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In Pro per

STATE OF CALIFORNIA

Energy Resources Conservation
And Development Commission

In the Matter of:) Docket No. 97-AFC-1
)
)
)
The Application for Certification)
For the High Desert Power Project [HDPP])
)
_____)

**BRIEF ON REOPENED HEARINGS AND
REVISED COMMENTS
OF GARY A LEDFORD - PUBLIC INTERVENOR
ON
PRESIDING MEMBER'S PROPOSED
DECISION
FOR THE
HIGH DESERT POWER PROJECT**

Respectfully submitted:
March 8, 2000

GARY A. LEDFORD
PARTY IN INTERVENTION
IN PRO PER

BRIEF ON REOPENED HEARINGS

I. INTRODUCTION

This Brief addresses the new Evidence and Testimony presented at the Reopened hearings on February 18th 2000. This Evidence has been used to make additional comments and proposed findings to the Presiding Members Proposed Decision. This Intervenor has consistently stated that the "Project" that the CEC has not studied was use of up to 40,000 acre-feet of water for the Re-development of George Air Force Base, not the use of 4,000 acre feet of water in Cooling Towers. While this intervenor continues to believe that the sale of 4,000 acre-feet of SWP without a benefit to the basin is unresolved, the key issue before this commission is whether the water "Project" that is proposed to be constructed and operated for the further development of VVWD has been fully addressed and mitigated. Under CEQA it is never too later to introduce evidence into the record.

Perhaps one of the most demonstrative issues that this reopened hearing has brought forth both from a CEQA standpoint and from the Energy Commission approving this project is the subject of "RELIABILITY". The record is replete in this case that Dry Cooling is the environmentally superior alternative, however the energy commission is reluctant to mandate it because in the deregulated environment the "risk" is being assumed by the "applicant".

Intervenor respectfully submits that the "risk" is born by the end users who rely on the commission making decisions that provide "reliable" energy. The use of 'water' for 100% consumptive cooling as Mr. Buell testified "has a high probability of the plant failing in the future" [Exhibit 146]. While he goes on to testify that the plant conditions could then be modified and Dry Cooling retrofitted, how long would that take?

The logical conclusion is the use of Water for cooling at this site will not give the commission a reliable plant for its full-expected life.

II. THE ISSUES

A. GROWTH INDUCING AND CUMULATIVE IMPACTS

The primary issue relative to the proposed Aquifer Storage and Recovery Agreement is whether or not the water treatment plant, pipelines and wells are solely for the benefit of HDPP. The evidence is clear that they are not. [RT 2/18/2000 Welch pgs: 119,120, 123,126,135,140,141,142,147; Hill pgs: 150,153,156,159,164,165,175 - 178; Buell pgs: 191,193,195,197, 212-215; Beinschroth pg: 220-224 Ex: 168,169,170;Almond pg: 225-227; Ex. 172, 174] Further CEQA evaluation of the "Water Project", that has the potential of delivering 14,000 acre feet of water to "George Air Force Base", has clearly not been studied, nor the cumulative impacts that may arise from the construction of an 18" pipeline from the sewage treatment plant. MWA has a similar problem in approving a Water Storage Agreement [RT 02/18/2000 Buell pg: 199,200,201], that can handle water for uses other than HDPP and for terms outside the limits of the contractual agreements.

Without the Presiding Members Proposed Decision that "All Environmental Consequences had been 'studied' and 'mitigated' to a level of non significance". The project cannot be approved.

The evidence before the Committee is clear and convincing that the CEC staff has additional concerns on:

- the terms of the Agreement,
- clarity of staff s conditions of certification,
- potential growth inducing impacts resulting from implementation of the Agreement.

Further that the facilities are designed to be used for "OTHER USES", than the Power Project and are for terms outside of the time frames studied for "Impacts" within the CEC document. Findings are mandated relative to the "Proposed Agreement" as follows"

- The term of the agreement was for 80 years - now reduced to 50 years (section 27.1 of the Agreement).
- The term on the proposed lease is 50 years - outside of the study period.
- Staff s assessment of ground water impacts was based on 30 years, which was the expected project life identified in the AFC.
- If no additional storage is provided, other than that required in the conditions of certification, the ground water bank will be depleted at 30 years.

- The Agreement as structured will create growth inducing impacts that have not been addressed or mitigated.
- All of the project s water related facilities are oversized, and capable of delivering up to 14,000 acre feet of water through the 24" pipeline from the MWA aqueduct.
- The Proposed Agreement (section 15) allows for VVWD s use of Water Treatment HDPP facilities.
- VVWD s use of HDPP facilities are growth inducing since this would provide an increased water supply for VVWD, thereby removing an obstacle to growth.
- The magnitude of the growth inducing impacts has not been estimated by staff.
- The most significant effect is created by VVWD s use of the HDPP water treatment facilities, since this provides VVWD access to State Water Project (SWP) water, which is currently not available to VVWD.
- Increased water supply for VVWD potentially leads to new residential, commercial, agriculture or industrial development in the Victor Valley area.
- This new growth potentially results in increased air emissions, wastewater and waste production, impacts on ground water, traffic, and impacts on community services.
- The environmental consequences of these impacts have not been addressed in the HDPP proceeding.

The record is clear, when the "Completed Agreement" was first presented to the committee at hearings in November 1999, the "Project Facilities" were understood to be separate and apart from the Victor Valley Water District Facilities. When Questioned in the Proceedings Mr. Welch testified that "there were no other agreements".. Mr. Hill testified that ". . .the use of the facilities would only be in case of emergency". [RT 02/18/2000 pg: 213 ln. 17-23];

Although this Intervenor had admitted into evidence the minutes of the VVWD Board minutes [Ex: 136] that clearly showed that the intent of the District was to use the facilities, that evidence at that time was ignored. Further testimony before the commission from the Mayor of Victorville, Terry Caldwell, who testified that the use of the facilities was for the redevelopment of George Air Force Base and "Beyond". Clearly the environmental consequences of the "Project" as to water is not a part of the CEC approval process.

Intervenor also points out that although a Base re-use EIR [EIS] has been developed - that issue of water had been litigated and there is a mandated requirement for a CEQA analysis

on each new project in the Redevelopment Project. None has been done. In addition the underlying EIR is over five years old and cannot be relied on.

B. MANDATING DRY COOLING

Clearly the evidence before this committee is the economic feasibility of providing Dry Cooling at HDPP is feasible. The CEC has approved two projects thus far for Dry Cooling and there is a project already constructed within 150 miles of Victorville using Dry Cooling. No evidence has been submitted that it is not economically feasible. In fact the only testimony from Mr. Welch is that he knows very little about the economic feasibility of Dry Cooling, especially on other competitive sites. When questioned his answers were evasive and if asked a specific question on economics, such as the number of days over 108 degrees, he stated his knowledge was "Proprietary". In the end Mr. Welch just stated that their analysis of the site led them to believe that Dry Cooling was not economical for them, "it would not offer enough of a payback".

[RT 02/18/2000 beginning on page 52]

BY MR. LEDFORD:

Mr. Welch, what is your background related to dry cooling?

A As I've stated earlier, I've been involved in the independent power business for over a decade.

Q Have you ever operated a plant that has dry cooling?

A No

Q Are you familiar with a project called Eldorado Power?

A Yes, I have.

Q Have you -- what can you tell me about that project?

A I understand that it's being built in southern Nevada; that it has dry cooling. I believe it may be 500 megawatts. I'm not exactly sure. It's either 500 or some variation, something around the size of our plant.

Q And is that power plant located in a high desert environment very similar to the Victor Valley?

A I mean southern Nevada, I believe, is a desert environment,

Q Is the Eldorado Power Project going to be selling power into the same energy grid as the High Desert Power Project sells power?

A I believe that they probably will be importing power into California. . . the Western System Coordinating Council as a single power grid, yes, they are.

Q Do you know what the summertime temperatures are in Boulder City?

A No, I don't.

Q Would you expect that they would be similar to what they are in the Victor Valley or higher?

A I would expect that they probably are very similar.

