

Exhibit ____ (JL-T-RD)
Rate Design Testimony

Before the
Washington Utilities and Transportation Commission

Docket Nos.
UE-991606
UG-991607

Direct Testimony of

Jim Lazar
Consulting Economist

On Behalf of
Public Counsel

Rate Design Issues

May 5, 2000

Dockets UE-991606 / UG-991607
Direct Testimony of Jim Lazar
Rate Spread and Rate Design Issues

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2
3 **Q. Are you the same Jim Lazar who has submitted evidence in the revenue**
4 **requirement phase of this proceeding?**

5
6 A. Yes, and my qualifications are addressed in that testimony, Exhibit ____ (JL-T-RR).

7
8 **Q. What is the purpose of this testimony?**

9
10 A. In this testimony, I address rate design issues contained in the testimony of Avista
11 witness Hirschhorn. My recommendations on rate spread are contained in the Joint
12 Testimony of WUTC Staff, Public Counsel, and Northwest Industrial Gas Users.

13
14 **II. COST OF SERVICE - ELECTRIC**

15
16 **Q. Should the Commission rely on the Company’s electric cost of service study in**
17 **spreading the rate adjustment in this proceeding?**

18
19 A. No. The Commission should rely on the Joint Testimony of WUTC Staff, Public
20 Counsel, and the Industrial Customers of Northwest Utilities, and should spread any
21 change in overall electric revenue requirements in accordance with the exhibit to that
22 testimony.

1 **III. RATE DESIGN - ELECTRIC**

2
3 **Q. What issues do you address in electric rate design?**

4
5 A. There are two issues, both dealing with residential rate design. First, I recommend that
6 the customer charge be increased from the current \$3.00 per month to \$3.82 if a significant
7 rate increase is granted, rather than the \$5.00 level the Company has requested. Second, I
8 recommend that the current three-block rate structure be retained. If any increase or
9 decrease in rates is approved, it should be applied on a uniform basis to each rate block.

10
11 **A. Customer Charge**

12
13 **Q. Begin with the customer charge issue. How do you respond to the Company's**
14 **assertion that the cost of meter reading and billing is \$5.18/month, and therefore the**
15 **monthly customer charge should be raised to \$5.00?**

16
17 A. I believe that a more accurate estimate of the costs which should be recovered in the
18 customer charge is \$3.82/month, and I recommend that the customer charge be established
19 at that level if one-third or more of the Company's requested increase is approved. If an
20 increase of less than 3% is granted, or a decrease imposed, the customer charge should
21 remain unchanged. The calculation of \$5.18/month, which appears at Page 5 of Mr.
22 Hirschhorn's Exhibit 493, is based on two assumptions which I believe are improper.
23 First, he has used the Company's proposed rate of return, and Mr. Hill has addressed why
24 that is in excess of a fair rate of return. Second, he has assumed that the costs of monthly
25 meter reading and billing should be recovered in the customer charge.

1 **Q. Do you have anything to add to Mr. Hill’s analysis on rate of return?**

2
3 A. Only one thing. Since the customer charge is absolutely stable from month to month,
4 providing the Company with very certain recovery of metering and billing costs, it would
5 seem to pose a lower risk than those elements of cost which are subject to uncertainty, such
6 as fuel or hydro system power costs, weather-related variations in sales levels, or other
7 riskier elements of service. If anything, an even lower rate of return should be applied to
8 meters and services.

9
10 **Q. Please explain your calculation of the customer-related costs on the Avista**
11 **electric system.**

12
13 A. For the residential class, this is approximately \$3.82/month, as shown on Exhibit
14 ___(JL-RD-1). In this calculation, I have included the costs of services, meters, meter
15 reading, and billing. I have also included administrative and general expense loading, and
16 general plant loading. These are the customer-related costs as determined by the
17 Commission in Docket U-89-2688-T, and reaffirmed in proceedings to which this
18 Company has been a party since that time such as UE-920499. However, for Avista, I have
19 reduced the meter reading and billing costs by 45%, to reflect that at most, only bimonthly
20 meter reading and billing costs should be considered customer-related. The previous
21 proceedings where the Commission determined the appropriate costs to include in the
22 customer charge were Puget dockets (U-89-2688-T; UE-920499), and at the time of
23 Puget’s last general rate case (UE-920499), Puget billed most residential customers on a
24 bimonthly basis.

1 **Q. On what basis do you assert that only bimonthly meter reading and billing costs**
2 **are customer-related?**

3
4 A. All customers must pay the customer charge regardless of their usage. