

APPENDIX "C"
TO THE
VERIFIED APPLICATION FOR AUTHORITY TO ISSUE SECURITIES

ARBITRATION AWARDS

**AMERICAN ARBITRATION ASSOCIATION
COMMERCIAL ARBITRATION TRIBUNAL**

In the Matter of the Arbitration between

PACIFICORP

Claimant,

v.

DESERET GENERATION &
TRANSMISSION COOPERATIVE

Respondent

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Case No. 77 198 Y 00223 10 NOLG

FINAL AWARD

I, THE UNDERSIGNED ARBITRATOR having been designated in accordance with the arbitration agreement entered into by the parties, and dated March 24, 1999 and having been duly sworn and having duly heard the proofs and allegations of the parties hereby, AWARD, as follows:

I. INTRODUCTION

This arbitration involves a dispute between PacifiCorp, an electric utility operating in the states of Utah, Wyoming, Colorado and Arizona ("PacifiCorp") and Deseret Generation & Transmission Cooperative, an electric utility operating in Utah and four adjoining states ("Deseret"). Their dispute concerns certain emission control modifications to be made at the Hunter II electric generating facility, one of three generators located at the Hunter Station in Carroll Dale, Utah ("Hunter II"). PacifiCorp and Deseret are two of the three owners of Hunter II, owning 60.31% and 25.108%, respectively. Utah Associated Municipal Power Systems, a political division of the State of Utah ("UAMPS"), holds the remaining 14.582% ownership interest.¹

¹UAMPS, relying on PacifiCorp, as an owner with its own money at stake, to make the correct decision (Tr. 838),

The arbitration agreement between the parties is found in Section 4 of the March 24, 1999 amendment (Ex. J-25) to the parties' Ownership and Management Agreement, dated October 24, 1980 (Ex. J-24). In that amendment, PacifiCorp agreed to present to the Hunter II Management Council for approval any Major Capital Improvement, *i.e.*, one requiring total expenditures in excess of \$1 million. Approval of a proposed Major Capital Improvement results in the costs of that Capital Improvement being billed to Deseret *pro rata* in accordance with its ownership interest. In the event that Deseret withholds consent to a proposed Major Capital Improvement, and the parties are unable to agree upon a satisfactory resolution within 60 days from the date of the Management Council, the dispute can be submitted to binding arbitration. Following an extended disagreement between PacifiCorp and Deseret regarding two proposed Major Capital Improvements, PacifiCorp initiated this arbitration on April 9, 2010.²

The arbitration agreement specifies that the American Arbitration Association ("AAA") is to administer the arbitration, over which a single arbitrator is to preside. Effective October 21, 2010, the AAA appointed the undersigned to act as that Arbitrator. The arbitration is to be completed and an award issued within 120 days after the demand for arbitration is filed, unless the parties agree to a different schedule. The parties agreed that the 120-day period would begin on October 21, 2010 and that the award should be issued on or before February 18, 2011. During the pendency of the arbitration PacifiCorp is authorized to proceed with the Major Capital Improvement(s) with which Deseret disagrees. PacifiCorp is exercising that right and plans to commence work on the disputed modifications on February 26, 2011.

The parties' arbitration agreement specifies that the arbitration will be held in Salt Lake City, Utah and that (Ex. J-25 at 6):

The sole question to be decided either 'yes' or 'no' by the arbitrator is whether the Major Capital Improvement, as proposed by PacifiCorp for Hunter II, the Common Facilities, and/or the Hunter Station Site, is consistent with Reasonable Utility Practice, as defined by the O&M Agreement.

Section 1.1 of the Ownership and Management Agreement dated October 24, 1980 (Ex. J-24 at

has approved the proposed expenditures at issue here.

²Deseret filed suit against PacifiCorp in Utah federal court on January 28, 2010, urging various breach of contract claims. On September 1, 2010, that court granted PacifiCorp's motion to compel arbitration.

8), defines Reasonable Utility Practice as follows:

Reasonable Utility Practice shall mean at a particular time any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry at such time, or which, in the exercise of reasonable judgment in light of facts known at the time, could have been expected to accomplish the desired results at the lowest reasonable cost consistent with good business practices, reliability, safety and expedition. Reasonable Utility Practice is not intended to be limited to the optimum practice, method or act to the exclusion of all other, but rather to be a spectrum of possible practices, methods and acts, having due regard for manufacturers' warranties and the requirements of governmental agencies of competent jurisdiction; *provided however*, that Reasonable Utility Practice shall not include any practice, method or act that discriminates against Hunter II or [Deseret's] Ownership Interest in relation to those employed by [PacifiCorp] at its generating units other than Hunter II or that is less favorable to Hunter II or the Ownership Interest [of Deseret] than those employed by [PacifiCorp] at its generating units at Hunter Station other than Hunter II.

