

Decision 04-12-016 December 2, 2004

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Application of Southern California Edison  
Company Regarding the Future Disposition of  
the Mohave Generating Station.

Application 02-05-046  
(Filed May 17, 2002)

(See Appendix A for List of Appearances.)

**OPINION AUTHORIZING SOUTHERN CALIFORNIA EDISON COMPANY  
TO MAKE NECESSARY AND APPROPRIATE EXPENDITURES  
ON CRITICAL PATH INVESTMENTS AT MOHAVE WHILE CONTINUING  
TO SEEK RESOLUTION OF THE WATER AND COAL ISSUES  
AND TO ESTABLISH A MERMA ACCOUNT**

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**Summary**

This decision authorizes Southern California Edison Company (Edison) to make necessary and appropriate expenditures on the Mohave Generating Station (Mohave), for critical path investments required by the 1999 Consent Decree<sup>1</sup> to allow Mohave to continue operations post year-end 2005; to continue working on resolution of the essential water and coal issues including the funding of the C-Aquifer hydro-geological and environmental studies; to study options/alternatives to work in concert with Mohave's continued operation or to replace Mohave's power generation for Edison customers and Mohave's economic benefits for the Hopi and Navajo communities and other affected stakeholders if Mohave cannot continue as a coal-fired plant; and to establish a Mohave Employee-Related Memorandum Account (MERMA) to track worker protection benefit expenses incurred before January 1, 2006, associated with the temporary shut-down of Mohave at the end of 2005. Once the two primary unknown questions concerning the availability of water and coal supplies are ascertained, the Commission intends to review those cost and the contingency

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<sup>1</sup> Mohave Environmental Consent Decree settled a federal civil lawsuit, CV-S-98-00305-LDG (RJJ), that was filed in 1997 by Grand Canyon Trust, Inc., Sierra Club, Inc. and National Parks and Conservation Association, Inc. against Edison and the other Mohave co-owners alleging various air quality violations at Mohave. Edison and the other Mohave co-owners were signatories to the 1999 Consent Decree and have known since then that either the required improvements had to be made, or the facility would shut-down at the end of 2005.

costs (which even Edison admits are not yet firm) subject to the usual GRC review of capital additions if Edison requests such regulatory assurance. Edison is also directed to proceed with an alternatives feasibility study to evaluate other viable procurement options to be used in conjunction with Mohave. Our goal is to return Mohave to service with as short of a shut-down period as possible. The Commission's decision at this time is made without prejudice to the ultimate resolution of the future fate of Mohave.

Edison is not required by law to file for a Certificate of Public Convenience and Necessity (CPCN) for the required environmental upgrades.

### **Background**

Mohave is a two-unit, coal-fired power plant located in Laughlin, Nevada. Together the plant's generating units have an operating capacity of approximately 1,580 megawatts (MW). Edison is the plant operator and owns a 56% undivided interest in Mohave,<sup>2</sup> which is equivalent to approximately an 885 MW entitlement. Under the terms of the 1999 Consent Decree, if Mohave is to be operational as a coal-fired plant post 2005, certain pollution control equipment<sup>3</sup> must be installed. In its application, filed May 17, 2002, Edison projected a total cost of approximately \$1.1 billion for the required pollution controls and other capital investments necessary to extend Mohave operations

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<sup>2</sup> The remaining percentage shares in the plant are owned 20% by Salt River Agricultural Improvement and Power District (Salt River), 10% by Los Angeles Department of Water and Power (LADWP) and 14% by Nevada Power Company (Nevada Power).

<sup>3</sup> SO<sub>2</sub> scrubbers, fabric filter dust collectors, and low-NO<sub>x</sub> burners. The pollution controls required by the 1999 Consent Decree do not address carbon and mercury emissions which could become issues under future environmental regulations.

post 2005. The cost includes (1) the required pollution control equipment itself; (2) other plant investments needed to accommodate the added pollution control equipment; (3) restoration of plant efficiency and capacity; (4) refurbishment of the coal-slurry pipeline to the plant; and (5) a water supply for the coal mine and slurry operation. In its application Edison requested that the commission either authorize it to spend up to \$58 million in preliminary work in 2003, or authorize it to establish appropriate accounts for the shut-down of the facility.

Under the Consent Decree, even if the installation of the equipment is underway, but not completed, by the end of 2005, the plant will have to cease operations until the installation is completed. Any cessation of operations and the associated residual costs, when combined with the cost of the pollution controls, impacts the economics of continuing Mohave as a coal-fired plant. Edison projects a lead-time of 3-4 years for installation completion. This time could be lengthened or shortened by a wide variety of factors.

Mohave employs approximately 355 people at the facility, 285 who are represented by the Utility Workers Union of America (UWUA). Mohave obtains all of its coal supply from the Black Mesa coal mine (Mine), which is located approximately 273 miles east of Mohave in northeast Arizona. The Mine is operated by Peabody Western Coal Company (Peabody) on lands that belong to the Hopi Tribe and the Navajo Nation (Hopi, Navajo). The coal is transported from the mine to Mohave by way of a coal-slurry pipeline owned and operated by Black Mesa Pipeline, Inc. (Black Mesa Pipeline). The mine and pipeline, combined, employ approximately 270 people, 220 of whom are represented by United Mine Workers of America (UMWA). The pipeline requires that the coal be pulverized and mixed with water near the mine site to produce the slurry. Once the slurry mixture reaches Mohave, the water is extracted and the coal is

dried. The water for the slurring process and for all other water requirements of the mine comes from the N-Aquifer, a well that underlies the land of the Hopi and Navajo.

In addition to the time limitation of 2005 as set forth in the 1999 Consent Decree for the installation of the required pollution controls, Mohave's coal supply contract expires at the end of 2005, and the availability of water for use at the mine and for the pipeline is uncertain after 2005 because the Hopi and Navajo oppose further use of the N-Aquifer for slurring purposes. Edison, and the other Mohave owners, have been, and still are, involved in negotiations for a continued supply of coal and water post 2005. Despite their efforts over the past three years, as of the writing of this decision the water and coal issues are still unresolved. The Mohave co-owners' agreement, whereby Edison, Salt River, LADWP and Nevada Power set forth the rights and obligations of the co-owners, also terminates at the end of 2005. While there are options for extension of the co-owners agreement, there is no obligation on the part of the owners to exercise the option.

## **Water and Coal Issues**

### **Water**

Since Mohave's inception in 1971, water from the N-Aquifer has been used to slurry the coal the 273 miles from the mine to the Mohave facility.

Approximately, 4,400 acre-feet per year of water is extracted from the N-Aquifer for this purpose. The Hopi Tribe opposes the further pumping of the N-Aquifer after 2005, and has taken this position since before Edison filed this application. This opposition is based, in part, on the value the Hopi, and others, place on the special religious and cultural importance of this water source and their concerns

about the impact the withdrawal of the water for the slurry purposes has on certain surface springs and washes in the Black Mesa area.

Beginning in 2001, Edison and the other Mohave co-owners restarted past efforts to develop an alternative water source to the N-Aquifer for the mine and the coal slurry pipeline. Because of the arid nature of the geography close to the coal mine, as well as the sensitive nature of the water associated with the Grand Canyon, the parties have had a difficult time identifying, much less obtaining, rights to another viable water supply. Some alternatives that were studied included a “pump-back” option involving obtaining Colorado River water from near the Mohave plant site; participation in a multi-purpose water pipeline from Lake Powell; a “mine-only” water pipeline from Lake Powell, possibly combined with relocating the slurry preparation plant further north; relocating the current N-Aquifer well-field to an area northwest of Peabody’s leasehold; obtaining effluent water from Flagstaff or other communities; and obtaining river water from the Marble Canyon area in the lower basin of the Colorado River.<sup>4</sup> After exhausting those possibilities after years of analysis and negotiation, the parties determined that the only potentially viable alternative is the C-Aquifer. This determination was not reached until almost a year after Edison filed this application.

Once the parties informed the Commission of the potential of the C-Aquifer, they also advised the Commission that a hydrologic feasibility study and an environmental study must be done by the Bureau of Reclamation (BOR),

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<sup>4</sup> Edison’s reply brief, p. 7, citing Salt River opening brief, pp. 6-8 and Palmer testimony from Tr. 2273-2276.

at a cost of approximately \$6 million, before it can be determined if the C-Aquifer is a suitable alternative. The major stakeholders negotiated for some time to reach an agreement on the funding for the C-Aquifer study. To facilitate these negotiations, the Commission scheduled a voluntary mediation for the Mohave co-owners, Peabody, and the Hopi and Navajo for October 10, 2003.

By the date of the mediation, the stakeholders had reached their own agreement to resolve the critical and complex issues that surround the development and operation of the C-Aquifer. Edison and the other co-owners agreed to fund the BOR study and negotiated a Memorandum of Understanding (MOU) to be signed by all stakeholders before funding was allocated and commenced. Unfortunately, the parties took until March 4, 2004, before all necessary signatures were obtained on the MOU.<sup>5</sup> Despite the best efforts of the Commission and the mediation judge, it still took almost five months for the parties to reach final resolution of many complex issues related to both the C-Aquifer and tangential issues as well.<sup>6</sup> Once the MOU contained all required signatures, Edison and the other co-owners funded the BOR study and the hydrological feasibility study is underway. Concurrent with the BOR study, multi-party negotiations are continuing to develop and establish all of the various agreements and arrangements necessary to build the C-Aquifer pipeline

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<sup>5</sup> A copy of the MOU is attached as Attachment B to Exhibit 18.

<sup>6</sup> Numerous allegations of “foot-dragging” have been bandied about by signatories to the MOU. However, when the Commission reviewed the chronology of the mediation efforts from October 2003 through the final MOU agreement date of March 4, 2004, it is clear that no one party did anything deliberate to sabotage the MOU, and the confluence of factors that contributed to the five-month delay were not attributable to any one party. What is important is that once the MOU was signed, Edison and the other co-owners forthwith funded the BOR study.

and well-field and implement usage of this new water supply for future Plant operation.

The C-Aquifer supply study will assess from a hydrological, geological, engineering, water-quality, and cost standpoint the viability of: (1) constructing the C-Aquifer Project (Project); (2) withdrawing 6,000 acre-feet per year (afy) of C-Aquifer via the Project during the extended term of Mohave; and (3) using the 6,000 afy of the C-Aquifer for coal-slurrying and other mine purposes to replace the N-Aquifer as the primary source of water. If the supply study proves positive, the Environmental Review, in accordance with the National Environmental Protection Act (NEPA) will review the environmental impacts of the activities enumerated above. The complete scope of work for the C-Aquifer supply and environmental studies is set forth in an attachment to the MOU.

Even if the C-Aquifer studies are positive, parties still have to consider and resolve many other complex issues including, but not limited to:

1. The amount of water found to be available during the supply study portion of the C-Aquifer study;
2. The status and nature of the Hopi and Navajo demands to upsize the proposed C-Aquifer pipeline and allocate some of the available supply of C-Aquifer water to Indian domestic and municipal use;
3. The scope and severity of any environmental limitations on the use of C-Aquifer water that are identified during the environmental study portion of the C-Aquifer study and incorporated into applicable permits;
4. The terms and conditions Edison is able to negotiate with the Hopi and Navajo relating to the use of the N-Aquifer, or another water source, as a temporary emergency back-up supply;
5. The definition and costs for all necessary rights of way and other property rights for the new water wells, pipelines and other related facilities; and

6. Clarification of issues connected with ownership and operation of the wells and pipeline.

Although the items enumerated above are of concern to all the parties, and involve unknown costs or timelines necessary for resolution of the issues, the stakeholders have expressed confidence that these issues can be satisfactorily resolved once the water supply is secure.

There is another potentially troubling water issue and that is a source of water for cooling purposes at the Mohave facility itself. In addition to the water that is extracted from the slurry mixture, Mohave also uses water from the Colorado River at the plant for cooling and other purposes. Mohave's contract for this water terminates in 2026 and there is no provision or assurance that the contract will be extended. While it may be premature to be concerned about a water source not needed until 20 years from now, the parties are in agreement that without a substitute cooling water source, the Mohave facility will not be able to continue in operation post 2026. This potential situation does affect the cost estimates for Mohave since it reduces the plant life projections from the normal 30 years to approximately 17-20 years.