- Q If the Eldorado project found that it was economically feasible to build their plant, would it not make sense that the High Desert Power Plant could also build a plant with dry cooling?
- A I do not know the economic assumption that went into the decision of the two companies that built that plant in order to do it.
- Q On how many days in the Victor Valley is the temperature in excess of 108 degrees?
- A I don't know that precisely.
- Q Well, how much money do you expect to sell the power for on hot days?
- A On hot days the cost of power is the highest because the demand for power is the highest. And so, as you know, being a consumer you pay more for power on those days.
- Q But you can't tell me how many days the power project would be selling power when it's over 108 degrees?
- A No, I cannot predict the weather, sorry.
- Q And you haven't studied on an average basis in your economic analysis how many average days there are a year?
- A We have various economic analyses that we have made clear as far as the assumption of what the weather and what the price of power is going to be. **It's considered proprietary information.**
- Q Isn't the bottom line that it's not that it's economically infeasible, but that your company would just make less profit?
- A As I've stated on many occasions the point of building this project is to make a profit. There is a level at which a project where the risk is not paid off by the profit available. . . where it would not offer enough of a payback to make this investment worth the risk.

Nowhere in Mr. Welch's testimony does he provide any detailed information on why the plant would not be economical. Although several other plants are now using Dry Cooling or will be in the near future.

The evidence before this committee and the CEC is that Dry Cooling is economically feasible. It is not up to the citizens of the State of California to take the "risk" for this project to be built when it has a high probability of failure and thus being unreliable.

C. DEVELOPING RELIABLE ENERGY

BY MR. LEDFORD:

The question is, do you think that this project has a significant risk of failure using wet cooling?

MR. BUELL:

I would like to say that I think that the water situation in this basin is very complex. There's a number of players that are going to lead to decisions in the future. And **it is possible that the project may, at some point in the future, lose a water supply from the state water project.** That could lead to failure of the project economically. The applicant could also, at that time, decide to retrofit the facility with dry cooling. And continue operation.

As has been the case from the beginning, this Intervenor's primary focus is on the issue of Water and the Regional Significance of the Overdraft. So powerful are the political lobbies of these large energy companies that they to date bought elections have significant effect and influence in the highest public offices.

The fact remains you cannot clear a minefield by clearing a small section in the middle of it, nor can you clean up polluted land by bringing in a small amount of clean soil. The solution to the Regional Overdraft is one of "Equity" a fair and equitable determination for all of the parties concerned. The applicant's proposal favors one city and one water district to the detriment of all other water producers involved. Applicant's proposal is contrary to the law that empowers the MWA, and subject to the outcome of the current California Supreme Court review.

Intervenor re-emphasizes to the commission, the State Department of Water Resources in a companion case, for the City of Victorville to purchase treated effluent [Ex 168, 170] for use at George has indefinitely put hearing on hold until the Supreme Court Rules as to the serious nature of the overdraft and the outcome on parties property rights.

The energy commission should mandate the use of Dry Cooling, as a technological and economically viable alternative, elevating the need for future litigation and environmental studies for the use of 100% consumptive use of water, in cooling towers, where Dry Cooling will provide the most reliable source of energy for the citizens of California.

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I.

INTRODUCTION

Since the Reopened hearings have presented substantial new evidence to support the original comments of this Intervenor. The new evidence demonstrates conclusively Intervenor's position that environmental consequences of using water, raises the substantial question of plant reliability and the potential for failure of the plant. [RT 2/18/2000 Buell pg.193; Ex 146] Further the Applicant did not present convincing evidence that the plant would not be economical in the high desert with Dry Cooling implemented. The evidence on this issue presented by intervenor and acknowledged by Applicant, Staff and this intervenor demonstrated that a new Gas Turbine Generating facility, rated at 500 MW, is operational in Boulder City, Nevada.

Intervenor, has consistently stated this proposed PMPD, as it relates to the use of water is not the functional equivalent of CEQA, the new evidence is conclusive.

Intervenor points out to the commission that the State Department of Water Resources in a companion case, for the City of Victorville to purchase treated effluent for use at George has indefinitely put hearing on hold until the Supreme Court Rules as to the serious nature of the overdraft and the outcome on parties property rights.

Intervenor provides the following revised and restated comments to the **PRESIDING MEMBERS PROPOSED DECISION**, based on the evidence, testimony and Public Comments at the reopened hearings.

II.

COMMENTS

Comment One: Site Certification Process

1. 21080.5. Certified Regulatory Programs. On page 2 of the PMPD, it is acknowledged that this decision must comply with Section 21080.5 of the public Resources Code, to do what the Energy Commission alleges is the functional equivalent of a traditional Environmental

Impact Report. The PMPD and the impacts to other agencies that desire to use this purported "function equivalent", fails the test.

Require that an activity **will not be approved or adopted as proposed** if there are **feasible alternatives** or feasible mitigation measures available which would **substantially lessen any significant adverse effect, which the activity may** have on the environment.

21002. Approval of Project: The Legislature finds and declares that it is the policy of the state that public agencies **should not approve projects** as proposed if there are **feasible alternatives or feasible mitigation measures** available which would substantially lessen the significant environmental effects of such projects. In this case, the obvious alternative and feasible mitigation to both undesirable water and air impacts is - Dry Cooling.

2. CEC Process fails to address comments from members of the Public. The Presiding Members Proposed Decision (PMPD), and testimony in the reopened hearings is the first time, a substantive amount of the issues raised by this Intervenor are addressed.. For example, on page 3 of the PMPD, ". . . Ledford, has repeatedly argued that our process fails to address comments from members of the public and thus violates both the spirit and the requirements of CEQA."

Intervenor requests that the following comments [changes] be added to page three in the paragraph concerning intervenor:

We note that in the present case one of the Intervenors, Mr. Gary Ledford, has repeatedly argued that our process fails to address comments from members of the public and thus violates both the spirit and the requirements of CEQA. His comments include the fact that the Energy Commission **has declined his request to review the regional significance of this project coupled with the cumulative and growth inducing impacts of the overdrafted water basin. He has also provided substantive evidence of a technically and economically feasible alternative [Dry Cooling], and our staff has acknowledged that Dry Cooling is the environmentally superior alternative. Mr. Ledford has called our attention to Article X Section 2, of the California Constitution, mandating the highest and best use of water, indicating his concern that the 100% consumptive use of evaporative cooling in the arid desert region of Southern California fails to meet this constitutional mandate (See generally Ledford's 11/13/99 Opening Brief, pages 12-14.) While we do not wish to belabor this point, we note, our opinion, [one that is disputed by Mr. Ledford and each Intervenor that replied to a Survey conducted by the Public Advisors Office]** is that our process requires substantially more opportunities for public participation and review than does the traditional CEQA process. Moreover, we believe, as explained in subsequent portions of this document, that we have fully and fairly examined the positions espoused by Mr. Ledford.

Comment Two: Scope of the Project

The major issue before the Energy Commission in approving the High Desert Power Project, is the definition of the **Project**. (The project definition is critical to a CEQA document and equally critical to the alleged "Functional Equivalent" of a CEQA Document the PMPD.) This issue has been litigated and extensively briefed, but is inaccurately characterized in this PMPD. Intervenor requests that under the Energy Commissions rules that the PMPD be amended to accurately recite the position of this intervenor, as redlined herein.

Scope of Project. For review purposes under the California Environmental Quality Act (CEQA), a "project" is defined, in part, as meaning "... the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment...". [14 Cal. Code of Regs., /15378 (a).] Intervenor Gary Ledford **has requested the commission review its responsibilities, with regard to Water Resources, looking at the full text of CEQA, the evidence in the record presented by the Mayor of Victorville, the CEC Staff and previous actions by the Mojave Water Agency.**

Section 21065 of the Code describes "Project" as . . . an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and which is any of the following:

(c) An activity that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

Mr. Ledford has provided indisputable evidence that one or more public agencies intend to use the alleged "functional equivalent document", to approve the "contracts" to provide State Project Water for the cooling towers and for "other uses" in the Redevelopment of George Air-Force Base. Mr. Ledford interprets this provision as meaning that the "project" for purposes of the Commission's environmental review of Water Resources should be the overall redevelopment of George Air Force Base, because the evidence in this case, clearly demonstrates that, the Mojave Water Agency, the City of Victorville and the Victor Valley Water District intend to use water as a part of a much larger project and this document to approve that use.(Relevant Exhibits: Ex 134; Ex 133; Ex 123) (See Ledford's 11/3/99 Opening Brief, pp.3-4, 8-9, 18-19 and citations therein.)

