both Exhibit 29 and Exhibit 201 (9/26/11 RT 19:9-13). The first sentence of the Executive Summary states, “KEMA Inc. and IID's Planning Section performed the Power Flow Analysis to review the impact of the proposed North Brawley 150 MW generation project when delivering power to IID internal electrical network (50 MW), (50 MW) to SCE and 50 MW for North Brawley load project in the 2010 timeframe.” (Ex. 29, p. 1.)

All documentary exhibits were received into evidence by the parties’ unanimous stipulation, so the record does not contain evidence of legal foundation or authentication, other than whatever foundation may be contained in the documents themselves. (9/26/11 RT 34:13-38:16.) Although there were no objections made to the receipt of any of the documentary evidence, we note that all of the documents relied upon by CURE, above, are hearsay to the extent that it is offered to prove the generating capacity of the two geothermal projects. Hearsay evidence may be used for the purpose of supplementing or explaining other evidence but is not sufficient in itself to support a finding unless it would be admissible over objections in civil actions. (Cal. Code Regs. tit. 20, § 1212.) The only means of calculating a power plant’s net generating capacity is prescribed by California Code of Regulations, title, 20, section 2003. The generating capacity of an electric generating facility is found by subtracting the minimum auxiliary load from the maximum gross rating of the plant's turbine generators. For purposes of determining jurisdiction, conclusory hearsay statements without reference to the calculation required by section 2003 shed no light on a determination of the generating capacity of a thermal power plant.

At the September 26, 2011 evidentiary hearing, CURE called two expert witnesses: David Marcus and Robert Koppe. The parties stipulated that Mr. Marcus and Mr. Koppe were experts in generation capacity, plant load, and transmission interconnection and that Mr. Koppe was an engineer but Mr. Marcus was not. On voir dire, both witnesses testified that they were not expert in the assessment of geothermal resources and neither witness had experience in the operation or management of a geothermal power plant. (9/26/11 RT 147:13-148:12.)

Mr. Marcus testified that he applied the regulations in measuring generating capacity (9/26/11 RT 74:22-75:22). Mr. Marcus also testified that he applied “Staff’s method” (attached to Exs. 50 and 51), then reinterpreted “Staff’s method” to assume that “steam flow” was tantamount to “isopentane flow” and “maximum fuel input conditions” meant “maximum geothermal brine flow.” (9/26/11 RT 76:15-77:17.) Mr. Marcus calculated the

generating capacity based upon the installation of six Ormat Energy Converters (OEC) and, alternatively, five OECs because he noted that the number of OECs located at North Brawley differed in the various documents he reviewed. (9/26/11 RT 94:14-95:5; 99:6-100:11.) In calculating the generating capacity using 5 OECs, Mr. Marcus testified that where he perceived a conflict, he would resolve it by assuming that the more detailed document was the more accurate one. (9/26/11 RT 100:14-103:25.)

Mr. Marcus concluded there are three separate ways in which the North Brawley maximum net capacity would be over 50 MW. (9/26/11 RT 104:6-12.) First, if a sixth OEC were added to North Brawley as permitted, it would increase the gross generation by a fifth and the net generation by a fifth, resulting in a generating capacity of 59 MW. (9/26/11 RT 104:20-105:10.) Secondly, since North Brawley brine pumping is capable of a brine flow margin 3.08 percent above the design point that would be needed to produce 49.5 MW, the net generating capacity after increasing brine pumping to the maximum capacity would be 50.36 MW. (9/26/11 RT 108:8-115:24.) Thirdly, after recalculating the auxiliary load (for instance, Mr. Koppe disregarded the auxiliary loads established on the name plate of the pump motors), Mr. Marcus concluded that the reduction in the auxiliary load would be 0.712; therefore, the net generation would increase by 0.712 to 50.212 MW. (9/26/11 RT 116:1-119:21, 196:4-13.)

On cross-examination, Mr. Marcus testified that he assumed “maximum fuel input conditions” meant the maximum geothermal brine flow conditions that the OECs could process irrespective of the maximum geothermal brine flow that the well field could supply. (9/26/11 RT 174:10-22; 176:23-177:10.)

Mr. Marcus testified that, given the wells that North Brawley is connected to today, it cannot generate more than 49.5 MW net. (9/26/11 RT 185:3-5.) He also admitted that he could not testify under oath whether North Brawley could generate more than 49.5 MW, even with increased brine flow, because his testimony was limited to the documents that he had reviewed. (9/26/11 RT 185:6-22.)

Mr. Koppe did not offer any new facts regarding the North Brawley facility apart from Mr. Marcus’ testimony. (9/26/11 RT 137:12-141:20.)

Respondent, Ormat, called a panel of four witnesses: Don Campbell testified as a geothermal field resource expert, Tom Buchanan testified as an engineer and a capacity expert, Robert Sullivan testified as an expert engineer in the development of the North Brawley and East Brawley geothermal projects, and Charlene Wardlow testified as an expert in the permitting and licensing of the North Brawley and East Brawley geothermal projects. (9/26/11 RT 221:12-225:14.)