Following document exchanges, depositions and the submission of pre-hearing briefs, seven days of hearing were held in Salt Lake City on January 31-February 4 and February 7-8, 2011. After the parties acknowledged that they had presented all of the evidence they wanted to present, counsel submitted closing arguments and the Arbitrator closed the record.

II. DESCRIPTION OF EXISTING HUNTER II FACILITIES

A. Current Control of Particulate Emissions

Hunter II is a coal-fired, 425 MW, base load, electric generating unit that was put in service approximately 30 years ago. To generate electricity, coal is first crushed to approximately 1-inch size, stored, then when needed pulverized to the consistency of talcum powder. The pulverized coal is then blown into the unit's boiler where it burns in suspension. The boiler generates high pressure, high temperature, steam that is used to drive the facility's

steam turbine generator.

The disputes here involve the handling and treatment of the gas released by boiler combustion (known as "flue gas"), which contains, among other things, particulates, sulfur dioxide ("SO₂") and mercury. Upon exiting the boiler, the flue gas passes through heat exchangers where heat is recovered, resulting in a flue gas stream temperature of approximately 300° F. The flue gas then flows through the unit's weighted wire frame electrostatic precipitator ("ESP"), which removes particulate matter from the gas stream. The flue gas is pulled through the ESP by means of induced draft fans ("ID fans") located downstream of the ESP.

The Hunter II ESP, housed in a large metal casing, consists of alternating series of discharge electrodes and collection electrodes, the latter in the form of large, grounded metal plates. The collection plates are spaced 18 inches apart, or 9 inches from the center of the discharge electrodes. The discharge electrodes are hung from a wire frame at the top of the ESP. Wire tension is maintained by means of an alignment frame located below the collection plates. Electromagnetic vibrators clean the wires and wire frames. The discharge electrodes apply a negative electrical charge to the particles entering the ESP, which particles are then attracted to the metal plates. There, they stick and are held, much like a magnet. These particles are periodically removed from the plates using "rappers", hammer-like arrangements mounted on the top of the ESP, that drop onto the plates from the top, dislodging the attached particles into hoppers located below, from which they are subsequently removed.

While state-of-the-art when originally installed, this kind of ESP has been shown to be less reliable than rigid-frame ESPs long used in Europe and more recently in the U.S. The wires bend and break and the plates bow and become detached, interfering with the creation of an effective electrical field. Sometimes the plates become grounded and must be taken out of service. Maintenance cannot be performed as these problems arise, only when the unit is shut down.

Because the low sulfur coal used in the Hunter II unit creates particles with a relatively high resistivity to the electrical charge applied by the discharge electrodes, the ESP is equipped with a sulfur trioxide ("SO₃") injection system which conditions the incoming particulates to accept the electrical charge. Over the last several years, the Hunter II ESP has generally

removed particulates at rates that satisfy existing environmental regulations, although on a number of occasions compliance with opacity limitations³ has been secured only by de-rating (reducing generation). Exs. J-29 and J-30. Because of the ESP's operational problems, PacifiCorp has had an electrician assigned almost full-time to keep the ESP working as well as possible (Tr. 332-335).

B. Current Control of SO2 Emissions

After exiting the ESP, approximately 90% of the flue gas is moved through Hunter II's scrubber system, propelled by booster fans. This system, known as a "wet scrubber", uses four large vessels to remove SO2. Upon entering at the bottom of these vessels, the flue gas is sprayed with a lime slurry as it rises upward. The lime slurry, prepared in the "lime prep area", reacts with the SO2 and the resulting particulates drop to the bottom of the vessel, often referred to as the sump. Oxygen from the flue gas is used to convert the resulting combination of water, lime and SO2 that accumulates in the sump into calcium sulfite. After additional treating, this sludge, in a paste-like form, is delivered to a landfill on the Hunter Station site, a truck-ride away from the units. In recent years, PacifiCorp has found it difficult to meet the requirements of the landfill permit, which requires that liquids not be deposited in the landfill. To meet this requirement with respect to the scrubber's sludge, PacifiCorp has mixed fly ash with the material in the sump area. Increases in the sulfur content of the coal used at Hunter II have reduced the fly ash available for this purpose, increasing PacifiCorp's difficulty in complying with the landfill requirements.