Mr. Ledford raised this issue throughout these proceedings. The Committee clarified that the scope of the present environmental review is limited to the direct, indirect, and cumulative impacts of the " project" consisting of "... the power plant and its appurtenant facilities ...". (10/8/99 RT 13-~~14~~.) Mr. Ledford characterizes the ability of the Energy Commission to act as the Lead Agency in the preparation of an environmental document with the full knowledge that this document is intended to be used by other responsible agencies to approve

"contracts" for the use of water resources, without the proper environmental review of the "Projects" that they intend to support this limitation as a "procedural error". (Ledford's 11/3/99 Opening Brief, p. 3.-4)

We disagree with Mr. Ledford's contention. Under our enabling statute, we have the exclusive power to "... certify all sites and related facilities...". (Pub. Resources Code, /25500.) For certification purposes, a "facility" is defined as any "... electric transmission line or thermal power plant..." and appurtenances meeting certain criteria. (Pub. Resources Code, //25110, 25120.) This represents the scope of the development over which we may exercise our discretionary permitting authority. Reading these provisions in conjunction with section 15378(c) of the CEQA guidelines which defines a "project," in part, as ".. the activity which is being approved ..." [14 Cal. Code of Regs., /15378 (c)] means that our review is necessarily confined as indicated by the Committee. Mr. Ledford disagrees, because the committee proposes to allow the use of water resources for Cooling Towers, when the "Project", that is a result of the water resources is the full redevelopment of George Air Force Base." That "Project", is admittedly not a part of the Energy Commissions environmental review.

Although, the reuse of George Air Force Base has already been examined. (See Ex. 116.), Mr. Ledford points out the Certified Base Reuse EIR is more than five years old, no where in the EIR was a Power Project proposed and litigation and a settlement agreement [Ex: 127] between MWA and the Victor Valley Economic Authority mandate specific environmental review prior to approval none of which has happened.

21157.6. Limit on Use of Master Environmental Impact Report

The master environmental impact report shall not be used for the purposes of this chapter if (1) the certification of the report occurred more than five years prior to the filing of an application for the subsequent project, or (2) if the approval of a project that was not described in the report may affect the adequacy of the environmental review in the report for any subsequent project, unless the lead agency reviews the adequacy of the master environmental impact report . . ."

21083.8.1. Baseline Provisions

(a)(1) For purposes of this section, "reuse plan" for a military ba21157.6. Limit on Use of Master Environmental Impact Report

(2) For purposes of this division, all public and private activities taken pursuant to, or in furtherance of, a reuse plan shall be deemed to be a single project.

The Committee disagrees with Mr. Ledford stating, The larger issue of the sufficiency of this environmental review is simply not within our purview to reconsider. This is especially true where we have no knowledge of, nor apparent permitting authority over, potential unspecified future projects. Mr. Ledford, contends that the role of the Commission or the Committee in regards to Water Resources, is to require that each agency that intends to be a part of the water supply and the five separate contracts conduct their own separate environmental analysis. This process is not unfamiliar to the Commission as a Separate Air Quality EIR was prepared and is a part of the record. The new evidence provided by staff clearly indicates that the committee has knowledge of the over sizing of the infrastructure and the ability of the VVWD to use the project for other uses that has not been studied within the review of the CEC.

The main point here is that Water cannot be a part of this certified proceeding for Cooling, unless a proper environmental analysis has been conducted on the entire "Water Project" that is being proposed.

Comment Three: Water Provider

Page 12 discusses the role of the Victor Valley Water District. The latest agreement is only a part of the official record a hand written exhibit expounds on the five separate agreements required to provide water for the project.[Ex 139] Intervenor requests that the following changes be made to clarify the record.

The City of Victorville Victor Valley Water District (VVWD) will provide potable water. Cooling water for the evaporative coolers, the steam cycles, and as makeup water for the HRSGs will also be required. This water is proposed to be provided by annual and interruptible contracts with the Mojave Water Agency. It is proposed that the City of Victorville and the Victor Valley Water District will jointly apply for water under annual contracts. The evidence in this case is that an application has been filed and that it intends to provide water for municipal and industrial uses at George Air Force Base. (Ex 134)(RT 10/08/99 P. 43) Testimony from the Mayor of Victorville demonstrated that the City intends to use the water for the Redevelopment of George Airforce Base "and beyond". The 720 MW configuration will require a maximum of approximately 4,000 acre-feet per year; the 678 MW configuration will require about 3,300 acre-feet per year. (9/16/99 RT 62.) As currently proposed by Applicant, the Mojave Water Agency (MWA) will provide, when available, State Water Project (SWP) for evaporative cooling, which consumes 100% of the water.; During the first five years the project is mandated to bank an additional 13,000 acre feet of water ~~this water would also be used to provide a groundwater "bank" from which the project could draw~~ during times when the SWP water was not available. (9/16/99 RT 58, 73.) To obtain SWP water for direct use and for banking, the City of Victorville and the Victor

Valley Water District will have to apply annually (on behalf of HDPP) to the MWA.5 SWP water will be supplied via a 2.5 mile long, 24" interconnection from the Mojave River Pipeline, **with a design capacity in excess of 14,000 acre feet per year.** [Exhibit 169]

Mr. Ledford points out that Mr. Randy Hill stated it best:

Mr. Hill: "My agency's Will Serve Letter with respect to this agreement is contingent upon the Energy Commission approving a project, because your process has to meet CEQA before we can issue a will serve letter." (RT 10/07/99 P. 313)

FINDINGS and CONCLUSIONS

Based upon the evidence of record, in accordance with Section 21081.5. In making the findings required by paragraph (3) of subdivision (a) of Section 21081, the public agency shall base its findings on substantial evidence in the record, and we find and conclude as follows:

1. The project objective is to construct and operate a natural gas-fired combined cycle merchant power plant in either the 678 MW or the 720 MW configuration described in this Decision, **and the construction of wells and water treatment facilities, which are designed to handle significantly more than the operational requirements of the power plant.**
2. The **proposed** project **also** consists of the power generation equipment, the transmission interconnection, the raw and potable water supply pipelines, the natural gas supply pipelines, and related facilities.
- 3.** The Power Project is to be sited on the former George Air Force Base where an Environmental Impact Statement has been prepared which addressed the proposed reuse of the former George Air Force Base, **but did not address the Power Plant, the 100% consumptive use of water and the EIS is more than five years old and shall not be relied on for this project.**
4. The cumulative and growth inducing impacts associated with a power project consumptively using **8,000** acre of State Project Water on the reuse of George Air Force Base is a substantial change to purpose of the original EIS.
5. An updated EIR for the former Air Force Base especially the use of Water and Air Quality is mandated by law, and by the Settlement Agreement with the MWA (Ex 134)
6. The evidence of record contains an analysis of both the 678 MW and the 720 MW configurations.

7. Applicant has the legal right to use the site proposed for the project. **However the term of the agreement is for 50 years outside the CEQA study period.**
8. **Applicant has not and did not during the hearing process provide a "Will Serve Letter", from one responsible water purveyor, supported by evidence of CEQA compliance to provide water for its proposed "Evaporative Cooling Process"**
9. **Applicant has not and did not provide evidence to the Energy Commission that required contracts that would make up the "Will Serve Letter", had been issued by the respective agencies or that those agencies had undertaken to do the required CEQA analysis as required by law.**

We therefore conclude that the High Desert Power Project is not presently described at a level of detail sufficient to allow review in compliance with the provisions of both the Warren-Alquist and the California Environmental Quality Acts.

