Docket No. _____
Witness: Barry G. Cunningham

BEFORE THE WYOMING PUBLIC SERVICE COMMISSION

PACIFICORP

Direct Testimony of Barry G. Cunningham

October, 2002

Q. Please state your name, business address, and position with PacifiCorp (the Company).

A. My name is Barry G. Cunningham. My business address is 201 South Main, Suite 2300, One Utah Center, Salt Lake City, Utah. My position is Senior Vice President of Generation for PacifiCorp.

Q. Please describe your education and business experience.

A. I have a Bachelor of Arts degree in Physical Science. During my career with PacifiCorp, I have served as a Trainer, Trainer Manager, Assistant Operations Superintendent, a Maintenance Superintendent, a Plant Manager and the Director of Technical Support with responsibility for all of PacifiCorp's small plants. I became Assistant Vice President of Generation in 1998, Vice President of Generation in 1999 and Senior Vice President in 2002, with responsibility for all thermal and hydro generation assets.

Q. What is the purpose of your testimony in this proceeding?

A. The purpose of my testimony is threefold. First, I will describe the process used by PacifiCorp engineers to develop estimated life spans for the Company's steam generating stations. I will explain how steam plant life spans were chosen for this purpose of this proceeding, and I will show how these life span estimates provide a framework for estimating the retirement date for each steam plant. In a similar manner I will describe the procedure used to estimate the retirement date for the Company's hydroelectric generating stations. Retirement dates for each steam and hydro plant were provided by PacifiCorp to Mr. Donald Roff of Deloitte & Touche for use in preparing the depreciation study that is the subject of this

proceeding. The depreciation study performed by Mr. Roff (Exhibit PPL____ (DSR-3)), which is based on plant balances at March 31, 2002, will be referred to hereafter as "the D&T study". The retirement dates provided by the Company to Mr. Roff are the same retirement dates contained in Schedule 3 of the D&T study. I will demonstrate that the estimated retirement dates proposed by the Company for both steam and hydro generation plants are reasonable and prudent and are appropriate inputs for Mr. Roff's depreciation analysis.

Second, I will explain why it is reasonable and necessary to include terminal net salvage, or "decommissioning costs", in the calculation of depreciation rates for generating plants.

Third, I will discuss the depreciation of water rights acquired for the operation of steam generating plants and explain why such depreciation is appropriate for ratemaking purposes.

GENERATION PLANT LIFE ESTIMATION

Steam Plant Life Spans

Q. Please explain what you mean by the "life span" of a steam generating plant.

A. For the purpose of determining depreciation, the life span of a steam plant is the period of time that begins when the plant is initially placed in service and begins to generate electricity and ends when the plant is finally removed from service and ceases to generate electricity. In other words it is the period of time during which electric customers benefit from the generation output of the plant.

Q. When a steam plant is removed from service, will it be retired and its investment removed from the Company's accounting records?

A. It may not be immediately retired from an accounting perspective. More likely the plant will be retained in a reserve status for a period of time until plans for its final disposition are made.

Q. If an accounting retirement is not made, will the plant remain in rate base and continue to impose costs on customers?

A. No. Under the life span concept a plant will be fully depreciated by the time it is finally removed from service.

Q. Why is it necessary to estimate the life span of a steam plant?

A. One major component of PacifiCorp's cost of service is the recovery of capital investment in steam generating plants. This recovery is accomplished through depreciation expense over the productive life of each plant. From the standpoint of setting depreciation rates it is necessary to have a reasonable estimate of the life span of a plant as soon as it is placed in service. For depreciation purposes all steam plant life spans are estimates that may be adjusted over time as circumstances warrant.

Q. What is PacifiCorp's current estimated life span for steam generating plants?

A. The Company estimates that, absent extenuating circumstances, the life span of its steam generating units is 40 years. After careful analysis the Company estimates that all of its steam plants have 40 year life spans, except for Gadsby, Dave Johnston, Hayden, Carbon, and Naughton, which are estimated to have life spans of at least 50 years.

Q. Who prepared the life span analysis?

A. The life span analysis was prepared by PacifiCorp's Generation Engineering staff under my direction. This group includes individuals with over twenty years of service with the Company who are experienced in all areas of steam plant operation, including the design, construction, operation and maintenance of the Company's existing units.

