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August 3, 2015

**VIA EMAIL AND OVERNIGHT MAIL**

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**Re: Comments on the Initial Study/Mitigated Negative Declaration  
for the Heber 1/Gould 1 Expansion Project (CUP 15-0013)**

Dear Mr. Cabanilla:

We are writing on behalf of California Unions for Reliable Energy ("CURE") to provide comments on the Initial Study/Mitigated Negative Declaration ("IS/MND") prepared by Imperial County ("County") for the Heber 1/Gould 1 Expansion Project ("Project") proposed by Heber Geothermal Company/Ormat Nevada, Inc. ("Applicant"). The Project includes an expansion of the Applicant's existing 62.5 megawatt ("MW") geothermal power plant facility by 16 MW with the addition of one Ormat Energy Converter (OEC 14), a 3-cellcooling tower, a 10,000 gallon isopentane storage tank and piping modifications.

Based on our review of the IS/MND, we conclude that it does not comply with the California Environmental Quality Act<sup>1</sup> ("CEQA") because it fails to identify all of the Project's potentially significant environmental impacts and propose measures that can reduce those impacts to a less than significant level. As explained in these comments, there is more than a fair argument that the Project will result in potentially significant impacts on air quality and from hazardous materials. The Project is also inconsistent with the Imperial Integrated Regional Water Management Plan. The County may not approve a Conditional Use Permit ("CUP") for the Project until it prepares an Environmental Impact Report ("EIR") that adequately analyzes the Project's potentially significant impacts and incorporates all feasible mitigation measures to avoid or minimize these impacts.

<sup>1</sup> Pub. Resources Code §§ 21000 et seq.  
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We prepared these comments with the assistance of environmental expert Petra Pless, D.Env. Dr. Pless' technical comments on the IS/MND and qualifications are attached and submitted to the County in addition to the comments in this letter. The County must address and respond to the comments of Dr. Pless separately.

## I. STATEMENT OF INTEREST

CURE is a coalition of labor unions that encourages sustainable development of California's energy and natural resources. Environmental degradation destroys cultural and wildlife areas, consumes limited fresh water resources, causes air and water pollution, and imposes other stresses on the environmental carrying capacity of the State. This in turn jeopardizes future jobs by making it more difficult and more expensive for industry to expand in Imperial County, and by making it less desirable for businesses to locate and people to live and recreate in the County, including in the Project vicinity. Continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduces future employment opportunities.

Additionally, union members live, recreate, work and raise their families in Imperial County. Accordingly, union members would be directly affected by the Project's adverse environmental impacts. Union members may also work on the Project itself. They will, therefore, be the first in line to be exposed to any hazardous materials, air contaminants and other health and safety hazards that exist onsite.

## II. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT MAY RESULT IN SIGNIFICANT IMPACTS REQUIRING THE COUNTY TO PREPARE AN EIR TO COMPLY WITH CEQA

CEQA has two basic purposes, neither of which the IS/MND satisfies. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project.<sup>2</sup> CEQA requires that lead agencies analyze any project with potentially significant environmental impacts in an EIR.<sup>3</sup>

<sup>2</sup> CEQA Guidelines § 15002(a)(1).

<sup>3</sup> See Pub. Resources Code § 21000; CEQA Guidelines § 15002.

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The purpose of the EIR is to “inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR protects not only the environment, but also informed self-government.”<sup>4</sup> The EIR has been described as “an environmental ‘alarm bell’ whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return.”<sup>5</sup>

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures.<sup>6</sup> The EIR serves to provide public agencies and the public in general, with information about the effect that a proposed project is likely to have on the environment, and to “identify ways that environmental damage can be avoided or significantly reduced.”<sup>7</sup> If a project has a significant effect on the environment, the agency may approve the project only upon a finding that it has “eliminated or substantially lessened all significant effects on the environment where feasible,” and that any unavoidable significant effects on the environment are “acceptable due to overriding concerns” specified in CEQA section 21081.<sup>8</sup> The IS/MND fails to satisfy the basic purposes of CEQA by failing to inform the public and decision makers of the Project’s potentially significant impacts and to propose mitigation measures that can reduce those impacts to a less-than-significant level. The County is required to evaluate the Project in an EIR.

