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BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-99-
DOCKET NO. UG-99-

DIRECT TESTIMONY OF DAVE DEFELICE

REPRESENTING AVISTA CORPORATION

WUTC		
DOCKET NO.	<u>UE-991600</u>	
EXHIBIT #	<u>T-290</u>	
ADMIT	W/D	REJECT
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EXHIBIT T- 32

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Q. Please state your name, business address, and present position with Avista Corporation?

A. My name is Dave DeFelice. My business address is East 1411 Mission Avenue, Spokane, Washington. I am employed by Avista Corporation (Company) as a Rate Analyst.

Q. Would you please describe your education and business experience?

A. I graduated from Eastern Washington University in June of 1983 with a Bachelor of Arts Degree in Business Administration majoring in Accounting. I have served in various positions within the Company, including Analyst positions in the Finance Department (Rates section and Plant Accounting) and in Marketing/Operations Departments, as well. While employed in the Plant Accounting section of the Finance Department in 1988-1990, I was involved in a depreciation study of the Company's Electric Plant facilities. I rejoined the Rates section in December of 1997 as a Rate Analyst.

Q. As a Rate Analyst, what are your responsibilities?

A. As a Rate Analyst I'm involved in activities ranging from financial analysis of special contracts, line extension tariff administration, and other regulatory processes including WAC rule revisions and WUTC studies on deregulation (ESSB 6560 & ESSHB 2831).

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

A. My testimony and exhibits in this proceeding will cover the Company's proposed changes in depreciation rates pertaining to Electric Plant in Service for Generation, Transmission, Distribution and General Plant accounts. Similar information is provided for Gas Plant in Service for Underground Storage, Distribution and General Plant

1 in service.

2 Q. What is the impact of the proposed changes in depreciation rates?

3 A. The Pro Forma Depreciation Adjustment, reflects an increase in electric
4 depreciation expense due to the utilization of new depreciation rates that were the result of a
5 detailed depreciation study performed by a consultant from Deloitte & Touche, LLP (D &
6 T). This adjustment also eliminates the out-of-period annual depreciation expense true-up
7 adjustment for 1997 recorded in 1998 and adds in the true-up for 1998 that was recorded in
8 1999. The effect of this adjustment is to decrease electric system operating income before
9 federal income tax by \$91,626. This amount is calculated on Page 3 of Exhibit 33. The
10 same adjustment for gas operations is to decrease system operating income before federal
11 income tax by \$17,752. This amount is calculated on Page 3 of Exhibit 33.

12 Q. When was the last time the Company changed its depreciation rates?

13 A. The last time the Company changed depreciation rates was January 1, 1990.

14 Q. Is the Company proposing different depreciation methodologies in this case
15 than what was used in 1990?

16 A. No. The change in depreciation rates determined by D & T, and the resultant
17 change in expense, is due to updated information determined through study and analysis of
18 historical retirement experience, salvage and cost of removal experience, along with
19 evaluation of Company plans and expectations, and determination of updated unit
20 remaining lives and net salvage factors, not new methodologies. It should be noted that the
21 Company continues to employ the Sinking Fund methodology for determining the
22 depreciation expense of its hydro electric generating facilities.

23 Q. Why are new depreciation rates being proposed in this general electric
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1 filing?

2 A. Accounting theory requires matching of expenses with either consumption or
3 revenues to ensure that financial statements reflect results of operations as accurately as
4 possible. The matching principle of financial accounting is often referred to as the “cause
5 and effect” principle. Because utility revenues are determined through regulation, changes
6 in asset consumption are not automatically reflected in revenues until regulated revenues
7 are adjusted to reflect the changes in asset consumption. Consumption of utility assets must
8 be measured directly by conducting a book depreciation study to accurately determine
9 mortality characteristics. Matching is an element of regulatory philosophy that addresses
10 intergenerational equity. Intergenerational equity means costs are borne by the generation
11 of customers that caused them to be incurred, not by a later generation. This matching
12 concept is one principle that can be used to ensure that charges to customers reflect the
13 actual costs of providing service. Also, proper matching of costs and revenues related to
14 group (mass) asset consumption will provide for not only sufficient recovery of existing
15 assets in service, but also provide for a mechanism to fund replacements of retired assets on
16 a timely basis, thus reducing rate impacts by way of limiting “catch-up” adjustments in
17 future depreciation studies.

18 Q. Please summarize the analysis methods used in the depreciation study?

19 A. The study consisted of the following processes:

20 Step One was a Life Analysis consisting of determination of historical retirement
21 experience and an evaluation of the applicability of that experience to surviving property.
22 For Production Plant, this step also entailed the determination of the generating unit
23 retirement dates suitable for rate calculation.

1 Step Two was a Salvage and Cost of Removal Analysis consisting of a study of
2 salvage value and cost of removal experience and an evaluation of the applicability of that
3 experience to surviving property.