About 10% of the flue gas bypasses the scrubber.⁴ While this means that SO2 is not removed from these bypass gases, they remain at a higher temperature and, in combination with outside air injected into the stack by means of a re-heat fan, are used to dry the gas exiting the wet scrubber. Absent this drying, water particles would form in the stack. Wet particles have a tendency to give false indications of opacity which would require a de-rating of the facility to avoid non-compliance with opacity limits. Because of the drying, the flue gas exiting the chimney is relatively dry and less opaque, allowing the unit to run at maximum capacity when it

³Opacity or haze is created by fine particulates that escape ESP collection and exit the unit's stack or chimney.

⁴The amount of flue gas bypassing the scrubber is controlled by dampers, which permit PacifiCorp to vary the warm air moving up the chimney.

can do so.

III. THE DISPUTED MODIFICATIONS

A. As Presented in the Hearings

Deseret contests two proposed Major Capital Improvements. As presented in the prehearing pleadings and in the testimony of both parties' witnesses, these two modifications are: (i) the installation of a Jet Pulse Fabric Filter (often referred to as a "baghouse") for the control of particulate emissions and related equipment changes (the "JPFF Project) and (ii) the re-design and upgrading of the scrubber and scrubber-related facilities for greater control of SO₂ emissions (the "Scrubber Project"). The total out of pocket costs of these modifications is approximately \$133.8 million, about one-quarter of which PacifiCorp proposes to charge to Deseret's interest

As so described, the JPFF Project involves a strengthening of the existing ESP casing and the total replacement of its internal components with a JPFF baghouse having multiple independent compartments. Each compartment can be isolated from the flue gas flow for cleaning and maintenance while the remainder of the unit continues to operate. Each compartment consists of numerous cloth bags, hanging from and supported by a metal sheet, with holes in it for the bags, which sheet is suspended from the top of compartment. Each bag has a wire cage inserted into it to prevent the bag from collapsing. Particulates in the flue gas collect on the outside of the bags. Each row of bags has a pulse pipe above it that is used to clean the bags. Air valves, located outside each compartment, sends a pulse of air down the row of bags. This pulse causes each bag to flex away from the cage and to shed the ash collected on the outside wall of the bag.

Because use of the JPFF results in a slower flow of air than does the ESP, two additional and significant modifications are required. The first is re-enforcement of the boiler to assure that it does not implode as a result of increased gas flow. The second is the enlargement of the booster fans in order to push the slower moving flue gas to the scrubber. The costs of operating the JPFF will exceed those of operating the ESP and will result in more "parasitic load", *i.e.*, generated electricity that will be used in operating the unit, thereby reducing the power available

to the owners.⁵

The Scrubber Project, as described throughout the proceeding, involves the closing of the flue gas bypass, modification of the scrubber facilities to handle the additional flue gas, improvements in the scrubber's agitator and absorber unit, and the installation of a forced oxidation system for the sump area (to convert the calcium sulfite to easier handling calcium sulfate). In addition, because the bypass gas is no longer available to dry the wet flue gas leaving the scrubber, PacifiCorp will remove the reheat fan, line the current dry stack to accommodate a wet stack operation, and move the opacity monitors (now in the chimney) to a location upstream of the scrubber. Other work designated as part of the Scrubber Project includes the replacement of the recycle pumps, the introduction of hydroclones into the waste treatment process (to assist in removing water from the waste), and rebuilding the lime prep area and waste disposal system.⁶

Overall, the two sets of modifications will eliminate the need for SO₃ injections, any concerns about fly ash quality, and assure compliance with landfill requirements. Moreover, they will reduce emissions of particulates, mercury and SO₂ to levels satisfying all limitations on those emissions expected in the foreseeable future.

B. As PacifiCorp Now Suggests

During closing arguments, PacifiCorp argued for the first time that in reaching the decision here the Arbitrator should define the JPF Project and the Scrubber Project to reflect the two tranches in which PacifiCorp submitted the projects for approval. Thus, PacifiCorp would have the Arbitrator define and consider as the JPF Project the modifications contained in the \$82 million request submitted to the Hunter II Management Committee on January 26, 2010 and to define and consider as the Scrubber Project those modifications contained in the \$52 million request submitted to the Hunter II Management Committee on March 9, 2010. *See* Exs. C-28 and C-29. PacifiCorp asserts that it was these proposals that Deseret rejected and it is these proposals that the Arbitrator should view as subject to the up or down determination required by

⁵The parties dispute how much incremental parasitic load will result from the installation of the baghouse modifications. The range appears to be approximately 1-3 MWH. Tr. 1593-1596.

⁶PacifiCorp has recently suggested that the work in the lime prep area and the waste disposal system should be considered part of a separate project. These operations are integral to scrubber operation. Moreover, if PacifiCorp had viewed this work as independent of the scrubber upgrade, it presumably would have submitted it as a separate line item on the ballot provided to Deseret.

the arbitration agreement.