Comment Four: Soil and Water

While the PMPD acknowledges that soil and water is the most contested area of the HDPP, it leaves one to think that there is only one voice, namely this Intervenor, who disputes the findings made to date in this proceeding. That is not the record or the case. One of the primary problems with the Energy Commission's process is the formality of it. Many other individuals, water districts, MWA Board Members, Water District Directors, other statewide individuals, and other members of the public like Brad Foster, attempted to intervene, give testimony or provide information. All of these comments are Docketed in this case, but did not necessarily (because of formal rules of evidence) make the status of an Exhibit and thereby enter the case record. The Record for the case, is one of comments. CEQA requires that anyone be allowed to comment and that the Lead agency is obligated to respond to those comments.

Other than a slight mention of the opposite position taken by this Intervenor, the Proposed decision does not fully reflect the record or accurately portray the position of this Intervenor. In that light, this Intervenor requests the following modifications are made to the PMPD

B. Water Resources [beginning on page 203]

This was the most highly contested area in these proceedings. Applicant, Staff, CDFG, and CURE believe that, with implementation of appropriate Conditions of Certification, the HDPP will create no significant adverse impacts to the area's water resources. An Intervenor, Mr. Gary Ledford, strongly disputes the propriety and the impacts of the project's proposed water supply plan. **Several other members of the Public commented on the use of water for cooling, some even requesting the formal right to intervene. The Energy Ceommission denied the formal applications for intervention as to their late filing. Nevertheless it is noted that Mr. Brad Foster requested such right alleging non-compliance with CEQA. In addition the Energy Ceommission received letters from**

counsel from the Baldy Mesa Water District, the Silver Lakes Association and others expressing the concern about the consumptive use of water for cooling. The overall record (both evidentiary and nonevidentiary) contains extensive documentary, testimonial, and non-testimonial explanations of these disparate positions.

We do not provide a complete recital of all competing contentions herein. Rather, we summarize and address only those points which we and by way of comment the parties or Intervenor find most salient and necessary to understand and objectively evaluate the evidence, and to formulate our decision.

1. Summary of the Evidence

[Break]

The Mojave River Groundwater Basin is severely overdrafted. This essentially means that more water is pumped from the basin than is replaced. MWA estimates that by the year 2000, given historic patterns of growth and water consumption, overdraft within the Alto Basin will be 29,800 acre feet per year, increasing to 45,400 acre feet by the year 2020. [Ex 174] 80% of the recharge of the basin occurs primarily from infiltration of rain runoff from the San Bernardino and San Gabriel Mountains through course grained sediments which are found in the Mojave River Flood Plain Alluvial Aquifer. Return flows ~~Water~~ from irrigation and septic systems also comprises a secondary use of water described as an average of 50% consumptive use ~~watersource of recharge.~~ (Ex. 87, pp. 4-5.) This overdraft condition has been characterized as "severe and critical". (10/8/99 RT 139: 5-7.) By the 1990's, a significant cone of depression had formed from pumping, presumably by supply wells for VVWD, the City of Adelanto, and GAFB. (Ex. 87 p. 6). The VVWD receives little or no benefit from recharge in the Flood Plain Aquifer [RT 02/08/2000; Hill pg: 175]

Groundwater quality in the project vicinity currently meets state and federal drinking water standards. (Ex 87, p. 6.) However, evidence presented by intervenor Ledford and acknowledged by Energy Commission Staff is that recent wells drilled within the GAFB for the new Federal Prison do not meet state or federal drinking water standards.

ii.) Basin Adjudication. In response to a lawsuit by the City of Barstow and the Southern California Water Company filed in 1990, the Mojave Water Agency (MWA) requested the Riverside Superior Court (Case No. 208568) declare the natural water supply of the Mojave Basin inadequate to meet existing water demand and that the court establish water production rights for individual producers throughout the basin. Negotiations among various parties resulted in a "stipulated agreement" and further judicial proceedings. In 1996, the Superior Court adopted the measures included within the stipulated agreement.²⁷ This

judgment was then brought before the 4th Circuit Court of Appeal. The Court of Appeal upheld the judgment for the stipulating parties while also holding that the non-stipulating parties (including Cardozo Appellants and Mr. Ledford's Jess Ranch; Ex. 99, p. 17) were exempt from the lower court's decision (Court of Appeal Case Nos. E017881/E018923/E018023 and E018681; see also Ex. 112). The appellate court decision was then appealed to the California Supreme Court (Docket No. S071728) where it is presently pending. (Exs. 87, pp. 8-9; 112.) The outcome of the Supreme Court Decision on Water Rights may substantially affect the ability of the MWA and other water purveyors to supply water to HDPP.

[Break]

The adjudication divided the Mojave Basin into five distinct, but hydrologically interrelated, subareas. The court found each of these subareas to be overdrafted due to the water demands of all producers within a particular area, the total annual overdraft of all basins is estimated at 68,000 acre feet per year. With well over 1,000,000 acre feet having been overdrafted. (Ex. 99 p. 17). The HDPP is located within the Alto Subarea. Within each of the subareas, the adjudication established a free production allowance (FPA) based upon the producers' maximum water production between 1986 and 1990. If a water producer produces water in excess of its FPA, then it must provide replacement water, usually through a payment to the MWA. (Ex. 87, p. 9)

[Break]

The evidence of record establishes that a producer may produce water in excess of its FPA and that MWA may supply water to the HDPP or any other project even though the current overdraft exists. (1017/99 RT 329, 341; Ex. 87, p.9.) The reason for this is that for all production, urban and agricultural the court found that on average the consumptive use was 50%. Some users were less and some more but on average all users consumed 50% of the water they produce. When a user over produces and is required to transfer or purchase replacement water, 50% of the new use is returned to the water basin as "Return Flow", and that water then begins to recharge the basin's overdraft.[Ex: 168, 172]

Applicants proposed use of State Project Water will use 100% of the water for evaporation in cooling towers. This new use of State Project Water has been presented to this Energy Commission by Mr. Ledford as contrary to the Adjudication, unless the Project replaces two acre feet of water for every acre foot that it consumes. This would place the power project on the same equitable footing as all other users of water within the MWA boundaries.

Mr. Ledford has further called our attention to the MWA Brief to California Supreme Court, (Ex. 112), Mr. Ledford has indicated that use of State Project Water for

Evaporative Cooling is a State Wide issue governed by Article X Section 2 of the California Constitution. The MWA argues in their brief to the California Supreme Court that all of the states water is subject to this Article.

1. The California Constitution Mandates That Beneficial Uses Of Water Resources Be Maximized

The overriding policy of the State of California is to maximize the beneficial uses of its scarce water resources. This policy is expressed in Article X, Section 2, of the California Constitution, which states in pertinent part:

"It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare."

[Break]

(1018/99 RT 23.) The SWP water would-be either used directly at the power plant or, after treatment at the power plant's water treatment facility, be injected for storage through a series of seven wells located approximately six miles from the plant. This is characterized as creating a water "bank". This storage would enable the project to procure SWP water, when it was available, for later use. (10/7/99 RT 301.) As necessary, this stored water would then be pumped and returned to the power plant for cooling uses. (10/7/99 RT 17~77, 182, 212, 261; 10/8/99 RT 54-5S.)³⁴ Under its proposal, Applicant would use only imported SWP water for plant cooling purposes. (10/7/99 RT 184: 4-10.) Applicant has further agreed to never use or attempt to use treated water from the Victor Valley Waste Water Authority. [2/18/2000 RT pgs: 140-142]

Mr. Ledford's position is that direct recharge of the basin with treated water is allowed, only to stipulating parties under the judgement and the testimony and evidence in the record supports his position. (RT. 10/08/99 pp. 70-84). The discrepancy comes from the position that water used 100% consumptively must comply with the terms of the judgment, where water must be accounted for on a 50% average consumptive use basis. [Ex: 168, 172]

The evidence is clear, that once the water is "Banked", it loses its character, it mixes with ground water. The Victor Valley Water District as a purveyor, Stipulating Party and applicant to MWA for State project Water must

comply with the terms of the Judgment, so that all parties are treated equitably. Thus, Mr. Ledford's position is that if SWP is to be used, it can only be used if HDPP purchases two-acre feet for every acre foot of water it uses. This then treats all water producers exactly the same. HDPP wants to only have to purchase one-acre foot for each acre-foot used. Mr. Ledford believes this is contrary to the judgment and prevents a beneficial re-use of the water.