### **Coal**

The Black Mesa mine is Mohave's only source of coal, and Mohave is the only purchaser of coal from the Mine, through Peabody. The coal-slurry pipeline is currently the only means of transporting the coal from the Mine to Mohave, and Mohave is specifically designed to burn slurried coal. The coal supply agreement between Peabody and the Mohave co-owners terminates at the end of 2005, and there is an option, but no obligation, to extend the term of the coal supply agreement up to 15 years.

Stakeholders have been negotiating the quantity, quality and price of coal post 2005. While there are complicated issues yet to be resolved, the parties have decided to address the post-2005 coal quality and quantity through a decision to implement coal-washing at the mine. This, however, does not completely settle the coal issues. Presently, there are two federal lawsuits brought by the Hopi Tribe and the Navajo Nation against Peabody, pending in Washington D.C. and Arizona, in which the plaintiffs are seeking to invalidate the coal leases under which Peabody mines coal on the Hopi and Navajo lands. Because of these suits, Peabody can not warrant that it can supply coal to Mohave.

In addition, Peabody has a permit pending for a permanent program permit to mine coal from the Black Mesa Mine that identifies the N-Aquifer as the source of water for the mine and slurry operation. The permit has been stalled for fifteen years due to a protest by the Hopi Tribe to the continued use of the N-Aquifer for the mine and slurry purposes. Environmental work is required as part of this permanent permit, and no work has been initiated on this work pending resolution of the alternative water supply issue.

The parties have conceded that a coal washing facility will be a necessary component to continued use of coal from the Black Mesa Mine. A coal washing facility portends additional pollution and emission problems that will also have to be resolved.

In summary, although the coal issues do not appear to be as daunting to resolve as finding an alternative water source, without satisfactory settlement of the outstanding coal issues, Mohave does not continue as a coal-fired plant.

### **Procedural History**

On May 17, 2002, Edison filed this application seeking Commission authorization to either 1) recognize that Mohave will no longer function as a

coal-fired plant after the end of 2005 and establish the appropriate balancing accounts for closure costs, or 2) authorize Edison to spend up to \$58 million in 2003 on the pollution controls and related capital expenses necessary to allow the facility to continue as a coal-fired plant post-2005.

Protests were filed by the Navaho, the Hopi, Salt River, the Center for Energy and Economic Development (CEED), Coalition of California Utility employees (CUE), Peabody, the Utility Reform Network (TURN), Natural Resources Defense Council (NRDC), and the Office of Ratepayer Advocates (ORA).

On October 11, 2002, a combined Prehearing Conference (PHC)/ Public Participation Hearing (PPH) was held at the Navajo Nation Chapter House in Tuba City, Arizona. After hearing the statements of the parties, and listening to over 100 concerned members of the Hopi Tribe and Navajo Nation, the local people, the mine and slurry workers, neighbors of the mine, environmental groups, and interested people from all walks of life and geographic locations, we concluded that we could not adequately address the full panoply of issues raised by Edison's application by the beginning of 2003. Instead, on January 7, 2003, Commissioner Lynch issued a Scoping Memorandum setting forth the scope of the proceeding and the issues to be addressed, along with a procedural schedule for the filing of the first round of testimony, on January 30, 2003, by Edison and on March 28, 2003, by the Intervenors. Concurrent rebuttal testimony was served April 25, 2003. Since the initial rounds of testimony, the Commission has requested additional testimony and/or briefing on numerous specified subjects, including cost and legal issues. Evidentiary hearings were held June 14 through July 9, 2004, and in advance of the hearings, parties served updated and/or supplemental testimony.

Concurrent post-hearing briefs were filed on August 9, 2004, and reply briefs were filed on August 24, 2004, by Edison, Hopi, NRDC, WEC, TURN, ORA, Navajo, Peabody, Salt River and UWUA/ UMWA/CCUE.

The proposed decision (PD) was mailed on October 20, 2004. On September 15, 2004, the Navajo filed a request for Final Oral Argument (FOA). On November 9, 2004, comments were received from the Hopi, Navajo, NRDC, WEC, Edison, Peabody, ORA and UWUA/UMWA/CCUE. In their comments, Peabody and the Hopi also requested FOA. On November 15, 2004, reply comments were received from the Hopi, Navajo, NRDC, ORA, Peabody, Edison, TURN and UWUA/UMWA/CCUE. On November 30, 2004, FOA was held. Following is a summary of the parties' comments and reply comments and a discussion of the modifications or clarifications the Commission adopts.

To begin, no party questions the value of Mohave to those most affected by its operation: the Hopi, the Navajo and the mine, plant and pipeline workers. In addition, Mohave is a key and valuable resource for Edison consumers as the utility ramps up its resource adequacy reserves. The parties universally recognize the importance of preserving the "Mohave-open" option. The major difference that divides the parties is on the topic of how much authority the Commission can give Edison *now*, in light of the inchoateness of the water and coal issues. The Hopi, Navajo and Peabody urge the Commission to amend the PD and give Edison *now* all the authority it will ever need to do the environmental upgrades and other capital improvements if the water and coal issues are resolved favorably. All of the other parties favor proceeding more thoughtfully and do not want the full authority given *now*, absent the Commission's ability to make a finding that authorizing the spending of \$1.1 billion is in the ratepayer and public interest. What we will do is to

authorize Edison to spend any money necessary to preserve the “Mohave-open” option, but do not authorize Edison to proceed with the pollution controls, related capital improvements and construction costs for those items now.

To address that concern we are clarifying what Edison should do if, and when, the water study reaches a favorable conclusion. Edison is to file an application in the Long-Term Procurement docket, R.04-04-003, that specifically addresses the future of Mohave. The application should be served on the service list for the Mohave proceeding, which list will be made a sub-list in R.04-04-003. While we cannot bind future Commissions to any particular process or timeline, this Commission can stress in this decision the importance of processing the application in as expeditious manner as possible that still allows for the vetting of sufficient information for a determination that keeping Mohave as a coal-burning plant is in the public and ratepayer interest. Issues that have already been litigated and are resolved in this decision will not need to be re-litigated in the application. This includes the costs for the pollution equipment and upgrades, upgrades to the slurry line, and costs related to the new water supply.

There were a few other common threads that ran through many of the comments. One primary thread was the recommendation that the alternatives study not just be viewed as a substitute for Mohave, but that renewables be studied as an energy source that could work in concert with Mohave. We agree and clarify that alternatives should be studied not just to replace Edison’s share of Mohave’s output in the scenario where Mohave is permanently closed, but that alternatives need to be studied as a compliment to Mohave.

Edison asks that the Commission clarify or revise the PD with regard to the following: (1) Commission forum in which Mohave’s extended operation is to be compared against possible alternative generation sources; (2) Edison’s

ability to recover the costs that it will incur in connection with the alternatives study; (3) the legal basis for the Commission's conclusion on the reasonableness of the Mohave capital costs; and (4) the Commission's treatment of the contingency amount included in Edison's cost estimates. We have adopted some of these recommendations in the body of the decision.

Peabody, along with the Hopi and Navajo, still want the Commission to issue a definitive order giving Edison the authority *now* to upgrade Mohave on condition that the C-Aquifer water source is found to be feasible. In addition, Peabody challenges the premise in the PD that Mohave must close post 2005 pursuant to the Consent Decree. The Commission relied on the record in the proceeding for that premise and the Commission has no authority or jurisdiction to extend the Consent Decree. If circumstances change and the Consent Decree is modified, the Commission will amend or clarify its decision on Mohave as appropriate.

Peabody further argues that the PD puts the Commission in the position of perhaps being the impediment to extending Mohave's life post 2005. We agree with Peabody, the Hopi and Navajo that the closure of Mohave, even for a limited time, will have devastating effects on the Hopi and Navajo people and tribes as a whole, as well as on the workers at the Mohave facility, at the mines and on the pipeline. In order to make certain that all parties understand the Commission's desire to do what ever is possible to keep the "Mohave-open" option in play, we clarify sections of the PD. However, we are still convinced that we cannot find at this time, based on the record of the proceeding, with the water and coal issues still uncertain, that authorizing \$1.1 billion for Mohave is in the public and ratepayer interest.

ORA urges the Commission to clarify that its approval of interim spending is limited to \$58 million, the amount Edison requested in its original application for preliminary retrofit work. This \$58 million is in addition to Edison's share of the reasonable costs of the C-Aquifer study and the coal and water negotiations, and 100% of the alternatives feasibility study. Instead, we authorize Edison to spend what is necessary to preserve the "Mohave-open" option, but do not authorize the pollution controls, related capital expenses and construction costs at this time.

ORA is also concerned about cost recovery for the interim spending if the retrofit of Mohave never occurs. ORA wonders if events transpire that make continued operation of Mohave impossible, such as a final conclusion that water is unavailable, and Edison continues to make critical path investments that basically are moot, should Edison still be able to recover those costs as reasonable, regardless of the circumstances. We refine our findings so Edison knows it will not be able to recover costs that are not focused on the keep "Mohave-open" option.

ORA also asked the Commission to clarify whether the cost estimates for the retrofit work were sufficient to guarantee cost recovery, even if there were overruns, or whether they were a "cap" and Edison would need to seek further Commission authorization if the costs increased. We find the cost estimates to be reasonable. Although Edison objected to the cost-cap concept, we agree with ORA that it is a good starting point as estimates go, and if there are increases in

the project's costs, Edison must seek authorization for the increased recovery by way of an Advice Letter (AL).<sup>7</sup>

In light of comments made by ORA, Edison and others that CEQA might apply to the Mohave retrofits, especially considering the long-term effects that might result from the continued operation of Mohave as a coal-burning facility, we retract our finding that CEQA does not apply. Instead, we will leave open that issue for determination when the actual retrofitting is ready to begin.

In its comments NRDC asks the Commission to clarify that the outcome of the alternatives study should not be prejudged, to factor into the cost of the retrofit the realistic expectation that if Mohave is extended carbon emissions will be regulated sometime during its lifetime, and that intervenors should be eligible for compensation for follow-up activities ordered in the PD. In addition, NRDC wants the opportunity to participate in Edison's review of the Ganatt time-line and to participate in the decision as to whether Mohave should be returned to service. We adopt some of NRDC's recommendations. Specifically, we are not prejudging the outcome of the alternatives study, and find that it is appropriate for intervenors to seek compensation for additional work contemplated by the decision. And we agree that Edison's cost estimates of \$720 million for environmental controls do not include the cost for controlling mercury and carbon, selective catalytic reduction, coal washing, post 2026 cooling water<sup>8</sup> and

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<sup>7</sup> We will specify that Edison may seek further rate recovery authorization via an AL, without limiting the Energy Division's authority to proceed otherwise.

<sup>8</sup> We have already adjusted for the possibility that Mohave cannot continue to operate post 2026 due to a lack of water for cooling purposes by estimating the refurbished plant's life as 17 to 20 years, instead of the usual 30-year plant life.

the slurry right-of-way. However, we know that Edison's estimates were just that and were based on factors that Edison knew it had to address. Edison's contingency of 30-plus % in its \$1.1 billion estimate was meant to cover some of these unknown costs. As discussed above, we will take Edison's estimates as a cap, and if and when Edison knows it has increased costs, it must seek further authorization for cost recovery assurance. As for carbon regulation and the other unaddressed costs enumerated above, when Edison files its application for full authorization to do the Mohave retrofits, it should alert the Commission as to the status of carbon regulation, and its estimated costs in relation to Mohave so the cost can be factored in when we make the final determination on Mohave. And Edison is to consider any suggestions it receives for shortening the Ganatt timeline.

WEC's comments presented some clarification recommendations, some of which we adopted. The main point presented by WEC was that the PD must make it clear that the alternatives study is not putting renewables in direct competition with Mohave, but that alternatives can work to compliment generation from Mohave.

UWUA/UMWA/CCUE's comments are focused on ensuring that Edison is authorized to take all feasible steps to ensure Mohave's future operations. One of the unions' primary concerns was that the alternatives feasibility study could side-track Edison from focusing on keeping Mohave open. We find that the two paths are not incompatible. We give Edison the necessary spending authority and cost recovery direction so it can pursue both avenues simultaneously.

In its comments and reply comments, the Navajo are still requesting that the Commission issue a "conditional spending order" as part of this decision. We do issue an order that authorizes Edison to spend money on preliminary

retrofit work, the C-Aquifer study, the alternatives feasibility study and the water and coal negotiations. We do not think labeling our orders with the nomenclature demanded by the Navajo changes the efficacy of our order or improves on it in any way. We carefully considered the positions of all the parties, determined the direction we wanted to go which was to preserve the “Mohave-open” option, crafted our decision accordingly and chose the terminology that best expressed our intentions.