Q. What criteria were considered in the life span analysis?

A. The life span analysis focused on four main areas: (1) an examination of the original engineering design life of the plants; (2) an evaluation of the operating and maintenance history of the plants as determined by owner operational requirements; (3) an assessment of the current condition of major equipment components; and (4) an assessment of current and potential future issues that may affect the continued operation of coal-fired generation plants, such as new generation technology and environmental issues.

Q. Please describe the Company's examination of engineering design lives.

A. One of the fundamental assumptions underlying the analysis is that the life span of PacifiCorp generating units should be consistent with their original engineering design lives, absent some event or set of circumstances that would indicate a need to change. To determine the original design life the Company contacted several of the engineer/architects of its existing plants; specifically, Bechtel for Naughton Units 1 and 2, Jim Bridger and Centralia, Raytheon Engineers and Constructors (formerly Stearns-Roger) for Naughton Unit 3, Huntington Units 1 and 2 and Hunter Units 1 and 2, and Brown and Root for Hunter Unit 3. Discussions with these engineers/architects led to the conclusion that the design life of PacifiCorp

steam plants constructed from the late 1960's through the early 1980's was 30-35 years. To confirm the reasonableness of the design life estimates, the Company also contacted the suppliers of the majority of our major steam plant equipment—General Electric for steam turbine-generators and ABB for boiler equipment. Discussions with these two equipment vendors suggested that during the period in which our major plants were designed, boiler equipment had an expected life of 30 years while steam turbines were expected to last 40 years. Thus, based on information provided by design engineers and equipment suppliers, the Company concluded that 35-40 years was a reasonable estimate for the original design life of its major steam generating plants.

Q. You indicated that there might be events or circumstances occurring during the life of a steam generating plant that could affect its original design life. What kind of events or circumstances were you referring to?

A. In preparing its life span analysis the Company considered three types of extraordinary events, the occurrence of any one of which might require a departure from original plant design life. One such event would be plant operating experience or maintenance practices that departed significantly from the original manufacturer's operating procedures or design parameters. The second type of event would be the installation of equipment or the imposition of operating restrictions necessitated by environmental regulations not anticipated at the time of original plant design. The third type of event would be the infusion of life-extending capital that might lengthen the lives of major equipment items,

compensate for aggressive operating and maintenance practices or respond to the requirements of environmental regulation.

Q. Did the Company evaluate the operating and maintenance history of its steam plants to determine compliance with original design parameters?

A. Yes. A review of historical records indicates that PacifiCorp's steam plants have been operated and maintained in a manner consistent with the 35-40 year life expectation reflected in original design parameters. Manufacturer's guidelines and/or operating recommendations from design engineers have been translated into training materials and operating procedures used throughout the Company's thermal fleet. A review of preventative maintenance logs, work order and equipment histories, and overhaul histories indicates that required maintenance procedures have been consistently applied for all plants. This is further demonstrated by the high capacity factors and low forced outage rates exhibited by PacifiCorp's thermal fleet.

Q. Has the Company identified significant environmental issues, not anticipated at the time of plant design, that could affect the 35-40 year original design life expectation?

A. The following environmental issues are creating risk that the Company's newer coal-fired generating plants may not reach their original design life estimate:

1. The Environmental Protection Agency (EPA) continues to emphasize the need for continued reductions in sulfur dioxide (SO2) and oxides of nitrogen (NOx) emissions. Vehicles for achieving these reductions include the work of the Grand Canyon Transport Commission, new visibility initiatives,

enforcement of New Source Review (NSR) regulations, and proposed new legislation aimed at substantial reductions in SO2 and NOx. Major legislative proposals include Senate Bill S556, sponsored by Senator Jeffords and President Bush's Clean Skies Initiative (CSI).