Effectuation of this plan requires involvement of the following entities, each of which have the CEQA obligation for approval of their respective agreements (see also Ex. 138):

Æ MWA as watermaster and wholesaler, MWA supplies SWP water, if available, to a user on an annual basis. MWA may not provide this water directly to the project, unless the project becomes a stipulating party however. In the present case, water for the project would be provided to the City of Victorville for direct use in cooling towers and other industrial and municipal uses. MWA, ". . .to wait for conclusion of this process, utilize CEQA equivalent. . ." (10/7/99 RT. 166-172, 177,333; 10/8/99 RT 29.)

Æ City of Victorville & Victor Valley Water District - jointly applies to MWA for SWP water on behalf of the project and other unrelated uses. The City delivers the water to the project for direct use or treatment via the new oversized pipeline between the project site and the Mojave River pipeline. (10/7/99 RT177; 10/8/99 RT24.)

Æ Victor Valley Water District (VVWD) injects the SWP water in its well field for storage, pumps this stored water, and delivers it to the power plant when sufficient SWP water for direct use is unavailable. Applicant will pay for, and VVWD will construct, own, and operate, the seven wells associated with the HDPP. The Victor Valley Water District intends to use the wells and the well field for its own uses now and in the future. The proposed contract is for a period of 50 years, far exceeding the anticipated useful life of the Power Project.(10/7/99 RT 177-78, 212, 284: 1-3, 311; 10/8/99 RT 26.) (Ex. 133,146)

Procurement of the project's water supply requires a series of contractual agreements.(Ex. 139.) These are as follow:

Æ The City of Victorville, on behalf of HDPP, will annually apply to MWA (in its capacity as wholesale supplier) per Ordinance 9 for SWP water. Allotments by MWA are considered on a yearly basis and are interruptible. (10/7/99 RT 335.) The City has applied for SWP water from MWA. (10/7199 RT 178: 16-23; 10/8/99 RT 29: 20-22; Ex.. 137.) This application remains "unapproved" the contract is awaiting the CEQA Equivalent Document from the ~~CEC~~Energy Commission to approve the use of water in the Power Project and other

industrial and municipal uses. (10/7199 RT 333.) Mr. Ledford argues that is an inappropriate use of the CEC Energy Commission document.

Æ HDPP must contract with the City for delivery of the SWP water. The testimony indicates that while the final agreement has not yet been executed, the parties have agreed in concept. (10/7/99 RT 178: 23 to 179: 3.) **Since no agreement has been presented, and the Evidentiary case has been closed, any indication that an agreement is forthcoming should be disregarded. The public is entitled as a part in this and in any public of this hearing process to have access to all agreements. Further, this agreement would also rely on the CEC Energy Commission for CEQA compliance which Mr. Ledford argues is an inappropriate use of the document.**

Æ VVWD must enter into two contracts. First, VVWD must contract with MWA (in its capacity as watermaster) in order to store the SWP water; this storage agreement is **alleged as being developed, internally and not circulated to the MWA.** (10/7/99 RT 178: 9-14, 342:12 -20, and 344: 4-10; 10/8/99 RT 29: 6-11.) Second, VVWD and HDPP must enter into an "aquifer storage and recovery agreement" in order to allow Applicant to use VVWD's facilities to inject the SWP water, as well as to draw upon the injected water when needed for power plant cooling. (1017199 RT 178; 10/8/99 RT 29-30.) This second**Neither agreement has not yet been completed and a proposed executed agreement is not acceptable to CEC Staff. 32**

The Applicants Expert testimony of in the record and indicates that the proposed water supply plan is consistent with the terms of the adjudication summarized above. (10/8199 RT 329: 10-13; Ex. 130, p. 2.) Mr. Ledford argues that Applicants expert, received over \$800,000 from the MWA to produce a water supply plan that indicates it will take all of the MWA entitlement to cure the overdraft. The evidence of the Water Supply Plan (Ex. 111), is the most demonstrable document of water availability.

iv.) Potential Impacts and Mitigation. Evidence presented by Staff and CDFG establishes that, unless adequately mitigated, the project's pumping of stored water could cause a decline in river bank discharges and base flows, or in the water level of the Mojave River Alluvial Aquifer. This in turn would result in adverse effects upon riparian vegetation and, ultimately, species dependent upon this vegetation. (1018199 RT 107; Ex. 93, p.2.) Mr. Ledford contends that providing SWP water as currently proposed for the HDPP, **and other associated projects with the redevelopment of George Air Force Base** will prevent MWA from **meeting its court mandated obligations to curing** [Ex: 168, 172] the overdraft situation in the basin. (1018199 RT 7, 64-5, 75.) **Mr. Ledford and witness Almond and Beinschroth further contend that allowing HDPP to use SWP water on a 100% consumptive use basis, gives HDPP a greater amount of water at a reduced rate than other producers in the Basin and thus creates an inequity.**

Applicant, Staff, and CDFG developed a modeling regimen to assess **only the HDPP project impacts, not including the cumulative or growth inducing impacts associated with the redevelopment of George Air Force Base.** [Ex: **146**] The evidence establishes that the model was designed to represent the major hydrogeologic properties of the groundwater system, as well as the hydraulics of the interaction with the Mojave River. It employed conservative "worst-case" assumptions and accounted for the pumping and injection activities of the project in order to ascertain any project related changes in the groundwater levels or the stream flow of the Mojave River. The model also considered the loss of injected water through dissipation.

We have previously expressed our desire for such an agreement. (10/8/99 RT 14-15.) Moreover, this agreement must be executed and not conflict with the final Conditions of Certification imposed by the Commission. (10/7/99 RT 305.) We note that MWA has also advised that such agreement should be consistent with our Conditions and pointed out various provisions of the draft agreement (identified as Ex. 133) with which it had concerns. (Letter of November 3, 1999.) Until such an agreement is provided, **which has the required CEQA requirement for all underlying agreements**, we remain unable to recommend that the project be certified **with water for cooling.**

FINDINGS and CONCLUSIONS

Based upon the persuasive weight of the evidence of record, we find and conclude as follows:

1. Soils in the project area are susceptible to wind and water erosion.
2. The Conditions of Certification below will ensure that the project does not create any significant adverse impacts to soil resources.
3. The Mojave River Groundwater Basin is severely and chronically overdrafted.
4. **The Victor Valley Water District is presently overdrafting their own well fields and will continue to do so in the future.**
5. **The High Desert Power Project proposes to use wet cooling technology. Wet Cooling Technology requires 100% consumptive use of the water and no beneficial use of the State Project Water paid for by all of the taxpayers of the High Desert will be used for recharge of the overdrafted basin.**
6. The use of wet cooling technology requires approximately 3300 to 4000 acre-feet of water annually.