4 Step Three consisted of the determination of the generating unit remaining lives, the
5 average service lives, the retirement dispersion identified by pending construction additions
6 and interim retirement ratios for Production Plant and retirement dispersion by Iowa-type
7 curves for Transmission, Distribution and General Plant, and the net salvage factors
8 applicable to surviving property for all categories of plant.

9 Step Four was the determination of the depreciation rate applicable to each plant
10 group, recognizing the results of Steps One through Three, and a comparison with the
11 existing rates.

12 Q Can you elaborate on the two different methods used for plant retirement
13 dispersions?

14 A. For Electric Transmission, Distribution and General Plant, and Gas Plant in
15 Service Account, historical retirements were used as a basis for the actuarial method of Life
16 Analysis. This can be performed since the vintage of retired and surviving property is
17 known. Multiple periods, or bands, of retirement history were used for analysis, 1) the last
18 five years, 2) the last ten years, 3) the last 15 years and 4) the entire period of history. From
19 this, actual survivor curves were visually fitted to Iowa-type standard curves.

20 The actuarial method of Life Analysis will not produce meaningful results for Production
21 Plant, because the actuarial method will provide a misleading indication of both average
22 service life and retirement dispersion without extensive terminal retirement experience.

23 Thus, a two step analysis was utilized. Step One was the estimation of the retirement date
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1 for each generating unit and Step Two was the calculation of past interim addition and
2 retirement ratios. Interim additions and retirements were determined from the Company's
3 actual recorded history by plant and account for the entire history of each plant. These
4 amounts then determined interim retirement ratios (interim retirements as a percentage of
5 past depreciable balances) that is the depreciation rate that would have recovered an amount
6 equal to the total interim retirements.

7 Q. What would be the impact if interim retirement ratios were not used in
8 Production Plant depreciation analysis?

9 A. Due to the nature of the mortality characteristics of generating plants,
10 using only historical retirements in the same way that is done for other plant categories
11 would result in artificially low depreciation rates for generating plants during the early years
12 of asset life. This is due to the fact that plant retirements for generating plants are not as
13 prevalent in the early years of plant life, as compared to the later in the remaining life of a
14 facility. Thus, cost recovery through depreciation rates would be disproportional (higher) in
15 the later years of the plant life, which violates the attempt to achieve intergenerational
16 equity.

17 Q. What are Iowa Curves?

18 A. Iowa Curves represent frequency distribution of retirements identified by a
19 simple nomenclature. The nomenclature is a combination of a letter and a number, the
20 letter refers to the shape of the distribution, whereas, the number represents the
21 concentration of retirements near the average service life.

22 For example, an "L" curve has the majority of retirements occurring prior to the average
23 service life or to the left of the mean. An "R" curve has the majority of retirements

1 occurring after the average service life or to the right of the mean. An "S" curve is
2 symmetrical to the mean or average service life.

3 For gas distribution plant accounts where aged retirement information was not available
4 for the entire study history, a method known as Simulated Plant Record (SPR) analysis
5 was utilized. The SPR method determines retirement dispersion and average service life
6 combinations for various bands of years that best match the actual retirements and balances
7 for each assets category. The simulated balances procedure consists of applying survivor
8 ratios (portion surviving at each age) from Iowa-type dispersion patterns in order to
9 calculate annual balances, and then comparing the calculated balances with the actual
10 balances for several periods, followed by statistical comparisons of differences in balances.

11 The simulated retirements procedure is similar, except that the retirement frequency rates
12 of the Iowa patterns are utilized to calculate annual retirements, and the comparisons are to
13 actual retirements rather than to plant balances.

14 Q. Could you discuss the analysis supporting the salvage and cost of removal
15 ratios that are proposed by the Company?

16 A. The analysis was based upon actual salvage and cost of removal experience
17 from 1983 through 1997. Salvage and cost of removal factors were developed for each
18 property group by dividing salvage and cost of removal amounts by the original cost of the
19 retired property. Since the average dollar age of retirements of plant is young relative to
20 the expected age of surviving property at retirement, this results in overstating salvage
21 factors and understating the cost of removal factors applicable to surviving property, if
22 history serves as the sole basis for net salvage determination. From this, salvage factors
23 would be overstated because young property retirements are more likely to be reused than

1 junked and the salvage value of reused items is much higher than scrap value. In addition,
2 cost of removal factors are understated because the amount of inflation reflected in the cost
3 to remove young property is much less than the amount that will be reflected in the cost to
4 remove the surviving property when it is retired. The average age of original installations at
5 retirement is equal to the average service life, meaning that the average age of surviving
6 property at retirement will be higher than the average service life and much higher than the
7 age of current retirements. Reaction to this situation resulted in an inflation adjustment to
8 historical cost of removal ratios.