2. Success of OTAG (Ozone Transport Assessment Group) implementation in the eastern United States will hasten the implementation of new requirements for NOx reductions to the 0.2 to 0.10 lb/mmBtu level. Reductions to this level on our coal-fired boilers will require the addition of Selective Catalytic Reduction (SCR) equipment.
3. There are continued efforts by many groups to commit the U.S. to reduce carbon dioxide (CO2) emissions. Current schedules under the Kyoto Agreement call for reductions in CO2 emissions beginning in 2008.
4. The Maximum Achievable Control Technology (MACT) rule under the Clean Air Act (CAA) has identified a need to reduce mercury emissions by 2008. Rulemaking on emission reduction requirements will be proposed by the end of 2003 and finalized by the end of 2004.
5. There is continued vocal opposition to coal-fired generation from environmental groups, with an increasing likelihood of citizen suits to restrict the status-quo level of coal-based generation, similar to the Company's experience at its Hayden and Craig plants.

While it is impossible to quantify the potential effect of each of these initiatives on individual Company plants at this time, the range and magnitude of future environmental issues raises serious questions about the long term viability of coal-

fired generation. From the standpoint of life span analysis PacifiCorp believes it is likely that future environmental costs will substantially affect the economics for plants whose design life would expire in the 2010-2025 time frame.

Q. Has the expenditure of life-extending capital had an effect on the life span estimates for any of the Company's generating plants?

A. Yes. The infusion of life-extending capital has extended the estimated life span to at least 50 years for Gadsby, Hayden and Dave Johnston. Gadsby was refurbished in connection with its conversion to gas firing capabilities in the early 1990's. The Company anticipates that the addition of a scrubber at Hayden will allow the plant to comply with environmental regulations and achieve a 50-year life span, although there remains some risk that additional environmental regulations could limit this life. At Dave Johnston, the installation of new coal unloading facilities will allow the plant to burn purchased coal and continue to operate beyond the closure of the adjacent Glenrock Coal Mine.

Q. Based on its evaluation of the criteria you have just described, how did the Company arrive at a life span of 40 years for plants that have not had life-extending capital additions?

A. As I explained previously, PacifiCorp believes that, absent extenuating circumstances, steam plant life span should be consistent with original design life. Design life was determined to be 35-40 years. An examination of plant operating and maintenance histories and an evaluation of environmental issues indicates that there is no compelling reason to depart from the design life at this time.

Therefore, a 40-year life span is a conservative reflection of the original design life estimate.

Q. Why is a 40-year life span more "conservative" than a 35-year life span?

A. The life span analysis was prepared to provide inputs to the depreciation study. All else being equal, longer plant lives mean lower depreciation rates. Therefore, a 40-year life span is more conservative than 35 years because it results in more conservative (lower) depreciation rates.

Recommended Steam Plant Life Spans for Depreciation Study

Q. You have just explained that 40 years would be an appropriate life span for the Company's steam generating plants, with the exception of certain plants that have had life-extending capital additions. Has the Company reflected these life span estimates in the current depreciation study?

A. No. For purposes of the current depreciation study PacifiCorp has elected to continue using the steam plant life spans stipulated to by the parties in the Company's last depreciation case, Docket No. 20000-EA-140 (Record No. 4618), and adopted by the Commission in its order dated July 28, 2000. In that stipulation the parties agreed to base depreciation rates for the Gadsby, Dave Johnston, Hayden and Carbon Plants on life spans of 54 years, Blundell of 37 years and James River of 20 years, and to base depreciation rates for all other PacifiCorp steam plants on life spans of 44 years. The only change the Company has made to these Commission-approved life spans is to further extend the life span for the Naughton Plant from 44 years to 54 years, to reflect the most recent engineering analysis.

Q. Why did PacifiCorp choose to use steam plant life spans that are longer than those supported by its own engineers?

A. While the Company believes that a strong case can be made for the use of a 40-year life span, experience in the last depreciation case suggests that other parties will support longer life spans. The proceeding in Docket No. 20000-EA-98-140 included a thorough Wyoming Consumer Advocate Staff (WCAS) review of key depreciation parameters. Much of this review centered on the appropriate life span for steam plants. Now, little more than two years from the April 1, 2000 effective date of the Commission order in that docket, PacifiCorp does not believe it is an efficient use of Company or WCAS resources to repeat this process. When PacifiCorp files its next depreciation study, typically in five years, it may be appropriate to revisit this issue.