- 7. The project has the present design capacity to treat 8,000 acre feet of water annually and it is expected that 3,500 to 4,000 acre-feet will be surplus to the operations of the Power Plant. This 8,000 acre-feet amounts to 15 - 20% of the net available water for the entire MWA to meet its obligation now and into the future. The Treatment facility could be expanded without further approval of the CEC.**
- 8. The 24-inch pipeline has a capacity of 14,000 acre feet per year or more.**
- 9. The Victor Valley Water District, the City of Victorville and the MWA intend to use the Project Water for uses other than HDPP, in facilities that have been over designed where in CEC staff identified several additional concerns about the terms of the Aquifer Storage Agreement, clarity of staff s conditions of certification, and potential growth inducing impacts resulting from implementation of the Agreement. These are as follows:[\[Ex: 146\]](#)**
- a. The present term of the agreement is 50 years (formally 80 years) (section 27.1 of the Agreement). Staff s assessment of ground water impacts was based on 30 years, which was the expected project life identified in the AFC.**
- b. If no additional storage is provided, other than that required in the conditions of certification, it is possible that the ground water bank will be depleted at 30 years.**
- c. In order to consider this agreement the applicant shall be required to update the ground water study and provide additional banking, if the applicant intends to operate beyond 30 years.**
- d. Certain aspects of the Agreement create growth inducing impacts.**
- e. All of the project s water related facilities are oversized.**
- f. The Agreement (section 15) allows for VVWD s use of HDPP facilities. VVWD s use of HDPP facilities are growth inducing since this would provide an increased water supply for VVWD, thereby removing an obstacle to growth.**
- g. The magnitude of the growth inducing impacts has not been estimated by staff.**
- h. The most significant effect is created by VVWD s use of the HDPP water treatment facilities, since this provides VVWD access to State Water Project (SWP) water, which is currently not available to VVWD.**

- i. Increased water supply for VVWD leads to new residential, commercial, agriculture or industrial development in the Victor Valley area.**
- j. This new growth results in increased air emissions, wastewater and waste production, impacts on ground water (see Table°1), traffic, and impacts on community services.**
- k. The environmental consequences of these impacts have not been addressed in this HDPP proceeding.**
- l. Staff has not had the time necessary to provide estimates of the magnitude of these impacts in this testimony, given the fact that this issue arose after the conclusion of the October 1999 hearings.**

Comment Five: CONDITIONS of CERTIFICATION (Pending Revision)

While it appears to this Intervenor that for all of its Public Participation, there appears to be at least a glimmer that Staff and the Committee have an understanding of the issue of water. Previously there were no teeth, no means of enforcement, even the small amount of control that was in the August 16th conditions did not exist. How can this applicant have so much control over the Mitigation Measures and the consequences that result if it fails to comply?

It is apparent that ultimately this project will be approved, let the record be clear that although this Intervenor does not object to the construction of a Power Plant, he does object to the use of water 100% consumptively wherein there is no benefit to the Basin. All other producers of water are mandated to purchase water on the basis on 50% consumptive use. This Intervenor requests that if this project is to be approved that implementing conditions and mitigation measures, with the ability of the Public to seek separate court intervention be put in place to protect the public.

These requests have been made in the past, or have been requested by Staff and later **deleted**, Such as the first sentence in the August 16th Conditions; "The Project shall not operate unless the following criteria is strictly observed".

The following redlined changes are requested for consideration:

SOIL&WATER-1 **The Project shall not operate unless the following criteria is strictly observed and the CEC shall issue an order to cease operations, should any party demonstrate to the CEC that the Applicant or any of the Applicants Water Contractors is in violation of these conditions.** The only water **that may be** used for project operation (except for domestic purposes) shall be State Water Project (SWP) water obtained by the project owner consistent with the provisions of the Mojave Water Agency's (MWA) Ordinance 9.

- a) No Water Purveyor may use the CEC Proposed Decision to approve any water supply contract, that includes any indication that water supplied or banked is for any use other than the Cooling Towers of the HDPP. Further a separate and independent CEQA Analysis shall be conducted for any proposed oversized and or surplus capacity of the facilities.
- b) Whenever SWP water is available to be purchased from MWA, the project owner shall contract for the use direct delivery of such water for project operation from the City of Victorville and the Victor Valley Water District.
- c) Whenever water is not available to be purchased from the MWA, the project owner may use SWP water pre-banked in the seven HDPP wells as identified in Figure Number 1 of the Addendum Number 1 to the Evaluation of Alternative Water Supplies for the High Desert Power Project (Bookman-Edmonston 1998) as long as the amount of water used does not exceed the amount of water determined to be available pursuant to SOIL&WATER-5. The Victor Valley Water District, a party to the Judgment and obligated to all the terms and conditions of the Adjudication shall be the contracting party with the MWA. The Seven Wells shall be for the exclusive use of HDPP and VVWD may not use the wells, pipelines or any other device associated with HDPP for its own customers. It is the intent of the CEC Energy Commission that the well field is exclusively for HDPP.
- d) Specifically no water from the Victor Valley Wastewater Regional Authority "VVWRA" shall ever be used in the High Desert Power Project.
- e) If there is no water available to be purchased from the MWA and there is no water available to be pumped, as determined pursuant to SOIL&WATER-5, no groundwater shall be pumped, and the project may shall not operate. At the project owner's discretion, dry cooling may be used instead. if an amendment to the Commission's is decision is approved.

Verification: The project owner shall submit to the California Energy Commission (CEC) Compliance Project Manager (CPM) a copy of the annual application to the MWA for SWP water when it is filed with the agency. The project owner shall submit to the CEC CPM a copy of the MWA's annual approved application for SWP water. The project owner shall submit to the CEC CPM a copy of the finalized agreement with the Victor Valley Water District (VVWD). The Project owner acknowledges that all of the agreements for water service are or may be subject to further environmental litigation, water litigation in the adjudication of the MWA water rights or other court interpretations relative to consumptive use. The Project owner agrees to all

risks involved and agrees to indemnify save and hold harmless the VVWD, the MWA, Ledford and the City of Victorville from any actions that may increase the cost of water, the availability of water or the possibility that the Project may be compelled to purchase two acre feet of water for each acre foot it uses.

SOIL&WATER-2 The project owner shall provide evidence of a storage agreement consistent with the terms of these conditions between the Mojave Basin Area Watermaster (Mojave Water Agency) and VVWD prior to **groundbreaking**.

SOIL&WATER-3 The project owner shall provide a copy of a "Will Serve Letter" from VVWD to the CEC CPM prior to the start of Construction. Said will Serve Letter shall contain a compliance provision that the Water Purveyor agrees to each and every condition and makes the same a part of the their agreement with the Applicant.

Verification: The project owner shall provide a copy of a "Will Serve Letter" from VVWD to the CEC CPM within thirty (30) days of its receipt by the project owner.

SOIL&WATER-6 Banked Water Available for Project Use:

- a. The amount of banked groundwater available to the project during the first twelve (12) months of commercial operation is the amount of SWP water injected by the project owner into the High Desert Power Project (project) wells minus the amount of groundwater pumped by the project owner, minus the amount of dissipated groundwater.
- b. The amount of banked groundwater available to the project after the first twelve (12) months of commercial operation is the amount of SWP water injected by the project owner into the project wells, minus the amount of dissipated groundwater, minus one thousand (1,000) acre feet.
- c. During the three (3) years prior to project closure, the project owner may withdraw the balance of banked groundwater determined to be available to the project, except for one thousand (1,000) acre-feet, pursuant to **SOIL&WATER-5**. The project owner is not required to replace this final withdrawal of groundwater. However, during the three years prior to project closure, at no time may the balance of banked groundwater decline below one thousand (1,000) acre-feet. Furthermore, there must be a remaining balance of one thousand (1,000) acre-feet banked in the groundwater system at closure, as determined to be available to the project pursuant to **SOIL&WATER-5**.
- d. The project shall not operate for longer than 30 years. In the event the project intends to operate for longer than 30 years, within 3 years prior to 30th anniversary, applicant shall begin s new CEQA analysis of the water issues, the Public and all interested parties shall be notified and full Public hearing shall be held in Victorville on the proposed extension. No amendment shall be issued

unless and until-unless the Commission has approved an amendment and a full CEQA analysis to its license that specifically evaluates the water resources impacts of continued operation and imposes any mitigation necessary to ameliorate any identified impacts.

e. No water is available for project use if the requirements of SOIL&WATER-4 are not met by the project owner.

(a) The project owner shall use the same verification as for SOIL&WATER-5; however, in addition, any facility closure plan submitted during that last three years of commercial operation shall address the disposition of any remaining water available to the project, as well as the disposition of the pipeline, wells, and water treatment facility.

Soil & Water 17 The project owner shall enter into an Aquifer Storage and Recovery Agreement with the Victor Valley Water District (VVWD). This agreement shall contain the following conditions:

Verification:It shall prohibit VVWD from producing or allowing others to produce water from project wells, except in the case of an emergency. that VVWD may produce water from project wells: (i) for use by the HDPP project pursuant to Soil & Water 1; and (ii) for purposes other than use by the HDPP project pursuant to Soil & Water 1 provided that such production, in combination with production from the VVWD wells identified in "c" below does not exceed the amount identified as "the baseline", as defined in a below.