Robert Sullivan described the North Brawley project as a 33 MW geothermal facility with an approved conditional use permit (CUP) that has been operational since December 2008. (9/26/11 RT 225:15-226:11; 232:15-16.) Coolant water is supplied by IID through a pipeline approximately three miles long from the West Side Main canal. (9/26/11 RT 226:12-16.) It sells its power to SCE under a long-term power purchase agreement through IID's transmission system. (9/26/11 RT 226:17-226:20.) It utilizes binary technology which allows the development of moderate temperature geothermal resources in a fluid state without steam. (9/26/11 RT 226:21-226:24.) The fluid (brine) is pumped from a depth of approximately 2,000 feet through extensive piping systems to the power plant, which consists of five OECs. (9/26/11 RT 226:24-227:3.) The OECs convert the heat from the geothermal resource by transferring it to the second binary fluid, isopentane. (9/26/11 RT 227:3-5.) The isopentane converts to a high temperature/high pressure vapor, which is sent to turbines, which turns a generator and makes electricity. (9/26/11 RT 227:5-7.) The cold geothermal fluid is then sent through another piping system to the injection wells. (9/26/11 RT 227:8-9; Ex. 200, App. B, Fig. 4.)

Mr. Sullivan testified that the North Brawley project has constraints on generating capacity that were not considered by CURE's witnesses. (9/26/11 RT 234:16-24.) For instance, transmission is limited for North Brawley at 49.9 MW. (9/26/11 RT 234:25-235:1.) Also, Mr. Sullivan testified that North Brawley contains miles of cabling, so for CURE to discount the cabling required to connect all the auxiliary loads is, in his view, poor engineering. (9/26/11 RT 236:12-14.)

Mr. Sullivan testified that the piping in a geothermal power plant is critical and Ormat installed some 80,000 feet of pipe for the North Brawley geothermal project. (9/26/11 RT 234:16-24.) He described how the Brawley Known Geothermal Resource Area (KGRA) is known for the corrosive characteristics of its fluid and sand which has both a chemical corrosive nature and an erosive nature. (9/26/11 RT 235:10-14.) Fluid velocity is of critical importance for a geothermal power plant because if the fluid velocity is too fast it will increase the erosive nature of fluid, but if it is too slow, the chemical content will increase scaling and corrosion. (9/26/11 RT 235:15-236:3.) The piping system was designed for a facility with a maximum capacity of 49.9 MW based upon a certain flow rate within a certain range of velocities to deal with these very serious issues of corrosion and erosion. (9/26/11 RT 236:6-9.) Mr. Sullivan testified that an 80,000 foot piping system is significant and that [CURE's witnesses' suggestion of] increasing brine flow five percent with no consideration given to the piping system is poor engineering. (9/26/11 RT 236:4-11.)

Mr. Sullivan observed that CURE's witnesses did not consider changes in the resource temperature. (9/26/11 RT 239:2-3.) He testified that slight changes in resource

temperature significantly change heat rate and efficiency. (9/26/11 RT 239:4-5.) Mr. Sullivan testified that a five degree change in resource temperature will move the heat rate well over three percent, which is what CURE's witnesses claimed was the potential margin at North Brawley. (9/26/11 RT 239:4-9.)

Mr. Sullivan refuted the assumptions of CURE's witnesses that it's "typical and usual to have margin in design for engineering" and that this margin could be operated continuously. (9/26/11 RT 239:10-15.) Mr. Sullivan testified that in a geothermal environment, operating into margins on production pumps or piping systems and velocities will wear those systems out very quickly and cause failure. (9/26/11 RT 239:22-240:1.)

Mr. Sullivan explained the critical flaw in the assumptions made by CURE's witnesses was that they treated the OEC as if it were an "off the shelf" generator. (9/26/11 RT 236:15-20.) Each OEC is specifically customized to the geothermal resource available and is designed in response to many constraints, including transmission, limitations imposed by permits, economics, flow velocities and chemical characteristics of the brine (9/26/11 RT 236:15-237:1; 238:11-12.) Mr. Sullivan refuted CURE's witness' assumption of a proportional increase, asserting instead that a five percent increase in brine flow would not result in an increase of five percent on gross power. (9/26/11 RT 237:2-6.) He also refuted the assumption that Ormat designs the geothermal plant to maximize power and testified that the design of the plant is based on these numerous constraints and to ensure "the correct amount of heat transfer surface to get the transfer of heat for the fluid flow we design for, at the velocities we need." (9/26/11 RT 237:11-19.)

As an example, Mr. Sullivan testified that the North Brawley was originally designed to have six OECs, because, at the time, Ormat was unsure of the temperature of the flow from the resource. (9/26/11 RT 237:20-238:1.) However, in the course of the design process Ormat discovered that there was significant change in the well field, so that they were able to extract the same amount of power (49.5 MW) from only five OECs instead of six. (9/26/11 RT 238:5-8.) Mr. Sullivan described how Ormat treated the cap of 49.5 MW as a "hard limit" and designed both power plants accordingly. (9/26/11 RT 238:9-13.) Mr. Sullivan explained the reason that North Brawley only installed five instead of 6 OECs: "we designed 49.5 and we found we could do it with less heat transfer surfaces because the temperature of the fluid increased. We could do it with less heat transfer so we dropped an OEC from the design." (9/26/11 RT 238:5-16.)

Tom Buchanan testified that the calculation of gross generating capacity of a baseload operation plant like North Brawley is done at the maximum input conditions based upon average ambient annual conditions. (9/26/11 RT 242:8-13; see *California Energy*

Commission Staff General Method for Determining Thermal Power Plant Generating Capacity, Exs. 50, p. 3; 51, p. 3). The calculation of auxiliary loads associated with the facility is done under the same conditions as the gross rating determination. (9/26/11 RT 242:13-15.) And lastly, the determination of the net capacity is the difference between that gross rating and the auxiliary load. (9/26/11 RT 242:16-18.)