While we want to avoid “unnecessary human suffering”<sup>9</sup> as the Navajo describe the impact on the Navajo and Hopi people if the plant is shut down, we are still convinced that the record supports the steps we have outlined in this PD for keeping the Mohave-open option available and agree with the Navajo that there are significant conditions that must be met *before* Edison begins major upgrade expenditures. Those conditions involve the C-Aquifer, resolution of all outstanding water issues, a determination that mine use of the water complies with the Endangered Species Act, resolution and dismissal of the Navajo equitable claims relating to the Black Mesa Mine Leases and Edison’s certification to the Commission that there is sufficient agreement on these issues to support going forward with the major expenditures. Without torturing the point further, we believe we have set the stage to keep Mohave open for the benefit of all stakeholders while simultaneously protecting the Edison consumers and ratepayers.

The Hopi’s primary request is that the Commission clarify that the feasibility study of alternatives is not linked to Mohave’s continued operation,

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<sup>9</sup> Navajo comments, p. 5.

but that the alternatives should be viewed as complementary to Mohave. The Commission's immediate objective should be on keeping Mohave open, and in the long term the focus can be on future replacement options. Next the Hopi ask the Commission to direct Edison to include in its resource planning an allocation of at least 885 MW of base load power from Mohave so that Edison does not fill that MW allocation with commitments for other power and then there is no need for Mohave. And finally, the Hopi urge the Commission to keep this proceeding open as a vehicle for oversight and reporting functions, rather than folding issues from Mohave into the procurement Rulemaking, R.04-04-003. We do clarify the PD as requested for the alternatives study, and in the Long Term Procurement proceeding, Edison was instructed to prepare its resource scenarios with a "Mohave-in" and "Mohave-out" options, and we will continue to have Edison do that to insure that Mohave is not accidentally forgotten and Edison becomes fully resourced with no need for Mohave.

TURN agrees with the recommendation presented by Edison and ORA that the PD should strike any references to AB57. We agree and have so modified the PD. TURN also echoes ORA and NRDC that the costs of Mohave's refurbishment should not be deemed reasonable. We carefully considered this issue and determined that the record supports finding that the \$720 million for pollution equipment and upgrades, \$200 million for upgrades to the coal slurry pipeline and \$160 million for costs associated with delivery of the new water supply in cost estimates was reasonable, and we now clarify that it is a cap for those costs, subject to Edison seeking approval for increases in the estimates. The additional 30 to 40 % that Edison identified as a contingency amount we are not finding reasonable at this time. TURN also asks the Commission to clarify that Edison is not authorized to spend that money now, and we do. Once the water

and coal issues are resolved, Edison is to file an application, and at that time, if the total costs, including fuel and water, indicate that continuing with Mohave is in the public interest, we can expeditiously authorize Edison to go forward with the upgrades. We will not need to relitigate those cost estimates. TURN also urges us to not modify the PD as requested by Peabody, the Hopi and the Navajo.

### **Motions**

During the course of the proceeding numerous motions were filed. Motions brought before the scheduling of the EH were ruled on either by the Law & Motion ALJ, or the ALJ assigned to the proceeding. Motions regarding requests to strike or limit testimony and/or to exclude exhibits from the record were ruled on orally by the assigned ALJ during the EH. With the exception of the request addressed below, any motions not previously resolved or addressed in this decision are deemed denied.

On September 22, 2004, the Navajo Nation filed a Request for Official Notice of Mitigated Negative Declaration (MND). The MND was prepared by the Commission in another proceeding, A.99-10-023, and addresses environmental upgrades and other related issues that the Navajo's allege are germane to this proceeding. The MND was prepared in connection with a sale Edison proposed to make of Mohave and includes the proposed environmental upgrades mandated by the Consent Decree. The Navajo want notice taken of this MND because they contend that it indicates that the Commission has already conducted a thorough environmental review of the Consent Decree upgrades.

We will allow notice to be taken of this MND with the caveat that the Commission is not making a finding in this decision whether or not further

environmental review of the project may be necessary, and with the further specification that the MND from 2000 may be outdated by the time the project needs to be reviewed again.

### **Summary of Parties' Positions**

#### **Edison**

Edison's initial 2002 application was neutral as to whether Edison supported making the necessary expenditures for the pollution controls mandated by the Consent Decree and keeping Mohave operational, or instead supported planning for the permanent shut-down of Mohave post 2005. By the time Edison filed supplemental testimony in January 2003, Edison was not optimistic that Mohave could continue operation post 2005 because negotiations on the important coal and water issues were stalled. Instead, in early 2003 Edison focused on the costs and procedures necessary to shut the plant down. Significant movement was subsequently made on the coal and water issues, and by the time of the evidentiary hearings in June/July 2004, Edison was redirecting its efforts toward the continued operation of Mohave post 2005. Edison's position post-hearing is that the record does not support a finding that Mohave should be permanently shut-down, but until the water supply issue is resolved, the Commission cannot make the necessary public interest determination supporting the \$1 billion investment in pollution controls.

While the Hopi, Navajo, and Peabody urge the Commission to issue a "Conditional CPCN," Edison advocates instead a "CPCN-plus-interim-funding" approach that would allow Edison to move forward with Mohave as quickly as

possible once the key issues are resolved.<sup>10</sup> From Edison's perspective, this CPCN-plus proposal would allow the Commission to have a clear idea of what it was approving before authorizing the \$1 billion plus investment, but the interim-spending would ensure that there was no preventable delay in the start of the retrofit process.

Edison and the other co-owners have already spent approximately \$9 million on preliminary engineering for the Mohave pollution controls and related plant improvements and have committed funding of \$6 million for the C-Aquifer studies. Edison argues that it does not need to spend any additional money on the Mohave retrofit until the coal and water issues are resolved. In point of fact, Edison claims additional interim spending will not speed up the retrofit—only the resolution of the water and coal issues can speed up the timeline. Edison's witness, Mr. Phelan, testified that once Edison is given notice to proceed from the Commission, it will take 36 to 39 months to complete the necessary upgrades for Mohave's future operation. Mr. Phelan further testified that the "real large commitment of dollars occurs six to seven months in when significant orders of materials would be placed, in particular, as it relates to the dry scrubber and the baghouse."<sup>11</sup> From Edison's perspective, it would be ill advised to commit to the purchases of such major equipment until the water and coal negotiations are completed.

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<sup>10</sup> Edison does not argue that a CPCN is required for the plant upgrades but urges that if the Commission determines one is necessary that it be a "CPCN-plus-interim-funding" approach.

<sup>11</sup> Edison post-hearing brief, p. 31, from Tr. 991-995.

In addition, Edison argues against any type of Conditional CPCN on several grounds: it could disadvantage Edison, and thereby harm Edison ratepayers, in the continued negotiations on prices, terms and conditions for water and coal commitments; provides no recognizable benefit; and injects confusion and uncertainty into the process.

Edison presented capital addition and other cost projections for the continued operation of Mohave totaling approximately \$1.1 billion--exclusive of the water and coal contract costs. Because of the lack of finality on the water and coal issues, including the cost of both items, Edison was not able to project a cost estimate with precision. This cost estimate presented was based on a 20-year plant life following the installation of the pollution controls and other related investments because Edison does not have now, and has no assurance it will obtain later, a water source for the cooling of the plant post 2026. However, based on cost estimates for considered alternatives, Edison posits that Mohave, even with \$1.1 billion in pollution controls and other upgrades, even with a multi-year shut down while the retrofit is being completed, even with potential additional water and coal supply costs and even with a shortened plant life till only 2026, is still cost effective.

In summary, Edison urges the Commission to authorize a CPCN-plus-interim-spending. In the meantime, Edison intends to press forward on reaching a resolution to the water and coal issues, and if and when these issues are adequately resolved, Edison will promptly file a CPCN application and seek interim funding for limited critical path work so as to minimize any delay pending the CPCN decision. However, under any scenario, Edison anticipates the shut-down of Mohave post 2005 pursuant to the Consent Decree and seeks authorization to establish the MERMA account to book the limited worker

protection benefit expenses that will ensue. The creation of the MERMA account is necessary, from Edison's perspective, irrespective of the length of the shut-down, and does not prejudice the re-opening of the plant.

Edison does not believe the alternative proposals presented by other parties are viable. In its reply brief, Edison urges the Commission to reject the various "conditional CPCN" proposals advanced by the Hopi, Navajo and Peabody, as well as the alternative proposals of WEC, NRDC and TURN, and instead to allow the continuing and intense efforts that are being made to resolve the coal and water issues.

### **Hopi Tribe**

The Hopi Tribe argues that the economic evidence it presents overwhelmingly supports the conclusion that Mohave should continue in operation as a coal-fired plant. To this end, the Hopi urge the Commission to approve a "Conditional CPCN" finding that it is in the public interest to preserve Mohave as a coal-fired power plant. The Hopi claim that the Conditional CPCN would allow Edison to spend a reasonable range of money for implementing the required plant upgrades and alternative water supply, subject to confirmation that the coal and water solutions are technically feasible.

Specifically, the Hopi urge the Commission to authorize Edison to proceed with the Mohave upgrades that are needed to obtain a replacement water supply for the N-Aquifer and to comply with the terms of the Consent Decree as long as the costs do not exceed \$1.08 billion for the capital investment and the average cost for delivered fuel and water in nominal dollars for 2006 to 2025 is \$1.57/MMBtu. In addition, the CPCN approval would be conditioned on satisfactory resolution of the technical issues associated with the new water supply and the required emission controls.

The Hopi argue that the case for keeping Mohave in operation is compelling. To begin, volatility in the supply and price of natural gas puts California consumers and ratepayers at risk the more they are dependent on gas as a fuel source for electricity. And coal, unlike liquefied natural gas (LNG) does not present geopolitical and/or national security risks. Also, coal supply agreements and prices can be locked into long-term contracts that bring supply and price stability as well as fuel diversity for consumers. The Hopi contend that its witness demonstrated that during the 2000-2001 California Energy Crisis, Mohave alone produced electricity cost savings that would have paid for the entire amount of the now required \$1.1 billion in Mohave upgrades.

Next, based on the Hopi calculations, the long-term cost savings to ratepayers from the continued use of Mohave will be huge, even if environmental requirements for mercury emission controls are tightened. The Hopi witness, Judah Rose, testified that Mohave is economic even if capital costs were to rise to 179% of Edison's capital cost estimates, and even if the price of coal doubled. Rose also tested his theory against numerous scenarios, including a shortened life of 20 years because of the cooling water issue, and in all cases, Mohave remained highly economic. As Rose testified, the cost of upgrading Mohave is equivalent to the capital cost of a new natural-gas fueled combined cycle gas turbine plant (CCGT) in California, yet the fuel costs are more stable and lower.

In point of fact, the Hopi posit that even taking into consideration all of Edison's criticisms of Rose's testimony, Mohave is still economic and saves California ratepayers over \$500 million.

Furthermore, addressing the environmental concerns that coal-burning plants raise, the Hopi witness testified that with all now required, and with some

future “might-be-required” emission controls, Mohave can produce clean, economical power. Black Mesa coal has a very low mercury content, and the baghouses that will be installed at Mohave as part of the pollution controls can capture any stray mercury emissions. The Hopi argue that even if Selective Catalytic Reductions (SCR) are required, SCR implementation is possible and will not affect the positive economics of the plant.

And finally, when compared with any of the other feasible alternatives, the Hopi believe that Mohave compares favorably with all renewables and compliments demand side efficiency programs. The Hopi’s argue that because Mohave is a baseload plant, demand side efficiency programs and renewable peaking resources cannot replace Mohave, but that the Mohave plant can work with these alternatives to augment and subsidize them.

No party to the proceeding failed to recognize the economic and social consequences that the shut-down of Mohave will have on the workers at the plant as well as on the Hopi and Navajo people and tribal governments. To address these concerns, WEC and NRDC suggested alternatives to Mohave that involved job opportunities on the reservations. WEC proposed replacing the economic and power benefits that flow from Mohave with two 500-megawatt solar installations on the reservations, and NRDC suggested constructing an integrated gasification combined cycle plant (IGCC) on the reservations or in Nevada.

The Hopi argue that WEC’s proposal is not “realistic, practical or sensible.”<sup>12</sup> For a myriad of reasons, including the fact that WEC presented no

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<sup>12</sup> Hopi post-hearing brief, p. 19.

source of financing for the project, no specific sites for the plants have been identified, and no contracts for the design, construction or operation of the plants were presented, the Hopi do not view the WEC proposal as one that would allow the Hopi to build an economy.