While this suggestion has some superficial logic, it is rejected. To begin with, this definition is contrary to the descriptions of the projects in PacifiCorp's internal analyses, pleadings, fact testimony and expert testimony, all of which divided the proposed modifications along functional lines depending on the type of emission being addressed, *i.e.*, particulate removal modifications and SO₂ removal modifications. The proposals submitted to the Hunter II Management Committee were not based on which emissions control functions were affected, but on the manner in which PacifiCorp decided to divide up the overall project for construction purposes. Thus, the \$82 million proposal was based on the contract awarded to Casey Industrial, which, in addition to covering the JPFf installation work and related aspects of the ESP replacement, also includes at least the following SO₂ removal related modifications: closing the flue gas bypass, conversion of the chimney to a wet stack, relocation of the opacity monitors, demolition of the gas reheat air system, removal of the recycle pump and removal of certain scrubber-related components of the ID fan discharge. These are not components of the JPFf baghouse conversion project presented in this proceeding but are directly related to the PacifiCorp decision to upgrade its SO₂ emissions removal capability. This is confirmed by the reports of PacifiCorp's consultants, who treated the Scrubber Project as involving the wet chimney work, Ex. J-13 at 4-2 to 4-5, and the JPFf work as not involving that work. Exs. J-6, J-7 at 9.

The \$52 million proposal reflects the work assigned to a second construction company, Marsulex. This work can in no sense be properly described as the complete Scrubber Project, because many of the modifications would not have been necessary if the bypass remained open and the scrubber was not required to carry a heavier load. PacifiCorp's witness Mr. Van Engelenhoven confirmed that the contracted work does not properly categorize the changes proposed, acknowledging that the contract responsibilities were structured to avoid contractor overlap and interference with one another, not to track the requirements of the JPFf Project or the Scrubber Project, and that the conversion of the dry chimney to a wet chimney was not a JPFf baghouse-related modification (Tr. 1143-44).

Another difficulty with PacifiCorp's recently announced position arises from the fact PacifiCorp seeks to justify the true JPFf baghouse project and the true Scrubber Project on

totally different grounds: the former on end-of-life issues and the latter on regulatory need. As PacifiCorp's counsel noted, combining the two in one Major Capital Improvement creates the risk that if one project is found not to be a Reasonable Utility Practice, that finding could require the rejection of a project that, standing alone, might have been found to be a Reasonable Utility Practice.⁷ It is hard to imagine that the parties intended such an odd, if not perverse, result. For all of these reasons, the recently offered PacifiCorp proposal on how to divide the projects is rejected as being contrary to the evidence of record and an unreasonable interpretation of the parties' arbitration agreement.

PacifiCorp contends that unless the questions answered are tied to the ballots cast, PacifiCorp will be unable to determine the cost of any project ruled on herein. Resolution of this cost question is beyond the scope of this arbitration. For purposes here, the Arbitrator understands the capital cost of the JPF Project to be approximately \$56.4 million and the capital cost of the Scrubber Project to be around \$77.4 million (as calculated by Deseret's expert Mr. Gebhart, Ex. J-90 at 17), before taking AFUDC into account.⁸ The final figures can be determined by agreement or in the course of the court proceeding. While there is some limited overlap between the JPF Project and the Scrubber Project (e.g., the size of the replacement booster fans is affected by both the JPF installation and the changes in the scrubber operation), the parties should be able to agree on the costs related to each project.

IV. ANALYSIS

A. Issues and Burden of Proof

The issues presented for resolution, and to be answered "yes" or "no", are as follows:

- (i) Is the proposed conversion of Hunter II's existing ESP to a JPF baghouse consistent with Reasonable Utility Practice? and
- (ii) Are the proposed upgrades incorporated in the Scrubber Project consistent with Reasonable Utility Practice?

As defined by the parties' agreement, a Reasonable Utility Practice is one that essentially

⁷Tr. 1772. Indeed, that would have been the result here based on the decisions reached below.

⁸AFUDC is Allowance for Funds Used During Construction, a valuation of the time that project money is tied up prior to placing the facility into utility service.

meets two tests. First, the proposed improvement must be a practice, method or act engaged in or approved by a significant portion of the electric utility industry or which, in the exercise of reasonable judgment in light of facts known at the time, could have been expected to accomplish the desired results at the lowest reasonable cost.⁹ The Arbitrator interprets these standards as representing alternate ways in which PacifiCorp can justify its decision. Such expenditures must either be of the type incurred by a significant number of other utilities faced with similar situations or the costs must be demonstrated to be the lowest reasonably possible. A good deal of latitude regarding cost incurrence is provided by the references to the facts known at the time, good business practices, regulatory requirements and the disclaimer of any attempt to require optimum practices. Second, even if the Major Capital Improvement meets these requirements, when compared with PacifiCorp actions taken at other PacifiCorp generating units, it may not discriminate against Hunter Station, Hunter II or Deseret's Ownership Interest therein.