Mr. Buchanan testified that the gross rating for the North Brawley geothermal project was calculated at 72.8 MW and minimum auxiliary load was calculated at 22.6 MW plus some electrical losses. (9/26/11 RT 243:1-6.) The current net capacity is about 33 MW and the average net generation is somewhere in the range of 25 MW. (9/26/11 RT 244:1-7.) Mr. Buchanan explained that increasing brine flow would not increase net generation capacity due to technical, economic, and contractual constraints. (9/26/11 RT 244:11-245:3.) Increasing brine flow would result in gross generation increasing at a logarithmic rate while auxiliary load increased at an exponential rate which would not create a worthwhile increase in net generation. (9/26/11 RT 244:15-244:8.)

Energy Commission Staff's witnesses testified that, according to their independent review of Ormat's determination pursuant to California Code of Regulations, title 20, section 2003(b)(4); the net generating capacity of 49.5 MW at the North Brawley was "very reasonable." (Ex. 300, p. 2; 9/26/11 RT 308:4-315:13.)

In weighing the evidence, we are mindful that geothermal power constitutes a very different species of power plant as opposed to, say, a gas-fired power plant utilizing an "off-the-shelf" combustion turbine generator that would generate the same output regardless of where it is sited. The record reflects all of the parties' earnest efforts in evaluating the generating capacity of the North Brawley geothermal project. However, CURE's witnesses were disadvantaged by a lack of expertise in geothermal power plants.

Specifically, CURE's witnesses made assumptions based upon partial information and lacked the experience in geothermal to consider such factors as fluid velocity and resource temperature. Neither of CURE's experts considered the fuel source, as the regulations require, "at those extraction and induction conditions which yield the highest generating capacity on a continuous basis." (Cal. Code Regs. tit. 20, § 2003(b)(1).) Section 2003(b)(1) requires a showing of the "continuity" of the steam conditions. CURE proffered no evidence at all on resource constraints or the annual average ambient conditions experienced at the site. (Exs. 50, p. 3; 51, p. 3.)

Ormat's explanation of the high variability of the geothermal resource is based upon their long experience in the area. We understand their need to custom design to the site conditions because of the unpredictability of the geothermal resource. In light of the conjectural nature of CURE's testimony and Staff's independent corroboration of Ormat's calculations of generating capacity, we find that CURE has not met its burden of persuasion that the capacity of the North Brawley geothermal project exceeds 50 MW.

2. The Generating Capacity of the East Brawley Geothermal Development Project

The insufficiencies in CURE's evidence regarding the generating capacity of North Brawley are magnified in its case against East Brawley because the East Brawley project is still in its permitting stage and lacks a track record from which to extrapolate reasonable expectations of performance. As Mr. Marcus testified, "there's a problem here. In saying what's the maximum capability of East Brawley, the real answer is we don't know, because it hasn't been built yet." (9/26/11 RT 102:10-13.)

Mr. Koppe testified that he did not review the methodology by which the Energy Commission calculates capacity in preparing his testimony. (9/26/11 RT 171:24-172:1.) He also suggested that his review was based upon incomplete information (9/26/11 RT 153:16-20; 198:2-6). Mr. Marcus testified that where he perceived a "conflict" in the documents he reviewed regarding East Brawley, he would rely on the data from the North Brawley project rather than those specified for the East Brawley project. (9/26/11 RT 100:15-24, 103:2-7.) Mr. Marcus testified that by reducing the number of OECs at East Brawley from five to three, the generating capacity would decrease by two-fifths. (9/26/11 RT 104:24-105:6.)

Again, Mr. Marcus testified that he did not consider the capabilities of the well field in calculating the generating capacity. (9/26/11 RT 175:11-17; 177:6-10.) Mr. Marcus attempts to dismiss the absence of information regarding the geothermal resource even though, according to Ormat, it is the fundamental driver of the design of the East Brawley project. (9/26/11 RT 122:1-18; 278:7-15.) Mr. Marcus assumes that the East Brawley project will bear no auxiliary load from injection pumps, which is contradicted by Ormat. (9/26/11 RT 123:25-126:9.) He also seems to have concluded that East Brawley would be designed for maximum throughput of brine without consideration given to its affect on piping; again apparently assuming that the project is designed for maximum output rather than optimum output. (9/26/11 RT 133:23-136:15.)

Mr. Sullivan testified that the East Brawley geothermal project is designed differently than the North Brawley facility. It is a much smaller facility based on three OECs, rather than the five at North Brawley. (9/26/11 RT 230:18-25.) The East Brawley facility would

be optimized based on the East Brawley geothermal resource because the resource is the driver in designing a geothermal facility; geothermal power plant design cannot be separated from the geothermal resource. (9/26/11 RT 278:7-15.) He also testified that theoretically the East Brawley facility could be less efficient than North Brawley if its geothermal resource is cooler. (9/26/11 RT 278:16-22.)

Mr. Buchanan testified that the net generation capacity for the East Brawley project was originally 49.5 MW, where maximum gross was calculated at 69.8 MW and auxiliary loads were calculated at 19.6 MW plus some electrical losses. (9/26/11 RT 245:9-22.) He concurred with Staff's calculations of the net generation capacity for the East Brawley project, but indicated that the current net generating capacity of the East Brawley design has been revised down to about 30 MW due to resource constraints. (9/26/11 RT 245:23-246:12.) Mr. Buchanan testified that the revised design for East Brawley will not enable it to operate in excess of 30 MW. (9/26/11 RT 268:6-19.)

Mr. Campbell testified that the area available for development at East Brawley is much smaller than that for North Brawley and the geothermal resources were cooler than expected, which was the primary reason for the reduction to 30 MW. (9/26/11 RT 249:13-24.) Contrary to Mr. Marcus' testimony that no power would be necessary for reinjection at East Brawley, Mr. Campbell testified that the average injection pressure is around 350 PSI, with some wells requiring as much as 500 PSI to inject into them. (9/26/11 RT 250:4-9.) He also testified that there is no reason why reinjection pressure would be any different at East Brawley than it is at North Brawley. (9/26/11 RT 250:9-11.)