The Hopi also do not believe that IGCC is economic or proven and therefore should not be considered in this proceeding as a Mohave replacement. The Hopi argue that while there are uncertainties that surround the coal and water issues germane to Mohave's continued operation, coal-burning power plants are a known technology, whereas the uncertainties associated with either the solar system or the IGCC render them too unrealistic and speculative to be seriously considered as viable alternatives to Mohave at this point in time.

To summarize the Hopi position: the economic consequences of Mohave's shut-down are far-reaching and potentially devastating for the tribes and other stakeholders. In fact, the Hopi argue that preserving and protecting Mohave will "lead the way in implementing sound environmental practices, strengthen national energy security, and avert what would otherwise be a modern economic massacre of the Hopi Tribe and its people."<sup>13</sup> The Hopi urge the Commission to order Edison to engage in all spending necessary to preserve Mohave.

As Chairman Taylor testified for the Hopi, "there is no question that the Tribe's economic security is fundamentally tied to the ongoing operation of [Mohave]. . . . [A]lmost 30% of our tribal budget is dependent upon [Mohave] derived revenues, a fact which impacts every aspect of Hopi life, including the education of our young people, health and social service programs, our

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<sup>13</sup> Hopi post-hearing brief, p. 1.

infrastructure, and many other essential programs.”<sup>14</sup> To bolster this argument, Chairman Taylor detailed that 65% of the Hopi’s total government budget is related to coal revenues, 30% of which is derived from Black Mesa coal sales to Peabody for delivery to Mohave.<sup>15</sup>

As Chairman Taylor further explained, unemployment on the reservation is pandemic, unemployment hovers at 50%, of those employed 35% earn below national poverty guidelines and 44% of Hopi families with children under 18 live in poverty.<sup>16</sup> Almost 40% of Hopi homes lack complete plumbing and over 35% lack complete kitchen facilities.<sup>17</sup>

In its reply brief the Hopi suggest that if Edison finds that the other Mohave co-owners are refusing to proceed or are acting unreasonably to delay any necessary critical path expenditures, Edison should report back to the Commission and seek further guidance.

### **Navajo Nation**

The Navajo Nation believes that the continued operation of Mohave as a coal-fueled generation facility is in the best interest of California ratepayers. The Navajo argue that Mohave is one of the lowest-cost, diverse and reliable energy sources serving California, and even when the costs of the environmental controls are considered, Mohave is competitive. From the Navajo vantage point, if Mohave is closed, some 260 mine workers who are Navajo and live and work

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<sup>14</sup> Hopi opening brief, pp. 26-27.

<sup>15</sup> Hopi opening brief, p. 27.

<sup>16</sup> Id.

<sup>17</sup> Hopi opening brief, pp. 27-28.

on the reservation will either be out of work or be forced to relocate off the reservation. This loss of employment will put a significant burden on the Navajo Nation and its ability to provide services to over 8,000 Navajo families, and will seriously impact local communities and businesses. When this cost is added to the loss of royalty and tax revenue for coal and water, it is obvious that the closure of Mohave will have a devastating impact on the workers and Navajo community.

As Navajo witness Ashley testified, the Navajo revenue from the Black Mesa mine provides 10-13% of the Navajo Nation's General Fund revenues, and the total amount for royalties and taxes received from Peabody's operation of the Black Mesa mine was \$19,178, 092 in 2002 and \$16,783,977 in 2003.<sup>18</sup>

Navajo Nation President Shirley, Jr. testified that the Navajo Nation's ability to assist laid-off mine workers was severely limited because of the already existing unemployment problem. Specifically, President Shirley testified that the Navajo Nation already provides general assistance to 8,000 plus families. If the mine closure adds workers to the list of those needing assistance, that will coincide with when the Navajo Nation's revenue sources from the mine to provide such benefits will be reduced.<sup>19</sup>

The Navajos recommend that the Commission issue a Conditional CPCN or a conditional spending order authorizing Edison to make expenditures necessary to prevent a temporary or permanent shutdown of Mohave and to bring the plant in compliance with the 1999 Consent Decree. The Navajo

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<sup>18</sup> Navajo opening brief p. 12.

<sup>19</sup> Navajo opening brief, pp. 12-13.

condition this proposal on the resolution of the water supply issue and on a set cost cap on the cost of as-delivered energy. The Navajo believe that this Conditional CPCN would allow the stakeholders to resolve the water issue in a manner ensuring that California ratepayers benefit from the continued operation of Mohave.

In the view of the Navajo Nation, the appropriate future course of action requires: (1) the C-Aquifer supply study must be completed, including a demonstration that the water supply source is in compliance with the Endangered Species Act; (2) the Navajos must resolve and dismiss their claims relating to the Black Mesa Mine Leases; and (3) Edison must certify that there is agreement on all of the above enumerated conditions and that the all-in-cost of Mohave generated electricity will not exceed \$46 MWh.

As a caveat, the Navajos remind the parties that the Navajos have every incentive to help craft a resolution to the water and coal issues as their very economic existence depends on the continued operation of Mohave.

However, the Navajos also argue that California ratepayers will benefit from Mohave as a power source. Mohave has historically delivered low-cost power to California. Now with the installation of the pollution controls, Mohave will deliver clean, coal-fired generation at a cost the Navajo claim is lower than the cost of energy from a natural gas fired facility. In addition, coal provides fuel diversity and supply and cost stability—especially important in light of today's volatile natural gas market.

The Navajos contend that all of the alternatives to Mohave that were proposed are advanced renewable technologies, some of which are still in the research and development stages. While these resources may have potential value, experimentation with them should not be at the expense of the welfare of

the Hopi and Navajo people. Therefore, the Commission should commit to Mohave's continued future, while allowing the utilities and other parties to research and develop other alternatives.

In evaluating the costs involved with the continued operation of Mohave, the Navajos allege that the requirements of a Conditional CPCN have been met because Edison has presented an "appropriate cost estimate" of what is required to keep Mohave operational post-2005. These costs as presented by Edison include the costs of a temporary shutdown, undepreciated book costs, pollution control and life-extension upgrades, refurbishment of the coal slurry pipeline, the C-Aquifer costs and a generous contingency sufficient to cover any cost uncertainties. Given these cost estimates, the Navajos contend that energy from Mohave is still cheaper than the most likely alternative—a CCGN plant, and obviates the vagaries associated with the supply and price of natural gas.

In summary, the Navajo urge the Commission to authorize Edison to expend the money necessary to keep Mohave operational by issuing the conditional CPCN, since the continued operation of Mohave is inextricably intertwined with the continued fiscal solvency of the Navajo Nation. In its reply brief the Navajo argue against Edison's proposal of a CPCN-Plus approach as the Navajo view that as a tactic that "engenders undue and prolonged delay."<sup>20</sup>

### **Black Mesa Pipeline**

Black Mesa Pipeline is the owner of the 273-mile long, 18-inch coal-water slurry pipeline originating on the Black Mesa in the Northeastern part of Arizona that delivers coal from the Peabody mine to Mohave. Under its current contract

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<sup>20</sup> Navajo reply brief, p. 10.

with Edison, Peabody has the responsibility for shipping the coal from its mine to the generating station. However, as of January 1, 2006, Peabody will no longer have that contractual obligation, and it will be the responsibility of the Mohave owners to arrange for the transportation of the coal.

Black Mesa favors the continued operation of Mohave as a coal-burning facility, not only for its own employees' sake, but for the fuel diversity it provides California. However, the pipeline company is concerned about the necessary temporary shutdown. The cost of even a temporary shutdown would include severance pay, outplacement services, retraining and other related employee expenses. In addition, the pipeline company estimates that the cost to overhaul the slurry pipeline in 2009 could be \$165 million, or even higher. Of primary concern to Black Mesa Pipeline is the uncertainty surrounding the coal and water issues, as well as the length and cost of even a temporary shutdown of Mohave for the pollution controls.

While cognizant of the uncertainties surrounding the coal and water issues, Black Mesa advances a proposal that it hopes would induce the parties to reach closure on the open issues: offer a deadline-based cost savings sharing mechanism whereby if participants complete their projects at below estimated costs they would receive a share of the difference between the cost and the estimate, while participants who do not reach agreement as of that date would not be entitled to such an incentive.

In sum, Black Mesa urges the Commission to reach a decision concerning the future of Mohave to provide closure to California consumers on their electricity supply, and more particularly to provide a greater degree of certainty to the employees, and their families, of Black Mesa Pipeline, Peabody and Mohave.

### **Salt River Project**

Salt River Project favors the continued operation of the Mohave facility and has been involved, as a co-owner of Mohave, in the negotiations, and subsequent MOU, concerning the C-Aquifer water feasibility study. From their understanding of the work to be performed by the BOR, it will take at least until spring of 2007 for the well field and environmental studies to be complete. However, even once the BOR completes its study, Salt River argues that there are still a myriad of issues that need resolution. Specifically, the following items must be negotiated with the Hopi and Navajo: rights-of-way and leases associated with the pipeline route and well fields; a royalty rate for water withdrawn from wells on the reservation; water rights issues related to the C-Aquifer; and selection of an entity to operate the water system.

Salt River argues that it would be premature for the Commission to issue any kind of a CPCN before three crucial issues are resolved: (1) the completion of the C-Aquifer study; (2) unavailability of water for cooling Mohave post 2026; and (3) the tribes' challenges in court to the validity of Peabody's coal leases. While Salt River does not anticipate that water for cooling Mohave post 2026 will materialize, Salt River argues it is important that any cost benefit analysis of Mohave recognize the potential shortened plant life. Once the water and coal issues are resolved, Edison should file an application for a CPCN.

Salt River does not share Peabody and the tribes' position that a Conditional CPCN now will assure the continuation of Mohave. As a co-owner, Salt River asserts that it is important that it, Nevada Power and LADWP, as well as Edison, know that the coal and water issues are resolved before committing additional spending. In fact, Salt River is concerned that the issuance of a

Conditional CPCN might interfere with the continued water and coal negotiations. Salt River again repeated these concerns in its reply brief.

In addition, Salt River does not agree with the concept that a price cap offers protection to ratepayers. To the contrary, Salt River argues that predetermining the price that Mohave co-owners would have to pay for coal and water would eliminate any possibility that the Mohave co-owners could negotiate the best price for ratepayers.

### **TURN**

TURN does not believe that Mohave is more cost-effective as a power source than other non-gas options available to Edison. TURN focuses on the uncertainties that surround Mohave, including the cost of retrofitting the facility and the necessary down-time to accomplish that task, and the water and coal supply and cost issues and questions whether Mohave can produce coal-based power any cheaper than other non-gas options. TURN is also concerned about the additional costs that might beset the Mohave facility if there are new requirements from the Environmental Protection Agency (EPA) concerning mercury emissions.

In addition, TURN questions the need for Mohave's baseload power generation in the face of renewed direct access to the noncore users and the resultant costs to ratepayers if the plant is restarted and there is an exodus of customers due to direct access, core/noncore, or community choice aggregation. TURN's witness estimated that in 2010, when Mohave is likely to return to service, Edison will only need 23% of Mohave's capacity. Instead of more baseload, TURN's witness opines that Edison will need more peaking power. As

TURN argued, even the Edison witness indicated that “we don’t have it [energy] when we need it the most and we have an excess when we don’t need it.”<sup>21</sup>

Earlier in the proceeding, TURN expressed a concern that if the Commission commits to the continued operation of Mohave before all the critical water and coal issues are resolved, parties could view Edison as having a “blank checkbook,” and the ratepayers could be prejudiced.

However, TURN is not insensitive to the devastating effects Mohave’s closure will have on many stakeholders, including the Navajo Nation and Hopi Tribe. In its post-hearing brief, TURN recommends that the Commission encourage Edison and other negotiating parties to continue working towards resolution of the water and coal issues; authorize limited critical path expenditures by Edison—with the understanding that Edison is limited to recovery of its 56% ownership share; assume Mohave will close in 2026; require Edison to quantify potential future compliance costs associated with mercury and carbon dioxide emissions at Mohave; give bundled ratepayers protections for possible stranded costs from refurbishments for Mohave; and open a parallel proceeding to explore alternatives to Mohave that rely on energy efficiency and renewable fuels and will also generate revenue for the Hopi and Navajo people.

What TURN does not recommend is granting any type of Conditional CPCN. TURN argues that granting a CPCN now “leaves out an important step by failing to bring together all the cost elements that are typically considered and examining all feasible alternatives.”<sup>22</sup> In addition, TURN is not convinced that if

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<sup>21</sup> TURN opening brief, p. 27, quoting from RT Vol. 4, 456-57.