Both parties agree that PacifiCorp has the burden of proving that both the JPFF Project and the Scrubber Project meet these requirements, and each of the projects will be evaluated with these requirements in mind.

B. The Process Leading to the Disputed Capital Improvements

The parties spent a good deal of time focusing on how PacifiCorp arrived at its decisions to pursue the JPFF and Scrubber Projects. Basically, starting in 1999, PacifiCorp began to develop a Comprehensive Air Initiative ("CAI"), which was designed to arrive at a comprehensive, system-wide approach to the resolution of an array of emission control concerns

[REDACTED]

⁹The Arbitrator understands the definition's references to "good business practices, reliability, safety and expedition" and its admonitions that a proposed action need not be the optimum practice and should take into account manufacturer's warranties and the requirements of governmental agencies to be a non-exclusive list of the kinds of considerations that PacifiCorp could take into account in reaching its decision.

[REDACTED]

PacifiCorp's efforts on its own behalf have, to date, been remarkably successful.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

There are undoubtedly many reasons for PacifiCorp's success [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] Mr. Sprott's testimony makes it clear that the Utah Department of Air Quality agency in particular fully discharged its obligations to the citizens of Utah. [REDACTED]

[REDACTED]

[REDACTED]¹⁰ That success, however, does not resolve the issues here. The fact that the agency accepted the impacts of PacifiCorp's facility modifications does not necessarily mean that PacifiCorp met its obligations to Deseret.

[REDACTED]
[REDACTED]

[REDACTED] PacifiCorp's CAI contemplated the installation of JPF baghouse systems and wet stack scrubber systems at its four "BART-eligible" units in Utah – Hunter I and II and Huntington 1 and 2.¹² In April 2005, PacifiCorp's Board of Directors approved what is

¹⁰ Success came at a price of approximately \$1.25 billion for the upgrades.

[REDACTED]

¹² BART-eligible is a designation applied to generators authorized between 1962 and 1977, and contemplates that those facilities may be required to install the Best Available Retrofit Technology. PacifiCorp's CAI provided in [REDACTED] Hunter II, for the installation of facilities exceeding BART requirements.

[REDACTED] Shortly thereafter, as part of PacifiCorp's effort to secure approval of the PacifiCorp-Mid-American Energy Holdings merger, it committed to make these significant system-wide modifications. At least from that point, if not sooner, PacifiCorp was fully committed to install a JPFF baghouse and to upgrade the SO2 removal facilities at Hunter II. Steps to implement this commitment followed soon after. In August 2006, PacifiCorp filed a Notice of Intent to implement the proposed changes at Hunter II (Ex. J-42). In March 2008 the project was approved (Ex. J-1) and in May 2008, PacifiCorp received a construction permit (Ex. J-2).

The record lacks any suggestion, much less evidence, that either of PacifiCorp's two co-owners was consulted prior to PacifiCorp's binding commitment to modify the Hunter II emission control systems. This omission suggests a singular PacifiCorp focus on securing a result consistent with its own interests, regardless of the impact on the co-owners.¹³ That fact does not control resolution of the two issues to be resolved here, each of which is addressed below.

C. The Proposed Conversion of the ESP to a JPFF

An ESP of the type originally installed at Hunter II generally has an expected life of 20-30 years, meaning statistically that the Hunter II ESP is on its last legs. Nevertheless, when PacifiCorp first designed its "fleet-wide" approach to controlling emissions, the ESP at Hunter II, despite its longevity, arguably was in better shape than most of PacifiCorp's ESP's of similar vintage. For example, an EPSCO examination in 2003 produced the anecdotal suggestion that the Hunter II ESP might last another 20 years. Ex. J-51 at 9. More clear-eyed, the EPSCO Phase III report concluded that none of PacifiCorp's Utah ESP's would last longer than 6 years. Ex. J-6 at 9. That six-year period ended in 2009, and the record confirms that the useful life of the Hunter II ESP is at an end. A recent examination revealed that many sections and collection plates are damaged and in need of rebuilding, there is corrosion on the ESP's collection plates,

[REDACTED]

which are significantly bowed, and many of the wire supports and frames are broken. In 2010, on average, 25% of the high voltage frames have been out of service. Ex. J-79.¹⁴ That the ESP is on its last legs is also apparently supported by a 2006 EPSCO review as well (a document on which Mr. Keeper relied but which was not an exhibit in this record). Tr. 498. [REDACTED]

[REDACTED] Thus, as things stand today, and have for a number of years, the Hunter II ESP is at the end of its useful life and must be replaced.