Ms. Wardlow testified that the reason the permit applications call for six OECs is "because, as discussed for North Brawley, we permitted it based on what we thought we might need so that we had flexibility as we learned about the resource and completed the design of the project." (9/26/11 RT 279:23-280:1.) The record is clear that the conditional use permit application for East Brawley describes the project as "49.9 net MW geothermal power plant consisting <u>of up to six</u> OEC binary generating units." (Ex. 200, App. B, p. 2 [emphasis added].)

Mr. Minnick, testifying for the County of Imperial, stated that conditions in the permits for both East Brawley and North Brawley prohibit the projects from exceeding 49.9 MW. (9/26/11 RT 295:5-296:2.)

Again, we find that Ormat's witnesses demonstrated a superior command of the facts and established that the East Brawley project will not exceed 50 MW, clearly and convincingly. Ormat's evidence was corroborated by Energy Commission Staff's witnesses and Intervenor, County of Imperial's witnesses. CURE's witnesses relied in

part on assumptions rather than information and demonstrated unfamiliarity with geothermal power plants. We find that CURE has not met its burden of persuasion that East Brawley geothermal project exceeds 50 MW.

3. The Combined Generating Capacity of the North and East Brawley Geothermal Development Projects

CURE offered no live witnesses to support its allegations that the North Brawley Geothermal Development Project and East Brawley Geothermal Development Project are one facility with a combined generating capacity of 150 MW. (9/26/11 RT 212:1-214:19.)

As noted above, the *Luz SEGS* Decision determined that the five subject facilities should be treated as a single facility because they (1) were sited on contiguous parcels, (2) were designed, installed, and operated by the same organization, (3) had energy and environmental impacts greater than a jurisdictional 50 MW facility (in that case 150 MW), and (4) all five units shared utility services for water, electrical interconnection, natural gas lines, and road access. (*Luz SEGS,* California Energy Commission, Case No. 86-CAI-3, *supra*).

Ormat admits by way of tendered evidence that it designed, owns and operates the North Brawley geothermal project and that it designed, owns and intends to operate the proposed East Brawley geothermal project (Ex. 200, App. B, p. 1; App. C, p. 4). Further, if the two facilities were found to be one, the record establishes that their combined net generating capacity would exceed 50 MW. (Cal. Code Regs. tit. 20, § 2003(b).) CURE has the burden of proving that the North Brawley and East Brawley should be treated as a single facility by establishing that the remaining criteria articulated in *Luz SEGS* are met.

A. Contiguous Parcels

In support of its claim that the North Brawley Geothermal Development Project and East Brawley Geothermal Development Project are on contiguous parcels, CURE offers Exhibits 200, p. 6; 200, Appendix B, Figure 7; 200, Appendix D, p. 1; 19, pp. 1, 25-26, 29; 32, p. 1; and 47, p. 3.0-2. (CURE Op. Brief, p. 14.)

Exhibit 200 is Ormat's Verified Answer. At page 6, it states in pertinent part: "North Brawley is located in Imperial County at 4982 Hovley Road, Brawley. East Brawley will be located at 5003 Best Road. These two sites, and the parcels on which they are located, are not adjoining. North Brawley and East Brawley are located 1.75 miles apart, and in completely different locations. Furthermore, the two sites of the two projects are physically separated by the New River. North Brawley is located on the west side of the

river, and East Brawley will be located on the east side. This is a sharp contrast to the *Luz SEGS* Decision cited by CURE, where the *Luz SEGS* facilities were located on *contiguous* parcels in a common location, separated only by utility and access roads shared by the facilities." (Ex. 200, p. 6.)

Exhibit 200, Appendix B, Figure 7 is an aerial view of the "Proposed and Alternative Transmission Line Routes" that does not identify parcels whatsoever. (Ex. 200, App. B, Fig. 7.)

Exhibit 200, Appendix D, page 1, is the Conditional Use Permit for the North Brawley project which describes its location as "the southeast corner of Section 17, Assessor's Parcel Number 037-130-040-000, Township 13 South, Range 14 East, SBB&M." (Ex. 200, App. D, p. 1.)

Exhibit 19, which is the Updated Project Description for the East Brawley geothermal project, describes, at page 1, that the "East Brawley Geothermal Development Project would be located on private agricultural lands just north of the City of Brawley in Sections 10, 11, 14, 15, 16, 21, 22, and 23, Township 13 South, Range 14 East, San Bernardino Base and Meridian (SBM)." (Ex. 19, p. 1.)

CURE also cites to pages 25, 26, and 29 of Exhibit 19, but nothing therein sheds any light on the identification of parcels or their alignment other than the description of the installation of piping over the New River "on private land (APN 037-140-02-01) owned by Veysey, Victor V. & Janet D and under lease to ORNI 17, LLC in the southeast corner of Tract 118. Several pipes from geothermal pads on the east side of New River will be extended across the New River (WGS 84 33°1'01.4"/115 03112.1)." (Ex. 19, p. 26.)

Exhibit 32, a letter from Ormat to Imperial County, dated August 4, 2009, merely states at page 1: "Completed CUP Application Form for two additional landowner (*sic*) to this project. The leased land owner is also part of the North Brawley Geothermal Development Project. The other parcels were purchased by ORNI, 17, LLC, a wholly owned subsidiary of Ormat Nevada Inc." (Ex. 32, p. 1.) The application identifies the property as "Best Road between Ward and Baum Roads on west side, Assessor's Parcel no. 037-140-16-01, 037-140-05-01, Legal Description Section 15, T135, R14E, SBM." (Ex. 32, p. 4.)