Steam Plant Retirement Dates

Q. How was the estimated life span for each plant converted into an estimated retirement date?

A. The estimated life span was added to the original in-service date for each generating unit to arrive at its estimated retirement date. For example, if a unit had an in-service date of 1980 and a 44-year estimated life span, its estimated retirement date would be 2024. For multiple-unit plants, the age was calculated for each unit. Then a weighted-average age for the entire plant was determined by weighting the capacity of each unit. An average retirement date was then calculated based on the remaining life.

Q. Were the estimated retirement dates calculated by the Company for each steam plant based on current Commission-approved life spans provided to Mr. Roff for use in preparing the depreciation study?

A. Yes. The estimated plant retirement dates were provided to Mr. Roff in the form of the document contained in Exhibit PPL____ (BGC-1).

Hydroelectric Plant Retirement Dates

Q. Is the process used to estimate retirement dates for PacifiCorp's hydro generation plants similar to the process used for steam plants?

A. Conceptually the process is very similar. The primary difference is that it is not possible to use generic life span estimates for hydro plants. While steam plants of similar size, vintage, and design requirements would be expected to have the same life span, each hydro plant is unique. Therefore, it is necessary to estimate the life span of each hydro plant separately; or in effect, to determine the retirement date for each hydro plant on an individual basis.

Q. What criteria are important in estimating the retirement date of a hydro plant?

A. The remaining useful lives of hydro facilities are governed either by the terms of operating licenses or by the remaining life of critical civil/structural or electro-mechanical components.

Q. Who prepared the estimated retirement dates for hydro plants?

A. The hydro plant retirement dates were estimated by PacifiCorp's Hydro Engineering and Planning staff. These individuals have experience in both plant operation and maintenance and in project relicensing.

Q. What license are you referring to?

A. The majority of PacifiCorp's hydro projects are federally licensed under the jurisdiction of the Federal Energy Regulatory Commission (FERC) which acts under the authority of the Federal Power Act (FPA). Hydro projects receive their initial license when they are first placed in service and may be relicensed upon expiration of the initial term. This initial term is usually for 50 years. FERC may grant new licenses of up to 50 years, depending upon the unique circumstances at each project. Currently, the most common relicensing period is 30 years. Over 90 percent of the Company's hydro capacity is or will be in the relicensing process in the next few years.

Q. How were the decision criteria applied to determine the retirement date for each hydro plant?

A. As previously mentioned, most of the Company's hydro capacity has been recently relicensed, is currently undergoing relicensing or soon will be. For plants currently in the relicensing process and plants that will begin relicensing in the near future, the estimated retirement date is the date of expiration of the current license plus 30 years (the most common period for new FERC licenses). For example, if a plant's current license expires in 2000, the estimated retirement date for that facility is 2030. For plants that have been recently relicensed, the estimated retirement date is the expiration date of the new license. The remaining life span of the plant is the same as the life of the license.

Q. Is there any exception to the practice of basing estimated retirement dates on FERC license expirations?

A. Yes. As I indicated before, the other primary driver of expected hydro plant life is the remaining life of critical components. PacifiCorp has a number of smaller hydro projects where significant new investment could make the plants uneconomical to operate given current alternative options to supply this energy. If an aging critical component were to fail at such a plant, it is likely that an economic analysis would indicate that the Company should retire the facility rather than spend the capital necessary to operate the plant for the remainder of its license term. For plants where Company engineers have determined that the expected remaining life of a critical component is shorter than the FERC license period, the retirement date of that plant has been estimated to reflect only the remaining useful life of the component. For example, consider a hydro plant with a FERC license expiration of 2025 that will require a complete flowline replacement in 2015. Company engineers believe that replacement of the flowline cannot be economically justified. The estimated retirement date for that plant will be based on the expected critical component failure date of 2015 rather than the 2025 license expiration date.

Q. If the continued operation of a hydro plant is not constrained by critical component failures, why should its life span be limited to the expiration of a FERC license? Wouldn't it be reasonable to expect FERC licenses to continue to be renewed indefinitely?