Consequently, the question of whether replacement of the Hunter II ESP with a JPF baghouse (as opposed to installing a modern ESP) is a Reasonable Utility Practice is akin to asking what decision the owner of a new plant would reach in choosing a new particulate control system (except that here the existing casing is usable). There is considerable evidence indicating that the selection of a JPF baghouse in such circumstances is the choice of a substantial portion of the electricity industry. Not only has PacifiCorp made that choice for its Hunter I and Huntington 1 and 2 units, as well as for 4 additional plants in Wyoming, but Deseret itself at its Bonanza unit and the Intermountain Power Project at its facility in southeastern Utah, have made similar decisions with respect to their Utah plants. Tr. 1719-1720. Mr. Lawson reviewed EPA's acid rain database and found that between 1998 and 2010 approximately 130 coal-fired units either began operations with baghouses or converted existing ESPs to baghouses. Mr. McRanie testified (Tr. 812) that the top 18 units in the EPA's industrial boiler database are baghouses. Mr. Keeler stated (Tr. 507) that a number of his clients have replaced ESPs with baghouses and Mr. Grieco, testifying for Deseret, identified one European company that has completed 15 ESP to baghouse conversions (Tr. 1544). *See also* Ex. J-11 at 3 (In 2004, "several US utilities have recently replaced existing ESP's with new stand alone baghouses"). While some existing ESPs have been replaced by new, modern ESPs, Tr. 509, it seems clear that a significant portion of the electric utility industry has made the same choice that PacifiCorp did.

¹⁴ An unscheduled outage at Hunter II permitted this examination. Deseret has not had a similar opportunity to view the internals of the ESP, and to offer a different opinion if appropriate. Nevertheless, the record strongly supports the conclusion that the decision to replace the Hunter II ESP was required by end of life concerns, irrespective of PacifiCorp's commitments. PacifiCorp's Reference Case, for example, indicates that in 2005 PacifiCorp viewed all of its ESP replacements as end-of-life decisions, as all were nearing 30+ years of operational service. Ex. J-12 at 4.

Deseret has undertaken to perform the analysis that PacifiCorp likely should have in order to determine the costs of an ESP alternative to the JPFf baghouse. Mr. Krigmont proposed an updated, rigid frame ESP design that Mr. McRanie, testifying on behalf of PacifiCorp, acknowledged would meet the particulate emissions limitation imposed on Hunter II in its operating permit and would satisfy opacity concerns as well as a JPFf. Installation of such an updated ESP would cost a good deal less than installation of the JPFf, although the full extent of its costs is uncertain.¹⁵

A JPFf, however, has an added advantage: it can control mercury emissions at a level well below even the state requirement that will go into effect on January 1, 2013 (Ex. C-4). In contrast, an updated ESP would not in and of itself resolve, or even address, mercury emissions.¹⁶

Deseret's expert witnesses presented testimony suggesting that technology involving activated carbon injection ("ACI") has been favorably tested and when added to an upgraded ESP, would enable the collection of significant amounts of mercury at Hunter II. While PacifiCorp's experts agreed that ACI testing had been performed, neither they nor any of Deseret's experts could predict either the cost of such a system or the amount of mercury that would be collected. Tr. *E.g.*, Tr. 1713-1715, 1734-1735. Moreover, there was testimony from Mr. McRanie that use of an ACI system in an upgraded ESP could be cost prohibitive. Tr. 806-808. He also noted that the success of ACI was uncertain because of the short distance at Hunter II over which the carbon would have to react with the particles. Tr. 856-859. No evidence to the contrary was submitted, and all of the parties' experts agreed that the ultimate cost, and chance of success, of using ACI to address mercury emissions was uncertain, both in 2005 when PacifiCorp committed to the JPFf installation and even today.

Another potential problem with the use of ACI is created by the fact that while a JPFf

¹⁵Mr. Krigmont conceded, however, that the power supply for his ESP design would not have been available in 2005 when the choice of the JPFf baghouse was made. Tr. 1307-1308. Although he had not performed a confirming study, Mr. Krigmont felt comfortable that the power supply available in 2005, while less powerful, would have been able to achieve comparable results.

¹⁶Deseret asserts that mercury recovery is a PacifiCorp afterthought, an issue that arose after the decision to convert to an JPFf baghouse had already been made. While mercury emissions control may not have been the primary driver of that decision, it was a matter of concern both before and at the time of that decision for both PacifiCorp and the consultants it hired. See Exs. J-6 at 15, J-7 at 7, J-8 at 3-4, J-11 at 2, 4, J-12 at 2, and J-26 at 11.

baghouse would eliminate any need for SO₃ injections to increase the resistivity of the coal particles used at Hunter II, the upgraded ESP could require continued SO₃ injections. Tr. 809, 1694-1696. Such injections, however, would lessen the effectiveness of any ACI system, requiring that even more ACI be used, significantly increasing the cost of any ACI system.