Exhibit 47 is the Draft Environmental Impact Report (DEIR) for East Brawley. The only relevant reference to parcels on page 3.0-2 is the sixth paragraph: "The geothermal plant site is owned by Ormat Nevada Inc., aka ORNI 19, LLC, and consists of one parcel of 33.7 acres. There are 39 leased parcels encompassing approximately 3,033.2

acres that will contain proposed wells and pipelines (see Table 3.0-1). The total area of disturbance for the project site is approximately 188.75 acres, which includes both the plant site and the wells and pipelines." (Ex. 47, p. 3.0-2.) Table 3.0-1 identifies Assessor's Parcel number, the relevant ordinance, the Land Use designation, and the total acreage of the 39 parcels. (*Id*.) The Assessor's parcel number for the 33.7 acres East Brawley geothermal project is 037-140-006. (*Id*.)

We reiterate that exploratory, development, and production wells, resource transmission lines, and other related facilities used in connection with a geothermal exploratory project or a geothermal field development project are neither appurtenant nor related facilities for purposes of defining the power plant. (Pub. Res. Code § 25120; Cal. Code Regs. tit. 20, § 1702 (n).) Accordingly, the 38 parcels that will contain proposed wells and pipelines for East Brawley are not part of the thermal power plant. (*Id*.)

CURE's fragmentary evidence on proximity is not sufficient to establish contiguity of the North Brawley and East Brawley facilities, particularly when weighed against Ormat's contrary evidence. Mr. Sullivan testified that the East Brawley geothermal project would be located almost two miles to the east of the North Brawley facility on the other side of the New River. (9/26/11 RT 230:22-24; 232:10-11.) He also testified that the City of Brawley owns land between the two parcels. (9/26/11 RT 258:22-259:16.) There is no authenticated assessor's map in the record and CURE called no witness to lay a foundation or authenticate any map or diagram that shed light on the proximity of these two power plants' parcels. We find that CURE has failed to provide evidence that North Brawley and East Brawley power plants are sited on contiguous parcels. This allegation is unproven.

B. Sharing Utility Services for Water, Electrical Interconnection, Natural Gas Lines, and Road Access

CURE proffered no evidence that the North Brawley and East Brawley power plants would share natural gas lines or road access. CURE's evidence is focused on utility sharing between the two power plants related to water, transmission and a "console" where the two power plants could "monitor" each other via a computer.

C. Sharing Water Facilities

CURE claims that "North Brawley and East Brawley will or, in the very least could, receive water service pursuant to one contract between Ormat and the City." (CURE Op. Brief, p. 19.) However, the record shows that Ormat has no contract with the City of Brawley for provision of water to either project. (9/26/11 RT 260:5-261:1.) CURE's Exhibit 21 is merely a Memorandum of Understanding ("MOU") between Ormat and the City of Brawley, to investigate the feasibility of pursuing the design, financing,

development and operation of a tertiary wastewater treatment plant. (Ex. 21.) The MOU, without more specific terms and allegations, is not proof of shared water facilities between the two projects.

CURE cites to Ormat's Water Supply Agreement ("WSA") with IID for deliveries of 6,800 acre feet per year for use "in and incidental to the operation of the North Brawley Geothermal Development Project," proposed by ORNI 18, LLC. (*Id*., citing to Ex. 200, App. G, p. 1.) CURE acknowledges that the WSA does not identify a specific point of delivery. (*Id*.) However, as Mr. Sullivan testified, North Brawley's water comes from IID's West Side Main canal through a three mile pipeline. (9/26/11 RT 226:8-16.) Mr. Sullivan cited to where the WSA expressly precludes sharing water with any other project, including East Brawley. (Ex. 200, App. G, p. 3; 9/26/11 RT 233:6-23.) The proposed East Brawley geothermal project does not have a water contract or a supply of water yet. (9/26/11 RT 230:18-231:1.) The WSA is not proof of shared water facilities between the two projects.

CURE offers Ormat's Brawley Wastewater Treatment Plant Tertiary Treatment Facility Conceptual Design Report (Ex. 22, p. 1) which evaluates "the use of effluent from the City of Brawley Wastewater Treatment Plant (WWTP) for use in the cooling tower make-up water at the East Brawley and North Brawley facilities." (CURE Op. Brief, p. 21.) As a "Conceptual Design Report," this document merely establishes that the use of WWTP water has been considered for both East Brawley and North Brawley. Even if this plan were implemented, however, the use by two power plants under common ownership of a commodity from the same supplier is not itself sufficient to establish that they are a single facility. Otherwise, all commonly owned gas-fired power plants in the state purchasing natural gas from PG&E might be regarded as a "single power plant[2]." To avoid such an absurdity, Exhibit 22 would have to show that Ormat's two Brawley plants were jointly sharing piping or equipment, beyond just buying water from the same purveyor, to establish proof of shared water facilities between the two projects. It does not present such a sharing arrangement.

Finally, CURE offers Exhibit 19, which is an Updated Project Description for the East Brawley facility, dated January 29, 2010. (9/26/11 RT 212:24-213:12.) At page 27, it lists equipment that a new pipeline crossing at the New River would support, including, "1 x 12 inch pipe for cooling tower blow down water (possibly from North Brawley to East Brawley)." (Ex. 19, p.27.) This is the sole reference in Exhibit 19 that would support CURE's claim of shared water equipment and, as noted, *supra*, CURE laid no legal

[2] It would be a particularly perverse result for use of recycled water from the same provider to indicate joint operation, since recycled water is generally environmentally preferable to using groundwater, and may be available only from a small number of sources in a region.

foundation for any of the documents they moved into evidence. (9/26/11 RT 34:13-38:16.)