<sup>22</sup> TURN opening brief, p. 9.

a Conditional CPCN was issued, even with a price cap as advocated by the Navajo and Hopi, that ratepayers would get the best negotiated price.

TURN advocates continuing with the C-Aquifer studies, water and coal negotiations, authorizing limited critical path expenditures so that the possibility of continuing with Mohave as a coal-fired plant is not foreclosed, but also TURN urges exploration of other alternatives that could bring similar economic benefit to the Hopi and Navajo, yet would be less risky and more environmentally sound. TURN believes this course of action is in the best interest of the California ratepayers.

TURN's suggestion about a companion proceeding to study alternatives to Mohave does suggest that the WEC solar option as well as the NRDC IGCC facility be reviewed. Both of these alternative proposals would produce cleaner power, but most importantly could potentially be a source of economic viability on the reservations for the Hopi and Navajo. In its reply brief, TURN again stresses the need for this study, because even if the shut-down of Mohave is temporary, the Hopi and Navajo will need some way to generate meaningful revenues during the 2006-2009 period. TURN is mindful of the impact this shut-down will have on so many people, particularly the Hopi and Navajo and the union workers, and nothing the Commission might do will prevent this required shut-down. TURN characterizes the proposed "Conditional CPCP" concept as a "half-baked"<sup>23</sup> proposal, and suggests a better course of action would be for the parties to explore an array of short-term and long-term options that benefit ratepayers and the Hopi and Navajo.

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<sup>23</sup> TURN reply brief, p. 3.

**ORA**

ORA questions the “need” for the power from Mohave, and argues that a decision on the future disposition of Mohave is premature and inappropriate until the threshold issues concerning water and coal are resolved. From ORA’s perspective, absent resolution of these concerns, ratepayers should not be burdened with financing any critical path spending.

In light of the Commission’s recent decision (D.03-12-059) approving Edison’s application to acquire the Mountainview facility, a 1,054 MW, baseload facility, located within Edison’s load center, ORA is concerned that the output from Mohave might not be needed by California ratepayers. In addition, ORA is concerned that with the uncertainties about Edison’s customer base in view of core/non-core, community choice aggregation, municipalization, direct access, distributed generation and expanded energy efficiency and demand reduction programs, committing ratepayers to pay for the necessary upgrades to Mohave may leave ratepayers with redundant costs and unneeded resources. Instead, ORA encourages the Commission to focus on new investments in energy efficiency, demand response and renewable generation to meet any anticipated demand growth, rather than continuing with the Mohave baseload facility.

ORA recommends that the Commission not grant a CPCN, or a Conditional CPCN, at this time, as the need for and cost-effectiveness of Mohave have not been proven. ORA believes California ratepayers might be better served from pursuing alternatives such as in-state energy efficiency, in-state natural gas combined cycle plants and in-state and out-of-state central grid renewables, instead of committing to finance the continued operation of Mohave in view of the unknowns and unresolved issues.

**Utility Workers Union of America/United Mine  
Workers of America/Coalition of California Utility  
Employees (Unions)**

The Unions predict that if Mohave is shut down, most of the 285 Mohave union employees, plus approximately 65 non-union workers, would lose their jobs. Basically, there is no alternative employment available in the Laughlin area, and no employment opportunities that would come close to duplicating the salary and benefits that the plant provides. Displaced workers too young to retire would most likely have to relocate and “bump” other represented employees at another Edison facility. Since the average age of the union members who work at Mohave is mid-forties to late forties, very few of the employees can retire.

The Unions argue that the situation is not much better for 230 mine and pipeline workers who would lose their jobs with Peabody and Black Mesa Pipeline if Mohave ceased to function as a coal-burning plant. In addition to loss of jobs at the mine and pipeline, the entire Hopi and Navajo communities would be affected by the end of coal mining. The Union’s economic expert estimates that the shutdown of the plant, mine and pipeline would result in a loss of 1,190 jobs, \$54.9 million in personal income, and \$162.2 million in business income.<sup>24</sup> As it is, the Hopi and Navajo have approximately 50% unemployment.

In addition, royalties from the mines are an important source of income for the Hopi and Navajo, and with those monies the communities have modernized and improved the standard of living for the residents. In 2002 alone, the Unions claim that coal royalty payments to the Hopi and Navajo, including bonus

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<sup>24</sup> Union opening brief, p. 8.

payments, exceeded \$40 million. Peabody also pays water use fees to the Hopi and Navajo in the range of \$3 to \$4 million per year.

The Unions urge the Commission to consider the devastating impact the closure of Mohave as a coal-burning plant would have on the plant, mine and pipeline employees, their families and the Hopi and Navajo communities. But the Unions also acknowledge that while the Commission should be mindful of the impact the closure of Mohave will have on the Hopi and Navajo communities, the Commission's primary focus must be on ratepayers. Even given this mandate, the Unions argue that the continued operation of Mohave will provide fuel diversity that will provide electricity at a reasonable cost. The Unions are confident that even after paying for the investments needed to upgrade Mohave, Mohave is superior cost wise to a new CCGT facility, especially because of the lower operating costs of Mohave, and because decommissioning costs must be added to the total cost estimate of any alternative.

The Unions do not oppose the Commission's consideration of any of the other alternatives, such as those proffered by WEC and NRDC, but contend that the solar and IGCC proposals suffer from high production costs, inability to provide dependable power at times of peak demand or reliance on untested technology.

In summary, the Unions urge the Commission to do what is possible to see that the C-Aquifer feasibility and environmental studies are completed, and if the C-Aquifer proves a satisfactory water source, have Edison seek full approval to go forward with the retrofit of Mohave and get interim funding for all critical path issues. Until such time as Edison can file such an application, the Unions

suggest that the Commission require Edison to report every two months on the progress being made toward these goals.

In its reply brief, the Unions summarize the positions of all the parties and find that there is consensus on the most important issue: Mohave should not be shut-down *now*. To insure that Mohave can continue as a coal-fired plant if the water and coal issues are resolved, the Unions urge the Commission to assure Edison that it will recover prudent investments made in Mohave. As a corollary, the Unions suggest that if Edison shuts Mohave down prematurely, Edison will not recover any unamortized plant balances unless it can demonstrate that it took all such steps and that the shutdown is due to factors outside of Edison's control.

#### **City of Laughlin, Nevada**

Laughlin, Nevada is the site of the Mohave facility and through testimony submitted by the Chamber of Commerce and the Town, Laughlin very much supports the continued operation of Mohave. The plant has a minimum \$60 million annual impact on the community, and even a temporary shutdown of the plant will have devastating financial implications for the area. In addition to the 355 employees at Mohave, Laughlin opines that an additional 300 people are employed in the environs to provide goods and services to the 355 plant employees and their families. From Laughlin's perspective, Mohave's continued operation is crucial to the continued health and viability of Laughlin.

#### **WEC**

WEC represents the Black Mesa Trust and To' Nizhoni Ani' and advocates a solar dish option as being more cost effective than refurbishing and re-powering Mohave. WEC bases its analysis on assumptions it makes concerning the water royalty payment for water from the C-Aquifer, right-of-way costs for

the 120 mile pipeline from the C-Aquifer field to the mesa, costs associated with the analysis and development of the C-Aquifer, cost of a back-up water supply, costs for a coal-washing facility, penalties for emissions from Mohave, payment of coal royalty payments to the Hopi and Navajo and the projected price of coal. In sum, WEC finds that “the Mohave refurbishment teeters on the edge of cost effectiveness.” From WEC’s perspective, if its assumptions about the costs enumerated are true, Mohave is not cost effective. However, WEC reasons that the solar dish option it prefers is a cost effective resource addition, is more environmentally compatible, and poses no risk to California ratepayers.

Most importantly, WEC argues against the continued operation of Mohave because it is a terrible waster of water and a huge pollution emitter. As WEC states, “[I]n the desert, water is life.”<sup>25</sup> WEC reminds parties that the N-Aquifer is not available for slurry purposes post 2005, and questions why fresh water should be used for slurry purposes—especially when water is such a valuable commodity in the southwest. In addition, many of WEC’s clients are concerned that the pumping of water from the N-Aquifer is drying up the springs that are important for religious ceremonies and purposes. WEC suggests exploring the use of “brackish” water, or dry cooling, instead of being totally reliant on aquifer water.

WEC posits that no matter what analysis is undertaken to compare the costs of a refurbished Mohave to any other alternative, including WEC’s solar dish option, Mohave fails to meet the cost-effectiveness test. WEC urges the

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<sup>25</sup> WEC opening brief, p. 6.

Commission to forego issuing any type of Conditional CPCN, and instead order Edison to negotiate with the Hopi and Navajo on the solar dish option.

In its reply brief, WEC argues that Mohave “was” a valuable generating resource for California—but only because it had no pollution controls, had unconscionable low coal prices, used prodigious amounts of pristine ground water, and had access to lots of Colorado River water for cooling. While that may have worked for the last century, WEC claims that using precious water to ship coal from Arizona to Nevada is a “dumb idea”<sup>26</sup> and it is time to take advantage of new electric generation technologies that are cost effective, don’t impact the environment and don’t use precious desert water.

#### **NRDC**

NRDC presents the Commission with a number of options beginning with the recommendation that Edison be authorized to spend the necessary money on the coal and water issues to keep the possibility of the continuation of Mohave a viable alternative. NRDC is concerned with not only the power supply to California if Mohave closes, but also with the economic future of the Hopi Tribes and Navajo Nation and the workers at Mohave. Specifically, NRDC urges the Commission to not allow, by decision or inaction, Edison to cease operations at Mohave without making provisions for environmentally superior and cost effective alternatives and for revenue sources for the Hopi and Navajo. Approval or denial of Edison’s original application does not resolve these concerns.

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<sup>26</sup> WEC reply brief, p. 4.

NRDC advances an alternative that it believes addresses the interests of most of the parties and that is to expend limited funds on Mohave on only critical path items and simultaneously examine an alternative resource plan to replace Mohave's output—with the collaborative input of other parties including the Hopi and Navajo. NRDC identifies the C-Aquifer water study, a coal-washing study and a coal washing environmental study as the only critical path expenditures that should be authorized now.

NRDC wants the Commission to direct Edison to do a study on alternatives that compares the cost of Mohave's compliance with the Consent Decree with renewable options on the reservations, an IGCC sited on Black Mesa, various energy efficiency programs, and possible power purchase agreements with third parties.

NRDC devised its own ideal alternative resource plan to replace Mohave's output as follows: 1/3 with energy efficient investments; 1/3 with renewable investments including resources constructed on or near the reservations in cooperation with the Hopi and Navajo; and 1/3 with a new IGCC power plant designed for carbon dioxide capture, located at or near Black Mesa mine. NRDC suggests that this proposal would address the needs and concerns of the California consumers, the Hopi and Navajo, the unions and the environmental groups. NRDC opines that its output replacement proposal is more cost effective than even a successful retrofit of Mohave because it is probable that Mohave will become subject to new pollution control requirements and the water supply at Laughlin expires in 2026, without any probable replacement source, rendering the lifetime of the plant shorter than normally assumed.

NRDC is confident that its alternative resource proposal will be successful for the following reasons:

- Energy efficiency effectively reduces user consumption at times of peak usage, incurs no line losses, relieves the utility from making system upgrades and because load is reduced, the amount of required reserve margins is reduced.
- Renewable energy resources, and specifically solar energy, are well suited for the state of Arizona, where the Hopi and Navajo are located. Solar energy conveniently peaks in the afternoon, simultaneously with the highest level of electric use. Other possible renewable resources for Arizona are geothermal, biomass, and wind.
- An IGCC plant, especially if it is located near the Black Mesa Mine, would provide many benefits including the fact that it can use reclaimed water, could be sized to use the remaining coal from the existing Black Mesa Mine, would provide continued employment for the miners, would provide construction payrolls where the Hopi and Navajo are located, then would provide employment for plant operation, and finally would increase the tax base in the vicinity of the reservations.

In summary, NRDC's proposal would (1) continue the coal mining jobs; (2) provide income to the Hopi and Navajo communities from lease payments for land, property taxes and royalties for coal; (3) provide a plant with a longer life than Mohave; (4) have much lower environmental impacts; (5) use less water; (6) provide employment, including union jobs; and (7) protect California electric users. However, NRDC does advocate that the Commission direct Edison to make necessary expenditures on the identified critical path issues to preserve the option of the Mohave retrofit while Edison is exploring NRDC's proposal with the Hopi and Navajo.