CEQA’s purpose and goals must be met through the preparation of an EIR, except in certain limited circumstances.<sup>9</sup> CEQA contains a strong presumption in favor of requiring a lead agency to prepare an EIR. This presumption is reflected in the “fair argument” standard. Under that standard, a lead agency must prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment.<sup>10</sup>

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<sup>4</sup> *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564 (citations omitted).

<sup>5</sup> *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

<sup>6</sup> CEQA Guidelines § 15002(a)(2)-(3); *Berkeley Keep Jets Over the Bay Com. v. Bd. of Port Comrs.* (2001) 91 Cal.App.4th 1344, 1354.

<sup>7</sup> CEQA Guidelines § 15002(a)(2).

<sup>8</sup> *Id.*; CEQA Guidelines § 15092(b)(2)(A)-(B).

<sup>9</sup> See Pub. Resources Code § 21100.

<sup>10</sup> Pub. Resources Code § 21082.2; CEQA Guidelines § 15064(f), (h); *Laurel Heights Improvement Ass’n v. Regents of the University of California* (1993) 6 Cal. 4th 1112, 1123; *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal. 3d 68, 75, 82; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-151; *Quail Botanical Gardens Foundation, Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1601-1602.

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The fair argument standard creates a “low threshold” favoring environmental review through an EIR, rather than through issuance of a negative declaration or notices of exemption from CEQA.<sup>11</sup> An agency’s decision not to require an EIR can be upheld only when there is no credible evidence to the contrary.<sup>12</sup>

A mitigated negative declaration may be prepared instead of an EIR only when, after preparing an Initial Study, a lead agency determines that a project may have a significant effect on the environment, but:

- (1) Revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where *clearly no significant effect* on the environment would occur; and
- (2) There is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.<sup>13</sup>

Substantial evidence can be provided by technical experts or members of the public.<sup>14</sup> “If a lead agency is presented with a fair argument that a project may have a significant effect on the environment, the lead agency shall prepare an EIR even though it may also be presented with other substantial evidence that the project will not have a significant effect.”<sup>15</sup> The CEQA Guidelines provides that “if

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<sup>11</sup> *Citizens Action to Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748, 754.

<sup>12</sup> *Sierra Club v. County of Sonoma*, (1992) 6 Cal.App.4th, 1307, 1318; *see also Friends of “B” Street v. City of Hayward* (1980) 106 Cal.App.3d 988, 1002 [“If there was substantial evidence that the proposed project might have a significant environmental impact, evidence to the contrary is not sufficient to support a decision to dispense with preparation of an [environmental impact report] and adopt a negative declaration, because it could be ‘fairly argued’ that the project might have a significant environmental impact”].

<sup>13</sup> Pub. Resources Code § 21064.5.

<sup>14</sup> See, e.g., *Citizens for Responsible and Open Government v. City of Grand Terrace* (2008) 160 Cal.App.4th 1323, 1340 [substantial evidence regarding noise impacts included public comments at hearings that selected air conditioners are very noisy]; *see also Architectural Heritage Ass’n v. County of Monterey*, 122 Cal.App.4th 1095, 1117-1118 [substantial evidence regarding impacts to historic resource included fact-based testimony of qualified speakers at the public hearing]; *Gabric v. City of Rancho Palos Verdes* (1977) 73 Cal.App.3d 183, 199.

<sup>15</sup> CEQA Guidelines § 15062(f).

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there is disagreement among expert opinion supported by facts over the significance of an effect on the environment, the Lead Agency shall treat the effect as significant and shall prepare an EIR.”<sup>16</sup>

As detailed in the following sections, there is a fair argument, supported by substantial evidence, that the Project may result in significant impacts to air quality and from hazardous materials. The Project is also inconsistent with the regional water management plan. CEQA requires the County to prepare an EIR to evaluate the Project’s significant impacts and propose all mitigation measures that are necessary to reduce those impacts to a less than significant level.