Ormat's expert, Mr. Sullivan, testified that North Brawley and East Brawley power plants will not be physically joined to facilitate cooling water blow down delivery from the North Brawley facility to the East Brawley facility. (9/26/11 RT 261:5-11.) He flatly denied that North Brawley and East Brawley power plants will share water utility service. (9/26/11 RT 261:2-3.) CURE indicated that they would cross examine Ormat's expert on this point but they did not. (9/26/11 RT 213:4-17; 269:19-281:8.)

There is no further evidence in the record to explain what Ormat may have meant by this reference to "cooling tower blow down water (possibly from North Brawley to East Brawley)" in Exhibit 19. (Ex. 19, p. 27.) Indeed the document speaks for itself and indicates that a "possible" sharing of water infrastructure was contemplated. As noted in Energy Commission Staff's Reply Brief, "[i]t appears that CURE's analysis with respect to aggregation is premised on documents that are no longer accurate. (Staff's Reply Brief, p. 2.) Again we find Mr. Sullivan's testimony to be completely credible and unimpeached. Thus, viewing Exhibit 19 in a light most favorable to CURE would, at best, put the evidence in a state of equipoise, where neither party's version preponderates. Accordingly, we find that CURE has not met its burden of proof regarding shared water infrastructure between the North Brawley and East Brawley power plants.

D. Sharing Transmission

CURE alleges that "North Brawley and East Brawley will also share a substation, owned by Ormat, as a common point of interconnection to IID's network." (CURE Op. Brief, pp. 17-18.) CURE has offered Ormat's mention of "an electric transmission line to interconnect to the substation at the North Brawley 1 Geothermal Power Plant" (Ex. 200, App. B, p. 1) to support this allegation; however, the record overwhelmingly establishes that North Brawley and East Brawley will each have its own substation. (Exs. 200, App. B, p. 2; 201, p. 1; 202, p. 1; 9/26/11 RT 261:12-262:21.)

The East Brawley project will have a gen-tie line running from its substation to IID's transmission system. (9/26/11 RT 262:8-15.) CURE argues that because the East Brawley and North Brawley projects have their first point of interconnection at the same point on the IID system, that they share transmission infrastructure. (CURE Op. Brief, p. 19.) Ormat argues that although the East Brawley project will interconnect to IID's transmission system at the same point of interconnection as the North Brawley substation, this does not mean that North Brawley and East Brawley will share a substation. (Ormat Rebuttal Brief, p. 11.)

CURE is arguing that the two projects share common transmission facilities before the first point of interconnection with IID's system. Ormat is arguing that the two projects never share common transmission facilities but simply run parallel at the first point of connection. The testimony of Mr. Sullivan indicates that the two facilities' transmission lines do not share common transmission facilities prior to interconnecting with IID's system. (9/26/11 RT 262:8-15.)

CURE offers East Brawley's Updated Project Description of January 28, 2010 (Exhibit 19) which states in pertinent part:

> The proposed interconnection transmission line route and one alternative route are under consideration as shown in Figure 7. The proposed interconnection line would be routed to the west from the power plant substation, crossing the New River and would be aligned north of Andre Road <u>to the interconnection point at the North Brawley 1 substation (west route).</u> The alternative interconnection transmission line route would course northerly to an alignment on the south side of Baum/West Baughman Road turning west and crossing the New River to Hovley Road where it would turn to the south <u>to the North Brawley 1 substation interconnection point (north route).</u> The substation and interconnection transmission line construction would be conducted concurrent with the construction of the power plant.
>
> <u>The substation at North Brawley is the point of demarcation between Ormat and the IID.</u> The substation is owned by ORNI 18, LLC. <u>The transmission lines beyond the substation are owned and operated by IID</u> to a point of interconnection with California Independent System Operator's (CAISO) controlled grid. (Ex. 19, p. 28, emphasis added).

The excerpt above indicates that East Brawley will not interconnect with the North Brawley 1 substation *per se*, but rather with *IID's interconnection point* at the North Brawley 1 substation. CURE has offered no other evidence to suggest that the East Brawley transmission system will feed into the North Brawley system or vice versa. CURE did not offer live testimony or cross-examine Ormat's expert on this point. (9/26/11 RT 269:19-281:8.) The East Brawley geothermal project does not have an interconnection agreement or a power purchase agreement. (9/26/11 RT 230:18-25.)

In synthesizing the evidence supplied by both Ormat and CURE, we find that there is sufficient evidence to establish that the two facilities' transmission systems will not interconnect before "the point of demarcation between Ormat and the IID" because the East Brawley facility will connect directly to the IID line after the first point of demarcation. (Ex. 19, p. 28; 9/26/11 RT 262:8-13.) Therefore, we find the allegation that the East Brawley and North Brawley projects will share transmission infrastructure is not proven.

E. Sharing Control Rooms

CURE did not raise any allegations in its Complaint regarding the control rooms of North Brawley and East Brawley. However, it argues in its Opening Brief that North Brawley and East Brawley will share a common control room (CURE Op. Brief, p. 15). Nevertheless, the evidentiary record clearly establishes that North Brawley and East Brawley will each have its own control room. (Exs. 201, pp.1-2; 202, pp.1-2.)