A. It would be imprudent to anticipate approval of license renewals beyond the near term. The FERC is responsible for hydroelectric project licensing under the Federal Power Act . Historically, FERC has balanced the need for power

produced by projects with the need to protect the surrounding environment and natural resources. However, FERC no longer has the discretion to balance hydro interests with other resource issues given the U.S. Supreme Court's rulings on Section 401 of the Clean Water Act (CWA), endangered species listings under the Endangered Species Act (ESA) and other rulings under the FPA. For example, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service have prescriptive authority under the FPA to provide fish passage in any manner they deem reasonable. As a result, typical license conditions now routinely include revised operating requirements and construction of new environmental mitigation facilities that may make the project(s) uneconomical to continue to operate in the future. This economic viability will need to be determined for each project, but such determination cannot be conclusively made until a new license is re-issued by FERC. For this reason PacifiCorp cannot reliably forecast operating lives beyond current license expiration dates. The estimated hydro plant retirement dates developed by Company engineers using the criteria that I have just described are reasonable and prudent in this dynamic, changing arena and are the appropriate inputs for Mr. Roff's depreciation analysis.

Q. How were the estimated hydro plant retirement dates developed by the Company provided to Mr. Roff?

A. The estimated hydro plant retirement dates were provided to Mr. Roff in the form of Exhibit PPL____(BGC-2).

OTHER PRODUCTION PLANT

Q. What process was used by PacifiCorp to estimate retirement dates for its Other Production Plants?

A. The process was similar to that used for the hydro generation facilities. The life spans for Other Production were assumed to be the length of either the Power Purchase Agreement for the specific facility or the expected life of a critical component. Little Mountain and Foote Creek (aka Wyoming Wind) use the contract length as the estimated life span for their respective facilities. The estimated life spans for the Gadsby Units 4, 5 and 6 were based on the 25-year design life span of the combustion turbine.

Q. Why is the contract life a good estimate of plant life?

A. Given the uncertainty in the power market, it is difficult to project the economic value of the plant past the end of the contract life. The future economic viability for each project will need to be evaluated as it nears the end of its estimated life span.

Q. Why is there a different life span for the Hermiston gas-fired plant than the Gadsby gas-fired plant?

A. The Hermiston gas-fired plant is a combined cycle base-loaded facility, which is designed to run at a steady state condition. Gadsby Units 4, 5 and 6 are peakers, and are therefore expected to cycle on and off at a higher rate. The cycling of the plant takes life out of the combustion turbines and reduces their life span.

Q. How were the estimated other production plant retirement dates developed by the Company provided to Mr. Roff?

A. The estimated other production plant retirement dates are included in Exhibit PPL ____(BGC-1).

TERMINAL NET SALVAGE (DECOMMISSIONING COST)

Q. Please explain the term "terminal net salvage" or "decommissioning cost"?

A. As I use the term, terminal net salvage refers to the cost of removing facilities that have been retired and restoring the site to its original grade. It does not contemplate site re-vegetation or other landscaping activities.

Q. Do the depreciation rates being proposed by the Company in this proceeding include recovery of terminal net salvage for generation plants?

A. The depreciation rates for steam generating plants include recovery of terminal net salvage. With the exception of the Condit and American Fork Plants, which the Company expects to remove, the depreciation rates for hydro plants do not provide for recovery of terminal net salvage.

Q. Why should there be a difference in the recovery of terminal net salvage between steam and hydro plants?

A. Conceptually there should be no difference—terminal net salvage should be reflected in depreciation rates. The cost of removing coal-fired plants is generally consistent for plants of similar size and vintage. This consistency facilitates preparation of reasonable terminal net salvage estimates for steam plants. However, every hydro plant is uniquely situated and the estimated removal costs would have to be individually determined. PacifiCorp will continue to evaluate the most appropriate way to reflect hydro terminal net salvage in future

depreciation studies, but it was decided not to include these costs in the current study.

Q. How were the terminal net salvage factors for steam production plant determined?

A. The terminal net salvage for PacifiCorp's steam generating plants was estimated by Mr. Roff. A description of the procedures used is presented in his direct testimony filed in this proceeding on page 11.

Q. Based on the Company's actual experience, does Mr. Roff's estimate of terminal net salvage for steam plants appear to be reasonable for PacifiCorp?