#### **A. Substantial Evidence Supports a Fair Argument that the Project May Result in Significant Air Quality Impacts**

##### *1. Construction Emissions*

The Project may result in significant air quality impacts from construction emissions. According to the IS/MND, Project construction would result in emissions of fugitive dust (“PM10”) and exhaust emissions, including PM10, nitrogen oxides (“NOx”) and reactive organic compounds (“ROC”).<sup>17</sup> The IS/MND states that fugitive dust from Project construction would be minimized by the use of control measures in a construction dust control plan approved by the Imperial County Air Pollution Control District (“ICAPCD”). For construction equipment exhaust emissions, the IS/MND states that all diesel engines would be registered with the California Air Resources Board (“CARB”) Portable Equipment Registration Program (“PERP”), which would assure that these engines meet “Best Available Control Technology” standards to minimize the emissions of air pollutants. In addition, a list of all off-road equipment utilized during construction would be submitted to the ICAPCD for verification.<sup>18</sup> However, as Dr. Pless explains in her comments, the IS/MND does not provide substantial evidence that air pollutant emissions from Project construction would be less than significant.<sup>19</sup>

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<sup>16</sup> *Id.*, § 15062(g).

<sup>17</sup> In her comments, Dr. Pless explains that ROC is essentially the same as the Imperial County Air Pollution Control District’s term reactive organic gases (“ROG”) and the federal term volatile organic compounds (“VOC”).

<sup>18</sup> IS/MND, pp. 2-9 and 2-10.

<sup>19</sup> See Letter from Petra Pless, D.Env. to Rachael Koss re: Review of Mitigated Negative Declaration for Heber 1/Gould 1 Expansion Project Conditional Use Permit #15-0013, July 31, 2015, p. 2 (“Pless Comments”).

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First, the CARB PERP program only applies to portable equipment. It does not apply to most of the heavy-duty construction equipment, such as bulldozers and cranes, that would be required for Project construction.

Second, mitigation measures Air Quality (d) and (e) improperly defer a quantitative analysis of NOx emissions until after Project approval:

- d. In order to confirm that NOx emissions are less than significant the applicant must submit to the Imperial County Air Pollution Control District a complete list of all off-road equipment planned for use and/or used for the construction of the wells and the facility by Make, Model, Year, Horsepower, and hours of operation prior to any earthmoving activity.
- e. Should NOx emissions exceed the threshold of significance as found in the Imperial County CEQA Air Quality Handbook the proponent may propose an off-site measure in the form of a project to "off-set" the net excess emissions or abide by Policy 5 which allow for the payment of in-lieu fees.

Although the County recognizes that construction NOx emissions could exceed the significance threshold, the IS/MND provides no quantitative analysis of this potentially significant impact.

Finally, mitigation measure Air Quality (d) implies that the Project includes well construction. According to Dr. Pless, well drilling and flow testing can result in substantial emissions of air pollutants which are extremely hazardous to human health, including diesel exhaust emissions and hydrogen sulfide.<sup>20</sup> The IS/MND completely fails to disclose or analyze the Project's potentially significant air quality and health impacts from well construction.

Substantial evidence supports a fair argument that the Project may result in significant air quality and public health impacts from construction emissions. The County also improperly deferred analysis of the emissions and impacts until after Project approval. The County must prepare an EIR to adequately disclose, analyze and mitigate these significant impacts.

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<sup>20</sup> Pless Comments, p. 3.  
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## 2. *Operational Emissions*

The IS/MND states that there will be “no net increase” of criteria pollutants from the Project.<sup>21</sup> The statement is completely unsupported. Substantial evidence supports a fair argument that Project operational emissions would result in a significant air quality impact.