CURE relies upon a statement made by Ms. Wardlow, in response to Energy Commission Staff's request for information, that there would be a dedicated computer at North Brawley that would allow for the "monitoring and operation" of East Brawley. (CURE Op. Brief, p. 16; Exs. 201, pp.1-2; 202, pp.1-2.) Mr. Sullivan testified regarding the scope and type of monitoring and operations that could be conducted from that dedicated computer ("console") including: operating data, such as generation amount and online status, monitoring of production pumps, alarms, and other activity at East Brawley, and other typical operating information. (9/26/11 RT 282:22-284:16.) Mr. Sullivan clarified that the dedicated computer would only be able to "monitor" the other facility for reporting purposes, but would not be able to control the other facility or effect any action there. (*Id*.) The ability to monitor and report operating data from another facility does not constitute the ability to control it. Therefore, we find that CURE has failed to prove that the North Brawley and East Brawley power plants will have a common control room.

Taking the *Luz-SEGS* factors as a whole, we find that CURE has failed to establish that the North Brawley and East Brawley geothermal facilities are a single power plant. That is, although, the two facilities share common ownership, they are nearly two miles apart. They do not share infrastructure, property lines or any commonalities that would lead a reasonable person to conclude that they are a single facility.

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VI. Decision

We find that the Complainant, CURE, has not proven the allegations of the Complaint. Specifically, we find that CURE did not prove that either the North Brawley or the East Brawley geothermal power plant exceeds a net generating capacity of 50 MW. Further, we find that CURE did not prove that the North Brawley and East Brawley geothermal projects constitute a single power plant. Therefore, we find CURE's allegation that the Energy Commission has jurisdiction over the North Brawley and East Brawley geothermal projects is not proven.

We caution that this Decision is limited to its facts and is specific to the geothermal power plants only. We make no finding as to the actual net generating capacity of the North Brawley and East Brawley facilities. Nothing in this Decision shall be construed as a directive or limitation on the Energy Commission's Compliance Staff's discretion to undertake a jurisdictional investigation of the North Brawley and East Brawley geothermal projects in the future.

CURE's Request for Investigation and all other relief is **DENIED** and the Complaint is dismissed with prejudice.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION
OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 - WWW.ENERGY.CA.GOV

Docket Number: 11-CAI-02 Date: September 15, 2011

Project Name: *In the Matter of Complaint against Ormat Nevada, Inc., Brought By California Unions for Reliable Energy*

Final Exhibit List

Exhibit	Brief Description	Offered	Admitted
COMPLAINANT'S EXHIBITS			
1	Verified Complaint and Request for Investigation By California Unions for Reliable Energy, dated June 28, 2011, docketed July 22, 2011		
2	Verified Answer of Respondent Ormat Nevada, Inc., dated August 29, 2011, docketed August 29, 2011		
3	Letter from Elizabeth Klebaner to Armando Villa and Sylvia Bermudez dated March 25, 2011, stamped received on March 28, 2011		
4	Grant Deed, Loma Farms, Inc., dated July 3, 1984, and docketed on July 6, 1984		
5	Application for Conditional Use Permit, Victor V. and Janet D. Veysey Trust, dated June 14, 2006		
6	Letter from Charlene L. Wardlow to William S. Brunet, dated September 17, 2007		
7	Letter from Jurg Heuberger to Charlene L. Wardlow, dated May 28, 2008, stamped received May 29, 2008		
8	Letter from Johnny M. Romero to Jurg Heuberger, dated September 9, 2008, stamped received September 9, 2008		

Exhibit	Brief Description	Offered	Admitted
COMPLAINANT'S EXHIBITS (cont.)			
9	Letter from Carlton King to Jurg Heuberger, dated September 15, 2008		
10	Letter from Manuel Ortiz to Jurg Heuberger, dated September 24, 2008, stamped received September 24, 2008		
11	Letter from Fred Valera to Jurg Heuberger, dated October 22, 2008, stamped received October 23, 2008		
12	Letter from Jurg Heuberger to Charlene Wardlow, dated October 30, 2008, stamped received November 3, 2008		
13	Noise Impact Assessment submitted by Ormat Nevada Inc. to County of Imperial Planning & Development Services, dated December 4, 2008		
14	Letter from Manuel Ortiz to Bill Darnell, dated January 8, 2009		
15	Letter from Joe Marhamati to Milford Wayne Donaldson, dated July 15, 2009		
16	Memo from Development Deisgn & Engineering, Inc. (Contact: Derek Dessert) to Whom It May Concern, dated December 3, 2009		
17	E-Mail from Jim Minnick to Jurg Heuberger, dated December 10, 2009		
18	Project Report from Planning & Development Services Dept. to Environmental Evaluation Committee, dated December 10, 2009		
19	Updated Project Description submitted by ORNI 19, LLC to County of Imperial Planning & Development Services, dated January 29, 2010		
20	Letter from Alma Benavides to Janet Laurain, dated April 14, 2001		
21	Memorandum of Understanding between the City of Brawley and Ormat Nevada, Inc., dated October 19, 2009		
22	Ormat Wastewater Treatment Plant Tertiary Treatment Facility Conceptual Design Report with duplicate showing approximate date of February 14, 2011		
23	Omitted		