NRDC also wants the Commission to order Edison to conduct a study, while the critical path items are on-going, to examine an alternative portfolio of resources to replace Edison's share from Mohave. NRDC again argued for this in

its reply brief suggesting that if the study was done now, it would reduce the time pressure during the CPCN proceeding.

**Peabody**

Peabody favors the continued operation of Mohave as it believes the plant is superior to any real world alternative and meets the needs of most of the stakeholders. From Peabody's perspective, Mohave is important enough that the Commission should take a proactive role, not a laissez-faire attitude, and grant Edison a conditional CPCN now.

To begin, Peabody argues that Mohave supports the Hopi and Navajo tribal economic communities, in contrast to what would happen if Mohave closes. Many economic and health issues are inextricably intertwined with the jobs that are directly and tangentially related to Mohave. Next, Peabody supports the continuation of Mohave because the plant supplies electricity to California without the volatility of the price and supply issues associated with natural gas. In conjunction with this point, if Mohave closes, that will increase California's over-reliance on gas-fueled electricity by approximately 5%. Because of the natural gas concern, Peabody advocates avoiding, or minimizing, the shut-down of Mohave especially during the 2006-2008 period when Peabody predicts the natural gas shortage will be the most severe. Peabody bases its prediction on the following data: (1) gas production is down; (2) off-shore well production is down; (3) the cost of new well exploration is prohibitive so there are no new sources of gas; (4) companies are expanding their ownership interests through acquisitions, mergers and consolidations—and not through new sources; (5) companies are spending less money on development; (6) there is no congressional support for expanding gas reserves; (7) congress has not extended

tax credits for gas investments; (8) there is no support for the Alaskan pipeline; and (9) there has been little progress on liquefied natural gas (LNG).

Peabody sees the only real impediments to the future success of Mohave as the feasibility of the C-Aquifer and the resolution of the pending litigation brought by the Navajo Nation, and joined in by the Hopi Tribe, against Peabody concerning the viability of the existing coal leases and related royalty issues.

Peabody suggests that the Commission determine that the continued operation of Mohave is in the public interest and order Edison to take all feasible steps to resolve the water rights issue so that the environmental upgrades can begin at the plant as soon as possible. In conjunction with these steps, Peabody urges the Commission to view Mohave as an “emergency” situation and take all steps possible to avoid or minimize closure of the plant. From Peabody’s perspective, if its predictions about the higher prices and reduced supply of gas come true, Mohave may be what saves California from an electricity crisis.

The Commission should find, Peabody proposes, that there is certainly a need for Mohave’s power, especially since it is scheduled to come back on line when base load is again needed. And, from Peabody’s analysis, no matter how you run the numbers, Mohave is economic as compared to any viable alternative. Mohave is good for ratepayers, good for the California economy, and vital to the livelihood of the Hopi and Navajo tribes. To this end, Peabody recommends that the Commission issue a Conditional CPCN authorizing the continued funding of the C-Aquifer feasibility and environmental studies, allow Edison to spend up to \$58 million on preliminary design and engineering work and allow Edison cost recovery.

In its reply brief, Peabody again cautions the Commission about the true consequences to Edison ratepayers if we take a “wait and see” attitude and do not take a proactive posture.

### **Issues Before the Commission**

For over two years, the Commission has heard from the stakeholders on the future fate of Mohave and what effects will result from whatever decision we make. In fact, Commissioner Lynch and ALJ Brown, along with Commission staff and representatives from the Public Advisor’s office, went to Tuba City, Arizona, on the Navajo Reservation, and on October 11, 2002, held a PHC/PPH in the Navajo Nation Chapter House. The Commission first heard from the parties and their counsel during the PHC segment of the proceeding, and then during the 8-hour PPH met and heard from over 100 individuals representing every aspect of Navajo and Hopi life.

The Commission has jurisdiction over the Mohave facility by virtue of Edison’s 56% ownership, and takes an interest in the plant because of the 885 MW California receives daily and for which Edison ratepayers are obligated to pay. This Commission does not have jurisdiction over the other Mohave co-owners, Salt River, LADWP, or Nevada Power, does not have jurisdiction in Nevada or Arizona, has no control over water in Nevada or Arizona, and certainly has no jurisdiction over the sovereign nations of the Navajo Nation and Hopi Tribe. However, that does not mean the Commission is not mindful of the far reaching effects its decision concerning Mohave’s future will have on all involved.

Edison’s initial application, filed May 17, 2002, preliminarily framed the issues before the Commission: should Edison be authorized to spend money on critical path expenditures before Edison files its CPCN for Mohave, or plan for

the permanent shut-down of Mohave at the end of 2005, with the appropriate memorandum accounts. As simplistic as these choices appear, especially in light of the totality of Mohave's impact in Nevada, Arizona, for the Hopi and Navajo, and for the plant, mine and pipeline workers and their families and communities, and for consumers and ratepayers in California, that is what is before this Commission: what should Edison be authorized to spend, and when, and what is the appropriate ratemaking and recovery mechanism?

## **Discussion**

### **Plant Upgrade Costs**

While parties certainly brought different perspectives and philosophies to this proceeding, there are numerous areas of agreement, mixed in with the competing proposals and positions. To begin, all agree that the Consent Decree requires Edison to install identified pollution controls and that there are corresponding capital upgrades to the facility that are also necessary to maximize the life of the plant. The estimate put forth by Edison for the upgrades and new equipment is approximately \$1.1 billion. In general terms, this includes \$720 million for the equipment and upgrades, \$200 million for upgrades to the coal slurry pipeline, and \$160 million for costs associated with delivery of the new water supply. Edison's witness also confirmed that this figure includes a 30 to 40% contingency factor. Except for the contingency factor, there was little disagreement as to Edison's representation of the projected costs for the itemized categories.

Different parties cross-examined the Edison witnesses on aspects of these cost estimates, but there appears to be somewhat of a consensus that these figures are sufficient for the purpose of assessing the cost of compliance with the Consent Decree.

### **Water and Coal Costs**

What is not known, and therefore Edison could not include in its application, are the costs of the future operation of Mohave as a coal-burning plant because of the on-going negotiations on critical water and coal issues that involve not only the cost of the commodity, but also the supply and quality. No matter what viewpoint each party brought to the proceeding, all of the parties universally agreed that first and foremost there must be resolution on the water issue. Mohave's future as a coal-burning plant using coal from the Black Mesa Mine, slurried by pipeline from the mine to the plant, requires large amounts of water. These coal and water supply issues must be resolved for this Commission to determine if the future functioning of Mohave is reasonable for AB57 purposes.

To this resolution, Edison and the other co-owners, pursuant to the MOU signed March 4, 2004, are funding the C-Aquifer hydro-geological study, and if that study proves that the aquifer is a viable water source, they will fund the subsequent environmental study. No party suggested that there is anything that can be done at this time to expedite this C-Aquifer study, and it appears that BOR has already commenced the first phase of the study. This hydro-geological phase takes approximately nine months and the environmental study takes approximately two years. Based on these time estimates, all of the C-Aquifer studies will be complete sometime in late 2006/early 2007.

While the Hopi, Navajo and Peabody profess complete optimism that if the C-Aquifer is determined to be a feasible water source alternative that all other issues will be quickly and satisfactorily resolved, at a fair cost, other parties are not as convinced that the other issues will be serendipitously resolved if the C-Aquifer study reaches positive results. Similarly, while the supply and price

of coal is still also unresolved, in the post-hearing briefs almost all of the parties indicated that significant progress has been made on these issues and there is more universal optimism that if the water source issue is resolved, a satisfactory outcome will also be reached on the coal issues.

### **Alternatives**

In addition to the outstanding water and coal issues that make an evaluation today as to the efficacy and efficiency of continuing with Mohave as a coal-burning facility impossible, there are also unresolved issues concerning (1) the need for the power, (2) time and type of need and (3) California's emphasis on reducing demand through energy efficiency and demand response programs, and meeting need through clean and/or renewable power.

California's Energy Action Plan<sup>27</sup> (EAP) sets forth a number of goals for California, including encouraging utilities to have a mixed portfolio of ownership interests, fuel diversity, and contract terms. Mohave, as a utility owned generation coal-burning facility gives Edison one more long-term, stable power source designed to serve baseload, and provides needed fuel diversity. It is true that Edison, and California, are very dependent on natural gas to produce energy. As so many parties commented, in the face of the volatile supply and price of natural gas, coal presents a cost-efficient alternative. Even though the exact price of coal is not known today, parties were in agreement that based on historical data, coal is a reliable and affordable source of power.

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<sup>27</sup> Joint Agency Energy Action Plan by the Commission, the California Energy Commission and the California Power Authority, adopted by the Commission May 8, 2003.

However, Mohave also produces a baseload supply of power, producing power 7/24. The question arises that if demand for electricity is reduced by either California's emphasis on energy efficiency and demand reduction programs, or because there are significant changes in Edison's customer base due to core/non-core, community aggregation, municipalization or direct access, will Edison still need 855 MW of power? Mohave cannot run efficiently as a "peaking" unit. If by the time Mohave comes back on line in 2009/2010, if Edison only needs "peaking" power, will Mohave be producing so much extra power as to vitiate any savings from the coal production?

Unfortunately, because of the absence of critical information on the costs of water and coal for a continued Mohave, neither the Commission, nor the parties, can make an informed determination as to the efficiencies of Mohave *vis-à-vis* any alternatives. Because Mohave is a baseload plant, the most logical comparison is with a new CCGT facility. While parties opined as to which would be more cost efficient, there was not enough clear information to make an accurate comparison. For example, although a new gas-fired plant would burn cleaner than a coal-fired facility, its economic efficacy depends significantly on the cost of gas—a factor that cannot be known exactly today. So what a CCGT facility might save on emissions costs, might be lost to the vagaries of the gas market.

Also because not all of the critical costs for a continued Mohave are known today, Mohave could not be compared with other possible alternatives, such as renewable sources. While WEC presented a proposal for solar on the reservation, WEC's cost estimates were not sufficient for comparison—even if Mohave's cost estimates were complete.

NRDC proposed a mixed portfolio of alternatives to replace Edison's share of load from Mohave: reduce demand by 1/3 through energy efficiency, obtain 1/3 of the power from renewables and get the remaining 1/3 from an IGCC. While this proposal comports with the EAP in loading energy efficiency and emphasizes renewables, again, we are unable to adequately compare the proposal with Mohave due to the inchoateness of Mohave's cost estimates and the lack of sufficient specificity of NRDC's recommendations.

### **Alternatives Study**

TURN suggests that the Commission open a companion proceeding to explore alternative resources until Mohave's coal and water issues can be resolved to the point that accurate and reliable cost comparison's can be made. TURN argues that none of the possible alternatives presented during this proceeding were adequately researched and did not provide reliable cost data. TURN urges the Commission to initiate this companion proceeding to both serve as the forum in which to review specific generation alternatives to Mohave and examine options for creating alternative sources of revenues for the Navajo and Hopi in the event Mohave closes permanently.

TURN reminds us that Edison's witnesses indicated that Edison had not investigated any alternatives because Edison focused exclusively on keeping Mohave in operation. TURN recommends that whether or not the Commission adopts TURN's companion proceeding proposal, Edison should seriously investigate options and include a comparison in its subsequent filing for Mohave. The alternatives should include proposals that would replace the income from the plant, mine and pipeline for the Hopi and Navajo, as well as choices that utilize energy efficiency and renewables. TURN suggests that

Edison investigate further the WEC solar proposal and the NRDC IGCC suggestion.

Our present record contains two proposals for alternatives to Mohave power: the WEC solar and the NRDC IGCC proposals, but neither proposal is more than conceptual in nature. However, based on the stated priorities of this Commission and the state, both proposals merit further consideration. NRDC proposes to replace Edison's share of Mohave's output with a combination of renewable energy on the Mesa, additional efficiency investments in California, and an IGCC at the Black Mesa Mine. WEC suggests that a massive array of solar thermal electric generators could be deployed on the Mesa, eventually totaling 1,000 MW of peaking-capacity renewable power.

We will pursue both of these proposals, and others that may be appropriate, in a focused manner to determine their technical and economic feasibility. In so doing, we will integrate this analysis into the long-term planning process in our Procurement rulemaking, which is the proper forum for consideration of supply, demand and resource-specific considerations.