Comment Six: DRY and HYBRID COOLING

Intervenor takes the position that Dry Cooling as the evidence has shown is the environmentally preferred method of providing cooling for the HDPP as well as all future Power projects in the State of California. Preserving our valuable water resources for the use and reuse to its highest, best and most beneficial uses.

Intervenor argues that the commission is compelled to condition this project to use Dry Cooling as a matter of Law. The Commissioners are the conscious of the Public at large in this great State, and whether they may think that is it OK to allow a market driven economy to take the risk of whether or not Wet Cooling will work or not, is not the issue of Law.

Intervenor, requests that the following redlined comments be added to the Presiding Members Proposed Decision.

1. Summary of the Evidence

Dry Cooling. In the direct . . . Dry cooling systems do not require the large volumes of make-up water that are necessary in wet cooling systems. **Installing Dry Cooling Systems would reduce water consumption by 95%. (Ex. 85, p. 3 & 5.)**

b) Comparison of Cooling Technologies

The evidence of record establishes that there are numerous site, design, construction, and operational variables that affect the initial, operating, and maintenance costs of the cooling technologies. The evidence further indicates that the choice to use dry, hybrid, or wet cooling towers ultimately depends on the specific needs of the proposed project. In general, dry and hybrid cooling systems provide benefits in the areas of lessened water use and diminished plume visibility; wet systems possess the advantage of allowing increased plant efficiency at a lower cost. (Ex. 85, pp. 1, 4-5.)

Costs. The evidence of record **is demonstrative that the Applicant or his expert did not do any ~~does not contain a~~** specific financial feasibility study directly pertinent to the use of dry or wet/dry hybrid cooling at the HDPP. (9/16/99 RT 95:19 to 96:8; 10/8/99 RT 161.) **On the other hand Mr. Ledford presented uncontroverted Evidence that Dry Cooling is both economically and operationally feasible. (Ex. 122) This evidence, a culmination of CURE's earlier efforts combined with the revisions of Ledford** does, however, contain various approximations of the range of costs which could be incurred were either of these technologies used. (10/8/99 RT 163, 168; Exs. 85, p.5; 122.) **Finally in the reopened hearings it was acknowledged that a 500 MW Power Plant (Elderado Power Plant), located in Boulder City, Nevada, is located at the same elevation in the same climate zone where the whether is hotter in summer. This plant is 100% Dry Cooled.**

In the present case, the evidence establishes that dry cooling systems ~~are~~**may be** more expensive than wet systems, **depending on the price of the water.**

Rough estimates indicate that a hybrid cooling system would cost twice, and dry cooling system two and one-half times, that of the proposed wet system. (*Id.*) Testimony from Applicant's witness places this variation in the \$10 to 20 million range. (9/16/99 RT 117-18; see also Ex. 85, pp. 5-6; Applicant's Opening Brief, p.3.) **The only documentary evidence submitted by Intervenor Ledford, in conjunction with a study done by CURE early in the process, including input from several vendors demonstrates**~~suggests~~ that the actual costs of the dry or hybrid cooling systems ~~may~~**are far** below this level when costs unique to the wet cooling system, such as that of water and the accompanying treatment system, are subtracted. (Exs. 119, 122.)

Overall, the testimony establishes that the Applicant proposes to use water cooling since it is **willing to take the risk that it is** the most efficient and least cost option. In the opinion of Applicant's witness, the choice of a using dry or wet cooling is basically an economic question, with water cooling being the preferable choice. (9/16/99 RT116-17.) **When asked whether it was true that the use of**

Dry Cooling would not render the plant unprofitable, but not profitable enough to take the "Risk".

Further, staff advises that Applicants evidence is not compelling that the plant is not economical.

2. Discussion of the Evidence

The evidence of record clearly establishes that the use of dry or hybrid cooling is technologically feasible for the proposed project. (9/16/99 RT 115, 171; 10/8/99 RT 163; Ex. 85, p. 12.) The evidence also establishes that the project, as proposed with wet cooling, needs a consistent source of water in order to operate reliably. (9116199 RT 165-66, 170.) These **facts** are beyond reasonable dispute. **Staff further testified that because of the issue of water availability the plant may cease to operate or have to retrofit to dry cooling during its 30 life. [02/18/2000 RT Buell pg: 197: Ex. 146]**

(C)(A) Applicant has chosen to design the project with wet cooling towers, in other words to use water for cooling when it is available. This decision is apparently founded upon an economic evaluation (9116199 RT 113) and, in the current competitive and deregulated electricity market, **we believe it is not ours to second guess. Mr. Ledford disagrees, arguing that our Section 21080.5. Certified Regulatory Programs.**

The rules and regulations adopted by the administering agency for the regulatory program is mandated to do all the following:

Require that an activity will not be approved or adopted as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect, which the activity may have on the environment. And;

21002. Approval of Project: The Legislature finds and declares that it is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects.

If Mr. Ledford's argument that Dry Cooling is the environmentally preferred method of cooling and that complying with the California Constitution on the highest and best use of the states water, then Dry Cooling could be mandated.

~~**Mr. Ledford further argues Tthe** evidence of record does **not** persuasively establish **whether or not** the use of dry or hybrid cooling is **not** economically prohibitive since **the applicant did not present any persuasive evidence to the contrary.** ~~the record does not contain a detailed economic analysis of this~~~~

~~privately funded project.~~ We note, ~~however,~~ that dry cooling will be employed on the recently certified Sutter Power Project (Docket No. 97-AFC-2) and is proposed for use on the pending Otay Mesa project (Docket No. 99-AFC-5). (9/16/99 RT 97:10; 10/8/99 RT 160-61.) These facts suggest that the use of dry or hybrid cooling is economically **feasible**, ~~at least for certain Projects at certain sites.~~ Further new evidence of the Eldorado Energy Plant in Boulder City, Nevada which is now operations at similar climate conditions to the HDPP, demonstrate that project can operate economically when selling power into the same grid as HDPP proposes to.

In the present circumstance we believe the appropriate inquiry is not whether Applicant *could* or *should* use an alternative cooling technology, but rather whether it must. In this context, the question becomes whether the use of dry or hybrid cooling would prevent or avoid residual significant environmental impacts caused by the use of the proposed wet cooling technology. We believe we have answered this question in the preceding portion of this Decision relating to impacts upon water resources. Mr. Ledford argues that our staff has consistently selected Dry Cooling as the preferable alternative:, citing the following that he believes indicates that Dry Cooling is the Environmentally superior alternative:

A. Power Plant Efficiency - Steve Baker: "While utilization of dry cooling would yield a small drop in efficiency, the benefits of dry cooling in terms of water supply outweigh any such disadvantage."¹ Question: "Do you believe that Dry Cooling is a viable alternative?", Answer: "From an engineering Standpoint, Yes it is".² ". . . there is only about a 2% overall annual drop in efficiency. I deemed that to be an insignificant drop in efficiency."³

Zoran Rausavljevich [For Applicant]: Question: ". . .if there was not a reliable source of water the project itself would not be reliable" Answer "That is a good statement."⁴

B. Waste Management - Ellen Townsend-Smith testifies: "The State Water Resources Control Board Resolution 75-58 discourages the use of fresh inland water for power plant cooling and encourages. . . Or other non-potable water sources. The policy also requires the evaluation of dry cooling and wet/dry cooling as a means of water conservation. No new conditions of certification will be proposed by staff for waste management to mitigate the effects of either dry of wet/dry cooling alternatives." Further Mr. Tooker, for CEC Testifies for Staff, when asked by Hearing Officer Valkoski if

¹ Hearing Transcript September 16, 1999. Page 168-169 & 176-177

² Hearing Transcript September 16, 1999. Page 171

³ Hearing Transcript September 16, 1999. Page 174

⁴ Hearing Transcript September 16, 1999. Page 166

"Waste Generation would be more or less with dry cooling, his answer was - "Less".⁵