A. Yes, in fact it appears to be rather conservative. Mr. Roff estimates approximately 8 percent negative net salvage (8%) for steam plant decommissioning. (Net salvage is negative when cost of removal exceeds salvage value. The net salvage percentage is calculated by dividing the net salvage amount by the retirement amount.) PacifiCorp has retired two steam generating plants in the last fifteen years—the Hale Plant and the Jordan Plant—both of which have been removed. The Company's actual terminal negative net salvage for the Hale Plant was (14%) and for the Jordan Plant it was (190%).

Q. Does PacifiCorp expect to remove steam generating plants that are retired in the future?

A. Yes. It has been the Company's practice to remove thermal plants upon retirement for a variety of reasons, and it is its current intention to continue to do so. PacifiCorp assumes that even if laws and regulations do not currently exist

which require removal of generation plants upon retirement, laws and regulations may be enacted that would require removal if the owner or operator fails to do so. There are public safety and environmental issues associated with generation plants, and the public may demand their removal if the owner or operator does not do so. The Company does not believe it is reasonable to assume that retired generation plants will be allowed to remain in place indefinitely in the future. In addition, it is unlikely that PacifiCorp could dispose of the sites of retired generation plants without removal. In fact, even if the Company were to retain the site for its own use, it would probably be necessary to remove the old plant before a new plant could utilize transmission or other site advantages. The Company believes that consideration of the potential obligations associated with indefinitely holding a retired generation plant might indicate that removal is the most prudent course and may be in the long-term public interest.

Q. Does recovery of terminal net salvage costs through steam plant depreciation expense represent sound ratemaking policy?

A. Yes, it does. Two of the most basic precepts of ratemaking policy are that customers should pay for their cost of service and that costs should be matched with benefits. Consistent with these principles, customers who benefit from the output of a steam generating plant should bear all the costs of producing that output, including the cost of constructing the plant and subsequent capital additions, the costs of operating and maintaining the plant over its productive life, and ultimately the cost of retiring and removing the plant. Recovery of terminal net salvage through depreciation expense over the useful life of the plant is the

only way to achieve a full and fair matching of costs and benefits. If recovery of terminal net salvage were to be deferred until the plant is actually retired, some customers would inevitably pay less than their cost of service while other customers would pay more than their fair share.

Q. Is the estimated removal cost for the Condit and American Fork hydro plants included in the current depreciation study prepared by Mr. Roff?

A. Yes. The depreciation rates developed by Mr. Roff for the Condit Plant reflect the recovery of $19.7 million for removal of the Condit dam and $1 million for removal of the American Fork facilities. This recovery is explained in Mr. Roff's direct testimony on page 12 and is documented in the depreciation study, Exhibit PPL____(DSR-3), Schedule 3.

Q. Are Condit dam removal costs reflected in currently authorized depreciation rates?

A. Yes. The depreciation rates approved by the Commission in Docket No. 20000-EA-98-140 that became effective April 1, 2000 include recovery of Condit removal costs.

Q. Please describe the situation involving the American Fork Plant.

A. The cost of removing the American Fork Plant has not been addressed in previous depreciation studies. However, the current FERC license for operating the plant expires in 2008, and PacifiCorp is faced with two alternatives—relicense the project and continue to operate it or decommission the facility. Since economic analysis has demonstrated that a relicensed American Fork project would not be cost effective, the Company does not plan to continue to operate the plant after the

current license expires in 2008. The Company's current estimate of the cost that will be required to decommission the American Fork Plant is $1 million. This amount is included in the current depreciation study as removal cost in order to recover it over the remaining useful life of the plant from the customers who will be served by the plant.

DEPRECIATION OF WATER RIGHTS

Q. Please describe the water rights that are at issue in this proceeding?

A. Coal-fired generating plants require significant amounts of water for operating and cooling purposes. The water rights at issue, most of which are associated with the Hunter, Huntington, and Dave Johnston Plants, were acquired to satisfy this operational need for cooling water. For the most part the cost of obtaining these rights was included in the original plant construction cost, although some additional rights have been acquired over the years to meet changing needs.