Edison is hereby directed to undertake a feasibility study of the options for replacing its share of Mohave's output if Mohave closes, or to be used in conjunction with Mohave if it returns to service, from sources that will provide the fullest possible benefit to the Hopi and Navajo while protecting the interests of Edison's ratepayers. Edison is to involve any interested party in this proceeding work together with those parties to design this study and to jointly determine the independent consultants, contractors and supervisors on the study. One aspect of this study should consider the IGCC options at the Black Mesa Mine, including water use issues and an assessment of the feasibility and cost associated with the sequestration of carbon emitted from the plant. Cost

assessments should include an analysis of federal funds available for IGCC development. Edison should also analyze the feasibility of renewable energy projects on reservation land, including but not limited to the proposed solar thermal facilities identified by WEC.

Both the IGCC and renewable energy projects should include consideration of any enhancements to the transmission system that may be necessary to bring power into California. The final plan should be sufficiently detailed, including cost components, proposed counterparties and generation on-line dates, to allow this Commission to affirm a specific resource plan during Edison's next long-term planning process. Ownership arrangements involving the Hopi and Navajo should be given consideration in the feasibility study.

Within 90 days of the issuance of the order, Edison shall file an initial study plan, including anticipated costs to ratepayers in preparing and conducting the study. Parties will have an opportunity to comment on Edison's filing and the study plan contained in it, including proposed additional projects or options that should be considered. Edison should include updates on the alternatives study in conjunction with the required updates regarding progress in the C-Aquifer study. Any costs incurred by Edison in conducting this study will be recovered in the manner established below.

Our understanding of the timing of events in the ongoing Mohave negotiations leads us to adopt the following schedule for the feasibility study process. It is anticipated that the C-Aquifer hydro-geological study will be completed by October 2005. This corresponds well with the timing of both the coal and water supply questions and the duration of the proposed alternatives feasibility study.

### **Edison's CPCN**

No party argued that a CPCN was *necessary*. Basically the only arguments concerning a CPCN urged the Commission to issue one now--if one was necessary. Edison does not think it needs a CPCN, and numerous other parties opined that under Pub. Util. Code § 1001 Edison may proceed with the pollution upgrades without one. We agree. Edison is not required by law to seek a CPCN for the Mohave pollution controls.

In point of fact, the parties arguing against the Peabody/Hopi/Navajo request for a conditional CPCN, did not argue that a CPCN is required by law. Instead, they opposed the granting of a conditional CPCN on general principal because of the inchoateness of the cost estimates and the fact that the Commission has no record before it to decide if the expenditure of \$1.1 billion or more is in the ratepayer and public interest.

The Navajo Nation proffered numerous Commission authorities in support of the proposition that the Commission has the authority to grant a CPCN—with conditions. Whether or not the granting of a CPCN with conditions that must be satisfied, such as environmental mitigation resulting from a CEQA review, is something the Commission *has* done or can do does not need to be resolved in this decision. In the cited cases, new or expanded generation facilities triggered the CPCN process.

Here, a CPCN is not necessary under the circumstances presented in this case. But most importantly, even if we agreed that we could torture the concept of a CPCN and twist it into a new creature known as a “conditional” CPCN, we do not see how it would satisfy Edison's concerns for cost recovery or the Hopi and Navajo and Peabody's desire for “certainty.”

The record is clear that what Edison wants is an assurance that if it makes the investment, it has a reasonable opportunity to recover return on its investment through rates. This, however, only addresses Edison's appropriate share (56%) of the cost for the required environmental improvements. The remaining 44% of Mohave is owned by the other co-owners, and Salt River, the next largest owner with a 20% interest, has indicated that it, Nevada Power and LADW&P will not commit to funding their share of the \$1.1 billion until the results of the C-Aquifer water supply study, environmental review, and negotiations between the parties on the other related and important issues are complete.<sup>28</sup> This Commission does not have jurisdiction over the other co-owners. Therefore, even if we were inclined to issue a "conditional" CPCN now, it would not provide the security that the Hopi and Navajo and Peabody would like to receive.

In addition, except for the Hopi and Navajo and Peabody, every other party weighing in on the "conditional" CPCN concept argues that it would thwart, not facilitate, the parties' continued negotiations on the other unresolved issues—most importantly the cost of coal and water. In point of fact, Salt River posits that although it intends to negotiate aggressively to achieve the best price for coal and water, if a "conditional" CPCN with a price cap of \$46/MWh is granted now, "[the Mohave co-owners] will still be negotiating with one arm tied behind their back."<sup>29</sup>

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<sup>28</sup> Salt River reply brief, p. 2.

<sup>29</sup> Salt River reply brief, p. 8.

There is one other troubling aspect to the requested “conditional” CPCN and that is that there is a lack of consensus among the “conditional” CPCN proponents as to whether, if the Commission authorizes the \$1.1 billion for environmental upgrades as long as the “all-in levelized cost” for energy from Mohave is \$46 MWh, the Commission ever has a subsequent opportunity to review the expenditures. It is unclear whether the Hopi and Navajo and Peabody want the Commission to give a “blanket immunity” to Edison for all expenditures, or whether there is an opportunity for the Commission, and interested stakeholders, to review Edison’s expenditures, prior to allowing recovery in rates, to determine whether the costs are “reasonable and prudent.”<sup>30</sup>

For all of these enumerated reasons, the Commission finds that the statutes do not require a CPCN and the record does not support the granting of one even if it was required.

We are convinced by the arguments posited by the Navajo, Hopi, and Peabody, that if they receive some assurance from the Commission that we are committed to preserving a “Mohave-open” option, that that will help make the continued operation of Mohave as a coal- fired plant a self-fulfilling prophecy. To that end, we address the reasonableness of the firm construction costs which have been the subject of a robust evidentiary hearing.<sup>31</sup>

### **Future Procedural Steps**

With 885 MW of energy, Mohave is a valuable resource and will factor in as a key component in Edison’s Long Term Procurement Plan (LTPP). However,

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<sup>30</sup> TURN opening brief, p.p. 9-10.

<sup>31</sup> Navajo reply brief, p. 1.

unless all issues concerning water and coal are resolved by the time Edison files its 2006 LTPP, Edison will have to prepare two resource scenarios: one with Mohave in, and one with Mohave out.

We initially considered having all issues concerning Mohave's future vetted in the 2006 LTPP. However, in response to comments from numerous parties, we clarify the procedures Edison is to follow to obtain Commission authorization to proceed with the environmental retrofits and other capital improvements. We still intend to close this proceeding once this decision is final. The procurement docket, R.04-04-003, however, will remain open. Instead of having Mohave considered as part of Edison's total resource package, we now clarify that Edison is to file a separate application in R.04-04-003, using the sub-service list identified under A.02-05-046, so that the authorization for the retrofits can be considered and determined separate and distinct from Edison's other issues in the LTPP proceeding. Issues litigated in this proceeding and subject to findings herein will not be relitigated.

To expedite the application process, we direct Edison to prepare such an application in advance, with only the costs associated with water and coal missing, so that once those costs are determined, Edison can file the application forthwith.

In this decision we find that the determination of the future fate of Mohave is a matter of economic life or death to the affected parties and inform the future Commission faced with the ultimate decision in Mohave that any steps it can take to expedite the proceeding will inure to reduce the human suffering created by delay and dealing with the unknown.

## **Ratemaking Issues**

### **Construction Costs**

The record in this proceeding establishes that the cost of the pollution controls and related capital improvements as put forth by Edison are reasonable. We therefore approve these costs subject to the conditions herein, and without limiting the Commission's ability to review the costs of the plant in service in a General Rate Case.

Edison has provided evidence and testimony on the costs of (1) engineering and design information; (2) a project implementation plan including contracting processes and construction tasks; and (3) "preliminary estimates of the costs of financing, construction, and operation" including fuel expenses. The construction costs that were the subject of the evidentiary hearing we find to be reasonable. However, the financing, operation, fuel and contingency costs are still inchoate and have not been vetted so we do not make a reasonableness finding at this time for those costs.<sup>32</sup>

In Edison's application filed in May 2002, the utility requested "critical path" spending authority for 2002/2003 so the Consent Decree required retrofits might be in place either soon enough to prevent a shut-down of the plant in 2006, or to shorten any temporary shut-down. This request was made in the context that Edison assumed the water and coal issues would be resolved by 2003.

It is obvious from the record in this proceeding that we are still awaiting resolution of the water, coal and other issues. But we are also mindful that if we do nothing in the interim, the keep "Mohave-open" option could be

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<sup>32</sup> TURN opening brief, p. 10, referencing Cal. Pub. Util. Code § 1003(a), (b), (c), (d), and (e).

compromised. We therefore find reasonable the following costs: (1) continued funding of the C-Aquifer studies; (2) funding of a study of alternative options; and (3) those specific design and construction costs that have been the subject of evidentiary hearings. Edison is also authorized to negotiate with contractors and vendors as necessary. We will borrow from TURN's proposal and limit Edison's recovery to 56% of any monies expended, except for the alternative options study where Edison may recover 100% of the costs incurred.<sup>33</sup> Edison should file an Advice Letter (A.L.) with the Commission's Energy Division (ED) setting forth with specificity line items it believes would be on the critical path to preserving the "Mohave-open" option. The A.L. should be served on the sub-service list, identified by A.02-05-046 as part of the service list for R.04-04-003 and should be updated as circumstances dictate.

Pending the outcome of the C-Aquifer studies, Edison is directed to continue to negotiate in good faith with the other stakeholders to reach a satisfactory resolution of all outstanding issues so Edison will be in a position to go forward with the environmental upgrades as soon as feasible. In the interim, Edison is to do whatever is possible within its control to advance the time line on the Mohave retrofit.

Edison prepared and filed a time-line for the Mohave retrofits, and it is referenced as the "Draft Gantt Chart: Mohave Life Extension (Interim Funding

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<sup>33</sup> Edison ratepayers will not be responsible for more than 56% of any monies spent pursuant to this Decision. The other Mohave co-owners should bear the additional % of expenses since all Mohave owners will benefit from the upgrades to the facility. While we do not have the authority to order the other co-owners to spend the money, we do hope they will cooperate in good faith.

Approval)(Gantt Chart).”<sup>34</sup> This timeline indicates that if and when the retrofit takes place, the plant will have to be closed for a prolonged period of time. In its testimony and briefs Edison indicated that until the water issue is resolved, there are very few expenditures that could be made now that would shorten the shut-down period for the plant.

Numerous parties challenged this assertion, and opined that with a combination of proactive steps taken now, and with a simultaneous, rather than sequential, approach to the engineering, purchasing and construction steps, the Gantt time line could be shortened. Edison is ordered to revisit the Gantt Chart and make a good faith effort to shorten the time line in any and every way possible include these updates with its monthly report.

Edison should file monthly reports with the Commission’s ED updating the Commission and the parties on progress in the coal and water negotiations, the C-Aquifer studies, the alternatives study and update on the Gantt Chart time-line. These reports should be served on the sub-service list for A.02-05-046 as part of the service list for R.04-04-003.

The Commission’s decision at this time is made without prejudice to the ultimate resolution of whether Mohave should continue as a coal-burning plant. However, by authorizing Edison to make certain investments at this time we keep that question open, until such time as a definitive public interest judgment can be made.

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<sup>34</sup> The Gantt Chart is Attachment A to Exhibit 11.

## **Ratemaking Issues**

### **MERMA Account**

No matter what the ultimate fate of Mohave's future will be, it appears that pursuant to the terms of the Consent Decree, the plant will have to temporarily shut-down at the end of 2005. The Consent Decree mandates this, and there has been no evidence that the plaintiffs to the Consent Decree will agree to any change in the closure date or any other terms of the settlement. Therefore, Edison seeks authority to create a new memorandum account—the Mohave Employee-Related Memorandum Account (MERMA)—to track limited worker protection benefit expenses that Edison may incur in connection with the temporary shut-down of Mohave.

As Edison explains in its brief, the creation of the MERMA account does not pre-judge whether Mohave will re-open again, or affect the date of any re-opening. The only purpose of the account is to provide a means for the future recovery of any worker protection benefit expenses associated with the shut-down of Mohave that may be incurred *before* January 1, 2006.

If there is an extension to the Consent Decree and Edison is allowed to keep Mohave operational post 2005, appropriate changes will be made to the MERMA account to reflect this time extension.

Any worker protection benefit expenses associated with the Mohave shut-down that are incurred *after* January 1, 2006, would be addressed in Edison's 2006 General rate Case (GRC).