- C. Power Plant Reliability - Steve Baker: As a part of staff's analysis of soils and Water Resources, staff identified that the project as proposed could potentially result in significant impacts on water resources. In addition, State Water Resources Control Board Resolution 75-58 discourages the use of fresh inland water for power plant cooling and encourages the use of wastewater or other alternative non-potable water sources. Based on these findings, staff has identified that dry cooling or wet/dry cooling may be feasible alternatives to the use of fresh inland water waters for HDPP cooling. Any reliability impacts on the electric system due to reduced availability on hot days should be insignificant.**⁶
- D. Public Health - Obed Odomelam: Mr. Obomelam's testimony before the commission was reconfirmed before the commission. "It will be appropriate, I believe that"⁷ While non-biased professionals, may not necessarily make recommendations, his testimony was that Dry Cooling Was Appropriate. "The fresh water conserving policies of the State Water Resources Control Board points to Dry Cooling as an appropriate Alternative to wet cooling in power plants. The Commission staff has noted this fact in identifying dry cooling as appropriate for the proposed project."**
- E. Noise - Steve Baker: As a part of staff's analysis of soils and Water Resources, staff identified that the project as proposed could potentially result in significant impacts on water resources. In addition, State Water Resources Control Board Resolution 75-58 discourages the use of fresh inland water for power plant cooling and encourages the use of wastewater or other alternative non-potable water sources. Based on these findings, staff has identified that dry cooling or wet/dry cooling may be feasible alternatives to the use of fresh inland water waters for HDPP cooling. The potential for increased cooling tower noise emissions, however is inconsequential for the HDPP.**⁸
- F. Visual Resources - Gary D. Walker: The use of wet/dry cooling would reduce but not eliminate the potential for cooling tower plumes . . . Overall the difference in visual impact compared to the proposed project would be negligible. ". . .as I said in my Errata, overall, the use of dry cooling would reduce the visual impacts." He concluded it would be the best of the two alternatives.**⁹

⁵ Hearing Transcript September 16, 1999. Page 195

⁶ Exhibit 85

⁷ Hearing Transcript September 16, 1999. Page 159

⁸ Exhibit 85

⁹ Hearing Transcript September 16, 1999. Page 282

G. Water and Soil - Joe O'Hagen: When questioned by Hearing Officer Valkosky as whether the use of Dry Cooling would cause any significant effects on Water. Mr. O'Hagen replied, "NO".¹⁰ and: ". . . just from the basis of water conservation . . . dry cooling is a great idea."¹¹

Furthermore, as the evidence of record as a whole shows, mitigation measures required by the various Conditions of Certification will reduce all impacts attributed to the project in general, and to the use of the wet cooling technology in particular (10/8/99 RT 167: 17-21), to below a level of significance.³⁵

FINDINGS and CONCLUSIONS

Based upon the persuasive weight of the evidence of record, we find and conclude as follows:

1. It is **economically and** technologically feasible to use either a dry or hybrid WetDry cooling system at the High Desert Power Project.
2. The use of dry or hybrid WetDry cooling systems would substantially reduce the use of cooling water **by as much as 95% for-by** the High Desert Power Project.
3. The use of either dry or hybrid WetDry cooling systems ~~would~~**may** increase capital expenditures and lessen power plant efficiency and output **by as much as 2% for temperatures under 98 degrees and 10% for temperatures over 112 degrees.**
4. The evidence of record does ~~not establish whether or not the~~ **establish that incremental-increased** capital expenditures and decreased power plant efficiency and output referred to in Finding 3, above, **do not** render the use of dry or hybrid WetDry cooling systems economically infeasible for use at the High Desert Power Project.
5. The evidence of record indicates that the decision to use the wet cooling tower technology at the High Desert Power Project is ~~largely an~~ **an at risk** economic decision by Applicant, **however the "risk" may be shared by citizens of California if the project proves to be unreliable.**
6. **With the exception of curing the Regional Overdraft, All other** direct, indirect, or cumulative impacts attributable to the High Desert Power Project have been reduced to below a level of significance through the Conditions of Certification contained in this Decision, **that mandate that wells, pipelines and treatment facilities are for the restricted use of HDPP only.**

¹⁰ Hearing Transcript October 8th, 1999. Page 142

¹¹ Hearing Transcript October 8th, 1999. Page 143 lines 13 - 15

We therefore conclude that the use of a dry or hybrid wet /dry cooling system at the High Desert Power Project is **economically and technologically feasible. Mr. Ledford believes, adoption of Dry Cooling as a Mandated Mitigation measure would eliminate the potential that the myriad of conditions required for the use of water whether legal or not would be eliminated., but we believe it** is not necessary in order to reduce any direct, indirect, or cumulative environmental impacts to below a level of significance. **[Do you Still?]**

II. Conclusion

The HDPP has not provided an un-interruptable source of water for its proposed project. There are Five Contracts, required to complete the water chain. No contracts have been produced. Furthermore, even if the contracts were before the Energy Commission, none comply with the requirements of CEQA. Any water source HDPP proposed is subject to a least five separate agreements and each contract are the subject of a separate CEQA analysis that relate to the production of water for cumulative and growth inducing impacts associated with the Redevelopment of George Air Force Base.

The evidence before this commission is that the VVWD and City of Victorville intend the water from the proposed new MWA pipeline for projects other than the HDPP. CEQA has not been conducted for these other projects. Expecting to take benefit of more than just HDPP, the evidence clearly shows that the cumulative impacts of the chain of contracts are not studied as a Regional Project. The contention that the applicant has resolved "most of the issues" that would affect its ability to obtain a license does not meet the requirement that without an un-interruptable source of water, the Project would be unreliable and HDPP cannot use Wet Cooling.

Intervenor requests the Commission to carefully consider Intervenors Water and Related Alternatives testimony which demonstrates that this project is one of Regional concern. As you re Energy Commission Staff has repeatedly stated there is an **"extremely serious groundwater situation in the vicinity of the project"** including significant reductions in Mojave River base flow.

As a result of overdraft in the area of now well over **1,000,000 acre-feet**, the most comprehensive analysis possible needs to be undertaken to restore ground water levels and recharge the basin. Allowing the HDPP to use SWP Water and not mandate that HDPP place

one acre foot water back into the basin for each one that it uses, deprives each resident of the MWA Region with a significant **Property Right**¹², that is one of equal treatment. Allowing a new 100% consumptive water use for cooling towers gives unfair preference to HDPP because all other local water users are mandated under the Judgment for Water Rights that use water on average 50% consumptively to replace and restore the basin.

Intervenor requests that the Energy Commission:

1. Insure that its CEQA Equivalent Document is not used for purposes it was not designed for, i.e. approving "Projects", that are for the exclusive use of the Power Project.
2. Develop conditions that are meaningful and insure the Plant "Shall", not operate in the event that any of the mitigation measures do no work.
3. Mandate that all conditions and mitigation measures be fully incorporated into third party contracts, including a provision that gives the CEC jurisdictional authority over the contract provisions.
4. Finally undertake a State Environmental Review of whether or not the use of State Project Water in Cooling Towers meets the intent of State Water Resources Control Board Resolution 75-58; and
5. Complies with the California Constitution Article X Section 2.
6. Delay any action on the HDPP until the California Supreme Courts rules on the water Adjudication with the Mojave Water Agency.

¹² Hearing Transcript October 6th 1999, page 7 Lines 9-16 [Ledford] ". .the issue is one of Property Rights. . ."

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STATE OF CALIFORNIA

Energy Resources Conservation
And Development Commission

In the Matter of:) Docket No. 97-AFC-1
)
)
The Application for Certification) PROOF OF SERVICE
For the High Desert Power Project [HDPP])
_____)

I Kathie Mergal declare that on _____, I deposited copies of the attached **Brief of Reopened Evidentiary Hearings and Revised and Restated Comments on Presiding Members Proposed Decision**, in the United States mail in Apple Valley California with first class postage thereon fully prepaid and addressed to the following:

Signed original document plus 11 copies to the following address:

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In addition to the documents sent to the Commission Docket Unit, individual copies of all documents were sent to:

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I declare under penalty of perjury that the foregoing is a true and correct.

Kathie Mergal