Exhibit	Brief Description	Offered	Admitted
COMPLAINANT'S EXHIBITS (cont.)			
24	Comments on Brawley WWTP Tertiary Treatment Facility Conceptual Design Report, dated April 21, 2011		
25	Letter from Vance Taylor to Janet Laurain, dated April 21, 2011		
26	Facility Study Agreement between Imperial Irrigation District and Ormat Nevada Inc., dated January 4, 2008		
27	First Amended and Restated Engineering and Procurement Agreement between Imperial Irrigation District and Ormat Nevada Inc., dated June 2, 2008		
28	SB 610 – Water Supply Assessment prepared by Development Design & Engineering for Ormat Nevada, Inc., dated December 11, 2008		
29	North Brawley System Impact Study – Final Report, Revision 1, dated January 8, 2009		
30	IID Interim Water Supply Policy for Non-Agricultural Projects, dated received April 22, 2011		
31	Letter from Janet Laurain to Brad Poiriez, dated March 30, 2011		
32	Letter from Charlene Wardlow to Jurg Heuberger, dated August 4, 2009		
33	Letter from Charlene Wardlow to Jurg Heuberger, dated May 12, 2008		
34	Letter from Ron Leiken to Brad Poirez dated September 14, 2010		
35	Resolution Providing Direction to Staff from State Energy Resources Conservation and Development Commission, dated October 29, 1986		
36	Letter from the California Energy Commission to Daniel Lyster, dated September 3, 1987, stamped received September 10, 1987		
37	Environmental Impact Report Environmental Assessment prepared for the County of Mono energy Management Department and the Bureau of Land Management by ESA Planning and Environmental Services, dated October 1987		
38	Waste Discharge Requirements (Revision 1) prepared by the California Regional Water Quality Control Board Colorado River Basin Region, dated January 16, 2008		

Exhibit	Brief Description	Offered	Admitted
COMPLAINANT'S EXHIBITS (cont.)			
39	Resolution E-4126 – Redacted prepared by the Public Utilities Commission of the State of California, dated March 13, 2008		
40	Imperial Irrigation District Board Agenda Memorandum to Board of Directors from General Manager, dated October 7, 2008		
41	Imperial Irrigation District Regular Meeting Agenda, dated October 7, 2008		
42	E-Mail from Shahab Khoshmashrab to Ken Celli, dated August 8, 2011		
43	Nevada Geothermal Power: Project Status Report, dated May 11, 2011		
44	*Ormat Technologies and Nevada Geothermal Power Execute EPC Contract for Blue Mountain Faulkner 1 Power Plant*, iStockAnalyst.com, dated April 2, 2008		
45	*Top Plant: Blue Mountain Faulkner 1 Geothermal Power Plant, Humboldt County, Nevada*, by Angela Neville, JD, Powermag.com, dated December 1, 2010		
46	Renewable Energy Update and Projects, Geothermal Projects, McIlvaine Company		
47	County of Imperial East Brawley Geothermal Draft Environmental Impact Report, Volumes I and II, March 2011		
48	Resume of David I. Marcus		
49	Qualifications and Experience of Robert H. Koppe		
50	Letter from T. O'Brien dated August 16, 2011 regarding East Brawley		
51	Letter from T. O'Brien dated August 16, 2011 regarding North Brawley		
52	Mr. Markus' notes (13 pages) [*CONFIDENTIAL*]		

Exhibit	Brief Description	Offered	Admitted
RESPONDENT'S EXHIBITS			
200	Verified Answer of Ormat Nevada, Inc. to Verified Complaint and Request for Investigation by California Unions for Reliable Energy, and Appendixes (Dated August 29, 2011)		
201	Letter from ORMAT Nevada, Inc. to California Energy Commission Regarding North Brawley Geothermal Project Generating Capacity (Dated September 1, 2011)		
202	Letter from ORMAT Nevada, Inc. to California Energy Commission Regarding East Brawley Geothermal Project Generating Capacity (Dated September 1, 2011)		
203	Supporting Technical Data in Response to CEC Staff's Engineering Questionnaire **[CONFIDENTIAL]** (Dated September 2, 2011)		
204	Supporting Technical Data in Response to CEC Staff's Engineering Questionnaire, Set 2 **[CONFIDENTIAL]** (Dated September 8, 2011)		
205	Response of Ormat Nevada, Inc. to CURE Data Requests Set 1 and 2.		
206	Response of CURE to Ormat Nevada, Inc. Data Requests Set 1 and 2		

Exhibit	Brief Description	Offered	Admitted
STAFF'S EXHIBITS			
300	Testimony of Joseph Hughes, Shahab Khoshmashrab, & Geoff Lesh		
301	Declaration of Terrence O'Brien		
302	Resumes of Staff's witnesses		

Exhibit	Brief Description	Offered	Admitted
IMPERIAL VALLEY PLANNING AND DEVELOPMENT SERVICES EXHIBITS			
400	Resumes of Intervenor's witnesses		

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
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IN THE MATTER OF COMPLAINT AGAINST
ORMAT NEVADA, INC. BROUGHT BY
CALIFORNIA UNIONS FOR RELIABLE ENERGY

Docket No. 11-CAI-02
(Revised 9/12/11)

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DECLARATION OF SERVICE

I, RoseMary Avalos, declare that on, December 5, 2011, I served and filed copies of the attached COMMISSION ADOPTION ORDER and COMMISSION DECISION, dated December 5, 2011. The original document, filed with the Docket Unit or the Chief Counsel, as required by the applicable regulation, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:

[http://www.energy.ca.gov/proceedings/11-cai-02/index.html]

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

(*Check all that Apply*)

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_X_ Served electronically to all e-mail addresses on the Proof of Service list;

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For filing with the Docket Unit at the Energy Commission:

_X_ by sending an original paper copy and one electronic copy, mailed with the U.S. Postal Service with first class postage thereon fully prepaid and e-mailed respectively, to the address below (preferred method);

OR

____ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 11-CAI-02
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

____ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
mlevy@energy.state.ca.us

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Original Signed By:
RoseMary Avalos
Hearing Adviser's Office