Thus, the choice of a JPFf to replace the existing ESP is the reliable, low-cost and perhaps the only, alternative, given PacifiCorp's need to control mercury emissions. The evidence demonstrates that the choice in 2005 of an upgraded ESP would not have assured reliable, low cost operations that met all anticipated emissions requirements. If PacifiCorp had selected that approach, the inadequacy of the upgraded ESP could well have caused PacifiCorp to replace the upgraded ESP with a JPFf baghouse, thus wasting millions of dollars PacifiCorp would have spent on the upgraded ESP. That is not a risk PacifiCorp was required to take.

Deseret has suffered no discrimination against it or its Ownership Interest in Hunter II as a result of PacifiCorp's choice of a JPFf baghouse. PacifiCorp has installed or will install a JPFf baghouse at each of its Utah generating facilities built in the same time frame as Hunter II in order to address end-of-life issues with respect to the ESP's at those plants. In addition, PacifiCorp has installed or will install a JPFf baghouse at several of its Wyoming generating units. In those Wyoming units where PacifiCorp has not committed to install a JPFf, the record indicates that the existing ESPs in those units are operating well and do not face the same end-of-life decision that PacifiCorp had to make at Hunter II.

In light of the above, the selection of a JPFf baghouse for Hunter II constituted a Reasonable Utility Practice. While PacifiCorp did not follow a normal path in deciding to install a JPFf at Hunter II -- failing to examine seriously any other alternatives -- the choice of a JPFf baghouse turned out to be the best and perhaps the only reliable solution to the end-of-life circumstance presented by the existing Hunter II ESP.

D. The Proposed Scrubber Upgrade

No end-of-life issues are presented with respect to the proposed scrubber upgrade. The current scrubber system at Hunter II is functioning well and meeting all emissions requirements. PacifiCorp presented only company personnel with respect to this issue, primarily to explain what changes were proposed and why regulatory and legal threats made the change necessary.

In addition, PacifiCorp sponsored Mr. Sprott, the former head of Utah's Department of Environmental Quality and the Utah Air Quality Board. Mr. Sprott described in great detail the regulatory requirements and pressures PacifiCorp faced, part of which presumably emanated from his office. Mr. Sprott's testimony, however, served to underscore the fact that PacifiCorp made the decision to upgrade the scrubber solely for its own purposes and without regard for its contractual obligations to its co-owners at Hunter II. Unlike the JPPF baghouse decision, PacifiCorp has failed to carry its burden of proof. [REDACTED]

[REDACTED]

[REDACTED]

First, there is no reliable evidence that a substantial portion of the electric utility industry would have made the voluntary decision to upgrade the Hunter II scrubber when the existing system was performing well [REDACTED]. In contrast there is Deseret's uncontested testimony that the normal way a utility proceeds is for the utility to postpone such a costly decision for as long as possible to see what regulatory limitations will be imposed and what technology is available to deal with them when the time comes to do so.

[REDACTED] The time value of postponing such decisions is significant, not to mention that in the meantime technologies may develop making it easier and less costly to make whatever change is necessary. PacifiCorp's commitment in 2005 to upgrade the Hunter II scrubber before there was any real need to do so is contrary to the practice of most utilities.

PacifiCorp has not really tried to argue that the proposed scrubber upgrade was "expected to accomplish the desired results at the lowest reasonable cost". The evidence shows that PacifiCorp made no attempt to consider other alternatives and, therefore, could not plausibly claim that what it proposed would incur the "lowest reasonable cost". PacifiCorp simply made no effort to find out. The one alternative that is known to have been available was to do nothing until the regulatory requirements for SO2 emissions were better understood. That was not an option PacifiCorp considered.

This failure is particularly acute since the alleged benefit of Hunter II's scrubber conversion to Utah's SO2 control policies is so minimal. Originally, Utah estimated that the total benefit of the millions that would be spent on the scrubber upgrade would be a reduction in SO2 emissions of 240 tons per year, or 0.13% of Utah's total emissions. Ex. J-4 at 25. Deseret's expert Mr. Gebhart made his own calculation and determined that the number might be as high as 485 tons per years, still an extremely small benefit, particularly in light of the cost that would be incurred. PacifiCorp's attempts to undercut the validity of Mr. Gebhart's analysis could not erase the fact that the cost of the Scrubber Project per ton of reduced SO2 emissions far exceeded that of other units at which PacifiCorp committed to the same type of modification. Voluntarily incurring this cost while Utah's SO2 emissions were well under the milestones set out in the plan it submitted to the EPA (Tr. 179-186), rather than arguing that the costs of the scrubber upgrade far outweighed any benefit to the State, again demonstrates PacifiCorp's lack of concern for its contractual obligations to Deseret.