9 Q. What were the changes in electric depreciation rates that were recommended
10 as a result of the study?

11 A. Following is a table that shows the existing rates and the recommended
12 rates:

<u>Functional Electric Group</u>	<u>Depreciation Rates</u>	
	<u>Existing %</u>	<u>Recommended %</u>
Steam Production Plant	3.12	3.38
Hydraulic Production Plant	1.04	1.58
Other Production Plant	4.18	2.36
Transmission Plant	2.41	2.88
Distribution Plant	2.27	2.45
General Plant	6.00	12.24

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18 Q. What does that represent in terms of a percentage increase in depreciation
19 expense?

20 A. By utilizing the new rates recommended in the study and applying them to
21 system electric plant balances as of December 31, 1996, depreciation expense increased by
22 approximately 21%, with Production plant and General plant constituting the majority of
23 the increase.

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Q. Can you summarize the findings and recommendations of the depreciation study using the functional groups listed above?

A. Yes. The composite rate for electric property under the study changed from 2.46% to 2.98%. As a group, life changes were mostly increases. Net salvage changes were mostly decreases due to decreased salvage and increased cost of removal. The relationship of increased asset life and net salvage decreases is expected due to the fact that cost of removal is sensitive to price level changes that reflect labor costs, while the salvage value of an asset will inherently decrease as its age increases.

A primary cause of the increase in Hydraulic Production Plant was the recommendation to update the interest rate included in the Sinking Fund calculation from the old rate of 6% to 9% to better reflect the Company's current cost of capital. Transmission and Distribution plant accounts experienced increased levels of negative net salvage. Steam Production plant accounts increased due to new investment activity which has a shorter recovery period than original installations and increased negative net salvage. Other Production plant decreased due to increased service lives. General plant increased due to changes in average service lives reflecting technological obsolescence. Specifically, Account 391.1, Computer Equipment lives were reduced from 8 to 5 years to more appropriately reflect asset turnover. Account 397, Communication Equipment lives were reduced from 18 to 10 years to better reflect the type of asset being installed.

Q. What are the Company's plans with regards to management of its installed personal computer base?

A. Computer technology is rapidly changing. The Company is planning to enter into a lease agreement with a large computer vendor to obtain office computers

1 through a 3 year lease program and rotate new computers at the end of each individual
2 lease.

3 Q. Why is the recommended average life for Account 391.1-Computer
4 Equipment, as a result of this depreciation study, 5 years, and not the 3 year life being
5 utilized in the new lease program?

6 A. Personal computers are not the only equipment in this category. Other
7 equipment are printers, control boxes, modems, etc. An average of 5 years is a better
8 reflection of the overall assets in this account. It is expected that another depreciation
9 study will be performed after December 31, 2001 and technology sensitive depreciable
10 assets will be re-evaluated at that time.

11 Q. What were the changes in gas depreciation rates that were recommended as a result
12 of the study?

13 A. Following is a table that shows the existing rates and the recommended
14 rates:

<u>Functional Gas Group</u>	<u>Depreciation Rates</u>	
	<u>Existing %</u>	<u>Recommended %</u>
Underground Storage Plant	2.39	2.36
Distribution Plant	2.56	2.68
General Plant	5.97	6.39

18 Q. What does that represent in terms of a percentage increase in depreciation
19 expense?

20 A. By utilizing the new rates recommended in the study and applying them to
21 system gas plant balances as of December 31, 1996, depreciation expense increased by
22 approximately 4%.

23 Q. Can you summarize the findings and recommendations of the depreciation
24

1 study using the functional groups listed above?

2 A. Yes. The composite rate for gas property under the study changed from
3 2.58% to 2.69%. As a group, life changes were mostly increases. Net salvage changes
4 were mostly decreases due to decreased salvage and increased cost of removal. The
5 relationship of increased asset life and net salvage decreases is expected due to the fact that
6 cost of removal is sensitive to price level changes that reflect labor costs, while the salvage
7 value of an asset will inherently decrease as its age increases.

8 General plant increased due to changes in average service lives reflecting
9 technological obsolescence. Account 1397, Communication Equipment lives were reduced
10 from 18 to 10 years to better reflect the type of asset being installed.

11 Q. What impact did normalizing the annual expense true-up adjustments have
12 on depreciation expense?

13 A. Properly recording the true-up adjustments in their respective reporting
14 periods served to slightly reduce recorded expense for the 1998 test year.

15
16 Q. Please explain the annual expense true-up adjustments and the impact they
17 have on depreciation expense?

18 A. Properly recording the true-up adjustments in their respective reporting
19 periods served to slightly reduce recorded expense for the 1998 test year.

20 Q. Please summarize the effect of the depreciation adjustment has on the
21 electric system results of operations?

22 A. The effect of this adjustment decreased electric system operating income
23 before federal income tax by \$6,762,000. This amount is calculated on Page 1 of Exhibit 33.

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Q. Could you please state again the effect this adjustment has on the gas system results of operations?

A. Yes. The effect of this adjustment decreased gas system operating income before federal income tax by \$796,500. This amount is calculated on Page 2 of Exhibit 33.

Q. Does that conclude your direct testimony?

A. Yes, it does.