We agree that this account is appropriate and necessary and direct Edison to file an A.L. with the E.D. establishing the MERMA mechanism and associated preliminary statement language. The expenses Edison is to track in this MERMA account include costs incurred by Edison for severance, retraining, early

retirement, outplacement and related expenses associated with Edison employees impacted by the shut-down of Mohave, including all payroll taxes associated with Mohave worker protection benefit expenses. The balance of the MERMA would earn interest at the standard three-month commercial paper rate.

### **Other Cost Recovery**

Edison has already spent money on preliminary retrofit work, on the C-Aquifer hydro-geological and environmental study and on an initial Preliminary Environmental Assessment (PEA). This decision authorizes additional spending on those activities as well as spending for the alternatives feasibility study. If Mohave operations are ultimately extended, Edison will capitalize its 56% share of these costs along with all other capital improvements made to the facility consistent with accounting conventions. If however, the plant is permanently closed, Edison will request abandoned plant recovery of its 56% share of these expenses in a GRC. We also adopt the Unions' proposal that if Mohave shuts down prematurely, Edison will not recover any unamortized Mohave plant balances unless it can demonstrate that it took all such steps to preserve the "Mohave-open" alternative and that the shut-down is due to factors outside of the utility's control.

While we cannot determine at this time whether Mohave will prove to be cost effective because of the confluence of multiple factors surrounding the Mohave facility--all of which are out of the control of this Commission, we do want to give the parties some assurance. Therefore, all reasonable costs Edison has incurred, or will incur for the water hydro-geological and environmental studies and the preparation of the PEA are recoverable as capital expenditures--subject to audit in a General Rate Case. We find those costs already incurred and reviewed in this proceeding so far to be reasonable.

In addition, as Edison proceeds with the other authorized spending, we will give Edison advance regulatory review and guidance as to the reasonability of the spending if Edison files a request for such review with the ED and serves it on the sub-service list for A.02-05-046 as part of the service list for R.04-04-003.

### **Preliminary Environmental Assessment**

Pursuant to a March 9, 2004, ALJ ruling, Edison prepared and submitted a PEA on August 6, 2004. The ruling directed Edison to address the “necessary construction activities at the [Mohave] site” if the installation of pollution controls and other retrofits were to proceed. In the PEA Edison indicates that the construction activities would span approximately a three-year period from commencement of construction. Even if all the outstanding water and coal issues are sufficiently resolved in 2004 enabling Edison to apply for Commission approval of its share of Mohave investments by early 2005, Edison still projects that the project would not be completed until 2009 to 2010.

The PEA identified that the projected construction activities would have potential adverse impacts to air quality, biological resources, cultural resources and hydrology/water quality. By implementing mitigation measures, Edison opines that all of these impacts can be mitigated to less-than-significant levels.

We do not know if any other environmental review will be required by Arizona or federal laws or statutes.

### **Comments on Proposed Decision**

The proposed decision of Administrative Law Judge (ALJ) Brown in this matter was mailed to the parties in accordance with Pub. Util. Code § 311(d) and Rule 77.7 of the Rules of Practice and Procedure.

### **Assignment of Proceeding**

Loretta M. Lynch is the Assigned Commissioner and Carol A. Brown is the assigned ALJ in this proceeding.

### **Findings of Fact**

1. Mohave is a coal-fired power plant located in Laughlin, Nevada that is subject to the terms of a Consent Decree entered into by Edison and the other Mohave co-owners in 1999, settling a federal civil lawsuit concerning various air quality violations at Mohave.

2. Under the terms of the 1999 Consent Decree, Edison must make necessary and appropriate expenditures on the Mohave Generating Station for pollution control equipment and other related capital investments in order to continue operations post year-end 2005.

3. Edison is the plant operator and owns a 56% undivided interest in the plant.

4. Edison projects that the pollution controls and related capital improvements will cost approximately \$1.1 billion.

5. Mohave obtains all of its coal supply from the Black Mesa Mine and the coal is transported the 273 miles from the mine to the plant by way of a coal-slurry pipeline.

6. The water for the slurry process and for all other water requirements of the mine comes from the N-Aquifer, a well that underlies the land of the Hopi and Navajo.

7. The Hopi and Navajo oppose the further pumping of the N-Aquifer for coal-slurry purposes post 2005.

8. The only potentially viable alternative source of water to replace the N-Aquifer that has been identified to date is the C-Aquifer.

9. The Mohave co-owners, along with the Hopi and Navajo, signed a Memorandum of Understanding regarding the possible use of the C-Aquifer as a replacement for the N-Aquifer.

10. Edison and the other Mohave co-owners are funding a study, to be conducted by the Bureau of Reclamation (BOR), to determine if the C-Aquifer is available as a water source alternative for the N-Aquifer.

11. The BOR study will proceed in two phases: first a hydro-geological study that will take approximately nine months, and then if the results of the hydro-geological study are positive, an environmental study that could take up to two years.

12. The Mohave plant itself needs additional water for cooling purposes over and above the water extracted from the slurry mixture and Mohave's contract for this cooling water expires in 2026; there is no assurance that water will be available after the contract terminates.

13. The Black Mesa Mine is Mohave's only source of coal, and Mohave is the only purchaser of coal from the Mine through an agreement with Peabody.

14. The coal supply agreement between Peabody and the Mohave co-owners terminates at the end of 2005.

15. Parties have been negotiating the quantity, quality and price of coal post 2005, but no final resolution has been reached.

16. Until there is resolution of the water and coal supply and cost issues, this Commission does not have enough data to determine if the future functioning of Mohave as a coal-burning facility is in the public interest and that the necessary \$1.1 billion investment will inure to the benefit of the Edison ratepayers.

17. The only determination this Commission can make at this point in time is to authorize Edison to continue funding the C-Aquifer studies, to fund a study of

alternatives to Mohave, and to continue to work towards resolution of the water and coal issues so as to keep the “Mohave-open” option viable.

18. It is reasonable to limit Edison’s recovery to 56% of any interim spending, reflecting Edison’s ownership interest in Mohave, except that Edison should have the opportunity to recover all costs incurred in the study of Mohave alternatives, if the Mohave co-owners do not participate in that study.

19. Edison should investigate alternative resources to first allow for a meaningful comparison of Mohave’s costs with other alternatives, including the WEC solar and the NRDC IGCC proposals, and also to replace the output from Mohave if the Commission ultimately determines that keeping Mohave open as a coal-burning plant is not in the public interest, or compliment the generation from Mohave if it returns to service.

20. Edison is to establish the MERMA to track limited worker protection benefit expenses that Edison may incur before January 1, 2006, in connection with the expected temporary shut-down of Mohave at the end of 2005.

21. Any worker protection benefit expenses Edison may incur from the Mohave shut-down after January 1, 2006, will be addressed in Edison’s 2006 General Rate Case.

22. Edison should file an Advice Letter with the Commission’s Energy Division establishing the MERMA mechanism and associated preliminary statement language.

23. If Mohave operations are ultimately extended, consistent with accounting conventions, Edison may capitalize its appropriate share (56%) of money already spent on preliminary retrofit work, on the C-Aquifer studies and on any other capital improvements made to the facility.

24. If Mohave is permanently closed, Edison may request abandoned plant recovery of its appropriate share (56%) of all expenses in a General Rate Case.

25. The future of Mohave as a coal-burning plant is a matter of economic life or death to the affected parties and it is reasonable to expedite the processing of Edison's application for full authorization to go forward with the environmental retrofits and other related capital expenditures so as to reduce any unnecessary or avoidable delay.

### **Conclusions of Law**

1. Edison's actual capital costs for the environmental upgrades, upgrades to the coal slurry pipeline and delivery of the new water supply, not including the 30-40% contingency for water and coal contract costs, are reasonable. Nothing herein prevents a review by the Commission of the costs of the plant in service in a General Rate Case.

2. The record supports finding reasonable the funds Edison has spent on the C-Aquifer studies and preliminary engineering, while Edison continues to work towards a resolution of the water and coal issues and to allow Edison to recover 56% of these expenses as capital expenses reflecting Edison's ownership share of Mohave, subject to a showing that Edison did not prematurely cause the facility to shut-down due to action, or in-action, within Edison's control.

3. It is reasonable to defer the Commission's final decision on the future of Mohave as a coal-fired plant until the Bureau of Reclamation completes the hydro-geological and environmental studies to determine if the C-Aquifer is a viable alternative source of water to slurry the coal from the mine to Mohave.

4. If the C-Aquifer is a viable alternative source of water, and if there is resolution on the issues relating to the quantity, quality and price of coal, Edison will be able to recover its reasonably incurred procurement costs.

5. To insure that the Commission has a complete range of alternatives to compare Mohave to, the Commission directs Edison to investigate and collect data on alternatives to Edison's Mohave share of, including proposals presented by WEC and NRDC, and to work with other stakeholders to design this study and to jointly determine who should conduct the study. It is reasonable to allow Edison to recover 100% of the cost of the study if the other Mohave co-owners do not participate in the study.

6. It is reasonable to authorize Edison to establish the Mohave Employee-Related Memorandum Account (MERMA) to track limited worker protection benefit expenses that Edison may incur before January 1, 2006, in connection with the expected shut-down of Mohave at the end of 2005.

7. It is reasonable that Edison recover limited worker protection benefit expenses that Edison may incur after January 1, 2006, in connection with the expected shut-down of Mohave at the end of 2005, in a General Rate Case.

8. It is reasonable that if Mohave operations are ultimately extended that Edison capitalize its 56% of money spent on preliminary retrofit work, on the C-Aquifer studies and any other critical path spending along with all other capital improvements made to the facility, consistent with accounting conventions.

9. It is reasonable that if Mohave is permanently closed that Edison recover its appropriate share of all expenses for abandoned plant recovery in a General Rate Case.

**O R D E R**

**IT IS ORDERED** that:

1. Southern California Edison Company (Edison) may spend necessary and appropriate funds on critical path investments at Mohave as defined herein, including the C-Aquifer studies and an alternatives feasibility study, while Edison continues to work towards a resolution of the water and coal issues.

2. Edison is authorized to recover as a capital expense 56% of any expenses already made on the initial engineering and design plans for the pollution control and retrofit work and any monies expended on the C-Aquifer studies, and 100% of monies spent on the alternatives feasibility study (if the other Mohave co-owners do not participate in the study) and any money Edison spends pursuant to this decision on interim critical path items subject to the limitations established herein.

3. Edison is to explore alternatives to Mohave continuing operation as a coal-fired plant. The focus of this study should be on exploring the specifics of these possible options so they may either be compared with Edison's Mohave share of in a subsequent proceeding, or considered as alternatives to replace the power from Mohave in the scenario where the plant is permanently closed or compliment the generation from Mohave if Mohave returns to service. The alternatives investigated should include options that provide economic stability to the Hopi Tribe and Navajo Nation, and where appropriate, utilize renewable resources for generation. Edison is directed to work with other stakeholders to design this study and to jointly determine who should conduct the study.

4. Edison is to file monthly reports with the Commission's Energy Division updating any progress made on the coal and water negotiations, the C-Aquifer studies, the alternatives' investigation and shortening the Gantt Chart time-line.

5. Edison is authorized to establish a Mohave Employee-Related Memorandum Account (MERMA) to track limited worker protection benefit expenses that Edison incurs before January 1, 2006, and to file an advice letter establishing the MERMA mechanism and associated preliminary statement language.

6. Edison is authorized to recover any costs incurred for limited worker protection expenses incurred after January 1, 2006, in Edison's General Rate Case.

7. Edison may file advice letters, or tariffs, as appropriate and necessary to implement the orders, conclusions and results reached in this decision.

8. If Edison determines that the other Mohave co-owners are not cooperating with the steps and spending established to preserve the keep "Mohave-open" option, Edison shall report this fact to ED and the Commission's General Counsel, so that the Commission may provide further guidance.

9. Edison is to prepare an application for authorization to go forward with the environmental retrofits and other capital expenditures, with the costs for water, coal and other environmental controls, so once the water and coal issues

are resolved, Edison can file the application forthwith. Capital costs found reasonable in this decision will not be re-litigated.

This proceeding is closed.

This order is effective today.

Dated December 2, 2004, at San Francisco, California.

MICHAEL R. PEEVEY  
President

CARL W. WOOD  
LORETTA M. LYNCH  
GEOFFREY F. BROWN  
SUSAN P. KENNEDY  
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**APPENDIX A**  
**LIST OF APPEARANCES**

**APPENDIX A**

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**(END OF APPENDIX A)**