[REDACTED]

In the case of the Scrubber Upgrade, PacifiCorp did discriminate against Deseret's interest in Hunter II. Discrimination occurred when the same result was applied to all Utah units even when the facts did not fit. In addition, [REDACTED] PacifiCorp felt comfortable continuing

¹⁸Mr. Sprott suggested that even the small air quality benefit created by the Hunter II Scrubber Project was an important part of the Utah agency's emission control efforts. That suggestion is inconsistent with the agency's decision to permit higher emissions at Hunter III when it permitted the Hunter II modifications.

to use performing ESPs on some of its generators because they were meeting emissions requirements and faced no end-of-life issues. Yet it declined to make any judgment about doing the same thing in the case of Hunter II's scrubber, preferring instead to implement the CAI rather than evaluate whether the need actually existed. These actions, or inactions, were inconsistent with its contractual obligations to Deseret.¹⁹

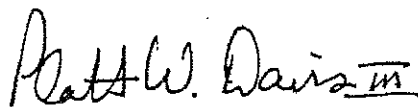
V. AWARD

For the reasons set forth above, I, the undersigned Arbitrator, AWARDS as follows:

1. Yes, the proposed conversion of Hunter II's existing ESP to a JPF baghouse, as defined in Section III above, is consistent with Reasonable Utility Practice.
2. No, the proposed upgrades incorporated in the Scrubber Project, as defined in Section III above, are not consistent with Reasonable Utility Practice.
3. The administrative fees and expenses of the American Arbitration Association, totaling \$4,600.00, and the compensation and expenses of the Arbitrator, totaling \$52,170.72, shall be borne equally by the parties. Therefore, Deseret Generation & Transmission Cooperative shall reimburse PacifiCorp the sum of \$2,300.00, representing that portion of said fees and expenses in excess of the apportioned costs previously incurred by PacifiCorp.
4. Each party shall bear its own attorneys' fees, expenses and other arbitration costs.

This Award is in full settlement of all claims submitted to this Arbitration. All claims not expressly granted herein are, hereby denied.

Entered on February 17, 2011, at Salt Lake City, Utah.



Platt W. Davis III, Arbitrator

¹⁹One has to wonder as well whether the offer to install an upgraded scrubber at Hunter II in order to assist in securing authority to construct Hunter IV, an act PacifiCorp now concedes was discriminatory, so locked PacifiCorp into pursuing the Scrubber Upgrade at Hunter II that it knew it could not effectively argue for different treatment at Hunter II, even if it had wanted to.

AMERICAN ARBITRATION ASSOCIATION
Commercial Arbitration Tribunal

In the Matter of the Arbitration between

PacifiCorp, Claimant
And
Deseret Generation & Transmission Co-Op, Respondent

Case Number: 77 198 00451 10 JMLE

AWARD OF ARBITRATOR

I, THE UNDERSIGNED ARBITRATOR, having been designated in accordance with the Ownership and Management Agreement, dated October 24, 1980, as amended by the Agreement Regarding the Coal Supply and Pricing Relationship Between PacifiCorp and Deseret Generation & Transmission Co-Op Under the Ownership and Management Agreement, dated January 1, 1999 ("the Ownership and Maintenance Agreement"), providing for binding arbitration, and having been duly sworn, and having duly heard the proofs and allegations of the Parties, do hereby, AWARD, as follows:

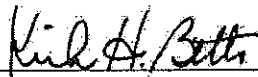
Pursuant to Section 4(a)(ii)(5) of the Ownership and Maintenance Agreement, whether the Major Capital Improvement involving the turbine upgrade project at Hunter 2 (installation of new HP/IP/LP steam turbines and related work), as proposed by PacifiCorp, is consistent with "Reasonable Utility Practices, as defined by the Ownership and Maintenance Agreement," the Arbitrator decides: No.

The administrative fees and expenses of the American Arbitration Association totaling \$4,600.00, and the compensation and expenses of the arbitrator totaling \$16,583.12 shall be borne equally. Therefore, Respondent shall reimburse Claimant the sum of Two Thousand Three Hundred Dollars (\$2,300.00), representing that portion of said fees and expenses in excess of the apportioned costs previously incurred by Claimant.

This Award is in full settlement of all claims submitted to this Arbitration. All claims not expressly granted herein are hereby, denied.

May 3, 2011

Date



Kirk H. Betts