Q. Why is it appropriate to depreciate the cost of water rights?

A. All generating plant construction costs, including water rights, should be recovered from those customers who benefit from the output of the unit over its productive life. It is necessary, then, to allocate the cost of water rights to generation expense in a systematic and rational fashion over the life of the plant. This allocation is accomplished through depreciation.

Q. For the most part, PacifiCorp's coal-fired generating plants are located in arid areas where water is a scarce commodity. Why wouldn't the value of water rights be expected to actually appreciate over the life of the plant—thereby eliminating any need for cost allocation through depreciation?

A. Although the value of water rights might be expected to increase over time, this expectation is based on the water being used for the same purpose at the time of acquisition and sale. The fact is that the Company was required to pay a significant premium above the market value of water for agricultural purposes to acquire the large blocks of water necessary to operate a generating plant. To operate the Hunter and Huntington plants, PacifiCorp had to acquire one-third of the water rights in Emery County, Utah. The water will be sold for agricultural purposes. Upon plant retirement, PacifiCorp will be unable to recover the premium it paid at acquisition by selling large blocks of water whose only use is growing hay and raising cattle.

Q. What makes you think that the water rights currently owned by PacifiCorp will not be needed in the future for non-agricultural purposes in Emery County?

A. These water rights will not be available until the Hunter and Huntington Plants are retired and closed. In 1998, between the generating plants and their associated coal mines, PacifiCorp directly employed more than 20 percent of the employed labor force in Emery County and made possible many additional jobs in supporting industries. The Company also paid more than 70 percent of total Emery County property taxes in 1998. Closure of the Company facilities will be a major economic blow to the area and may provide the impetus for an outward migration of job-seekers. Under these circumstances the municipalities in Emery County will likely need less water rather than more, and there are few prospects

for other major industrial development in this area. Thus, the major use for the water rights owned by the Company will undoubtedly be agricultural.

Q. Is there a similar situation with the water rights acquired for the Dave Johnston Plant in Wyoming?

A. Yes. PacifiCorp needed to acquire very high quality water rights to ensure the continued, uninterrupted operation of the Dave Johnston Plant because there is no water storage capability in the area. The rights acquired were converted from agricultural use at a substantial premium. Because the value of water for generation is so much greater than the value of water for ranching, it is unrealistic to expect the conversion premium to be regained when the water is again made available for agricultural use.

Q. How do the facts you have just described support the depreciation of water rights?

A. Since the future value of water rights is expected to be small compared to their acquisition cost, it is sound ratemaking policy to recover the cost of these rights through depreciation expense from the customers who benefit from their use. It makes no sense to require a future generation of customers to bear the risk of paying for water rights for a plant that never served them.

Q. You have explained that when the steam plants are retired, the residual value of water rights will be small compared to their acquisition costs. How has this residual value been reflected in the depreciation study?

A. In arid states such as Utah and Wyoming, water rights will always have value. For purposes of the depreciation study, the Company has included a ten percent

salvage value for the water rights when they are converted from industrial to agricultural use upon the retirement of the generating plants. Such inclusion reduces depreciation expense for these plants.

CONCLUSION

Q. Based on the foregoing testimony, what conclusions have you reached?

A. It is my opinion that the life spans approved by the Commission in Docket No. 20000-EA-98-140 for PacifiCorp's steam generating plants (adjusted only to extend the life of the Naughton Plant) provide a reasonable basis in this case for the estimated retirement dates used as inputs for Mr. Roff's depreciation analysis. Similarly, it is my opinion that the hydro plant retirement dates provided to Mr. Roff are reasonable and are based on the latest engineering estimates. I conclude that the terminal net salvage calculated by Mr. Roff for PacifiCorp steam generating plants is reasonable and conservative, based on the Company's actual experience. It is necessary to include steam plant terminal net salvage in depreciation rates to properly match customer benefits with customer costs and to ensure that all customers pay their full and fair cost of service. These same principles of ratepayer equity require that the Condit and American Fork hydro plant decommissioning costs be recovered through depreciation expense from the customers being served by the these hydro plants. Finally, I conclude that the cost of water rights acquired to operate steam generating plants should be recovered through depreciation from the generation of customers who were served by those plants.

Q. Does this conclude your testimony?

A. Yes.