The Project would use isopentane for the motive fluid. Dr. Pless explains that isopentane is “a ROC and precursor to the formation of secondary photochemical oxidant air pollutants in the atmosphere, including ozone and ozone precursors.”<sup>22</sup> Isopentane emissions originate from various connections such as valves, pipes, seals, flanges, from activities such as purging vapor recovery systems, and from operational losses such as fill, drain and tube leaks.<sup>23</sup> According to Dr. Pless, “[r]eleases of motive fluid increase with the capacity of the OEC and the intensity of power production activities.”<sup>24</sup> In her comments, Dr. Pless shows that the Project’s operational losses of isopentane would result in a significant impact from ROC emissions.<sup>25</sup> The County must prepare an EIR that discloses, analyzes and mitigates this significant impact.

The County must also identify offsets for the Project’s fugitive isopentane emissions. ICAPCD Rule 207 C.2.a requires offsets for any new or modified stationary source with a daily potential to emit ozone precursors of 137 pounds or more per day. Dr. Pless explains that the combined ROC emissions from the three existing OECs at Gould 1 and benzene emissions from the dual flash Heber 1 facility, plus Project isopentane emissions from the new OEC would exceed the 137 lbs/day offset threshold.<sup>26</sup> Thus, the facility must offset the additional fugitive isopentane emissions associated with the new OEC unit and storage tank.

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<sup>21</sup> IS/MND, p. 2-10. (“The proposed expansion is not expected to result in a net increase of any criteria pollutant with the implementation of the below mitigation measures.”).

<sup>22</sup> Pless Comments, p. 5.

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*, p. 6.

<sup>26</sup> *Id.*, p. 7.

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**B. Substantial Evidence Supports a Fair Argument that the Project May Result in Significant Impacts from Hazards and Hazardous Materials**

The IS/MND claims that the Project “would not require the use, storage, transport, or disposal of hazardous waste or hazardous materials” and “is not expected to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.”<sup>27</sup> These claims are completely unsupported. Substantial evidence supports a fair argument that the Project would result in a significant impact from the use, storage and transport of isopentane, a hazardous material.

Dr. Pless explains that isopentane is a classified hazardous substance. According to Dr. Pless, isopentane “is an extremely volatile and extremely flammable liquid at room temperature and pressure. The normal boiling point is just a few degrees above room temperature, and isopentane will readily boil and evaporate on a warm day.”<sup>28</sup> The IS/MND completely fails to analyze the hazards associated with the use, storage, transport or disposal of isopentane.

Notably, as Dr. Pless explains, the County’s EIR for the East Brawley Geothermal Project analyzed and mitigated impacts of a vapor cloud explosion from the release of 12,000 gallons of isopentane from any of the six 12,000-gallon horizontal Level 2 OEC loops in the facility’s six OEC units in a ten-minute period. In the East Brawley Geothermal Project EIR, the County concluded that impacts from the use of isopentane were significant. The EIR stated that the Project applicant would relocate the residences immediately south and east of the power plant site prior to the start-up of the power plant.<sup>29</sup>

Here, according to Dr. Pless, the Project includes a new OEC unit with similarly sized isopentane loops. Likewise, the Project poses similar vapor cloud explosion risks to residents within a radius of 0.3 miles, specifically to the existing residence at 851 Pitzer Road about 1000 feet to the east of the Project site.<sup>30</sup> The County completely failed to disclose, analyze or mitigate this significant impact.

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<sup>27</sup> IS/MND, p. 2-14.

<sup>28</sup> *Id.*, p. 7 (internal citations omitted).

<sup>29</sup> *Id.*, p. 8.

<sup>30</sup> *Id.*, pp. 8-9.

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### **III. THE PROJECT'S USE OF COLORADO RIVER WATER FOR POWER PLANT COOLING IS INCONSISTENT WITH THE IMPERIAL INTEGRATED REGIONAL WATER MANAGEMENT PLAN**

The Project proposes to use 36,000 gallons of water per minute for power plant cooling, which would increase the existing facility's water use by 25 percent.<sup>31</sup> The Imperial Irrigation District ("IID") would supply Colorado River water for the Project. The IID adopted the Imperial Integrated Regional Water Management Plan ("IRWMP") in 2012. The IRWMP states:

To the extent that water is proposed for power plant cooling, the developer shall demonstrate that alternative water supply sources and alternative cooling technologies are unavailable, environmentally undesirable, or economically unsound.<sup>32</sup>

There is no evidence that the Applicant has demonstrated that dry cooling or hybrid cooling is "unavailable, environmentally undesirable, or economically unsound" for the Project's power plant cooling.

On the contrary, Dr. Pless explains in her comments that dry cooling and hybrid cooling are technologically and economically feasible. Dr. Pless points to Ormat's own statement that it is feasible to use dry cooling for Ormat's proprietary technology:

The OEC can operate with either air or water cooling, depending on the availability and cost of suitable water resources. Air cooling systems feature low operating costs and an exceptionally low environmental profile. They operate in a closed loop, do not require chemical additives and involve no waste disposal. In addition, air cooled plants do not produce a visible plume and blend into the landscape.

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<sup>31</sup> *Id.*, p. 10.

<sup>32</sup> Imperial Water Forum, Imperial Region Integrated Regional Water Management Plan, October 2012, Chapter 8, Reduce Water Demand – Increase Water Use Efficiency; available at [http://www.imperialirwmp.org/2013%20Updates/CH08%20Reduce%20Water%20Demand%20201210\\_10\\_Proof.pdf](http://www.imperialirwmp.org/2013%20Updates/CH08%20Reduce%20Water%20Demand%20201210_10_Proof.pdf).

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Indeed, Ormat uses dry cooling at several of its geothermal power plants.<sup>33</sup> Dr. Pless also notes that dry or wet/dry hybrid cooling systems have been built and are in operation all over the world in all, including the most extreme, climates.<sup>34</sup>

In the alternative, the Project could reduce its water demand by pretreating the cooling water makeup water. The IRWMP states:

Cooling water demands are in part based on water quality. Pre-treatment, whether on-site or off-site of the power plant or by a public agency or the power plant developer, would allow for more cooling cycles as compared to use of water of lesser quality.<sup>35</sup>

According to Dr. Pless, water pretreatment is “technologically feasible, commercially available, and used at other power plants.”<sup>36</sup>

The Project’s proposed use of IID Colorado River water for power plant cooling is inconsistent with the IRWMP. The County must disclose this inconsistency in an EIR. The County must also require the applicant to demonstrate that alternative water supply sources and alternative cooling technologies are unavailable, environmentally undesirable, or economically unsound prior to allowing the use of Colorado River water for the proposed Project.

#### IV. CONCLUSION

The IS/MND is inadequate because it fails identify and mitigate the Project’s potentially significant impacts to air quality and from hazardous materials. The facility must offset the additional fugitive isopentane emissions associated with the new OEC unit and storage tank and must show that those offsets are available. The Project is also inconsistent with the regional water management plan. The CEQA Guidelines require that an EIR be prepared if there is substantial evidence supporting a fair argument that any aspect of a project may cause a significant effect on the environment, regardless of whether the overall effect of the project is

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<sup>33</sup> Pless Comments, pp. 11-12.

<sup>34</sup> *Id.*, p. 12.

<sup>35</sup> IRWMP, Chapter 8. Reduce Water Demand – Increase Water Use Efficiency, 8.2.3.2 Treat Cooling Water to Improve Quality, October 2012, p. 8-31;

[http://www.imperialirwmp.org/2013%20Updates/CH08%20Reduce%20Water%20Demand%20201210\\_10\\_Proof.pdf](http://www.imperialirwmp.org/2013%20Updates/CH08%20Reduce%20Water%20Demand%20201210_10_Proof.pdf).

<sup>36</sup> Pless Comments, p. 13.

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adverse or beneficial.<sup>37</sup> As discussed in detail above, there is substantial evidence that the Project may result in significant adverse and unmitigated impacts that were not identified in the IS/MND.

Sincerely,



Tanya A. Gulessarian  
Rachael E. Koss

REK:clv

Attachments

**cc via email:** Brad Poiriez, Air Pollution Control Officer, ICAPCD

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<sup>37</sup> CEQA Guidelines § 15063(b)(1).  
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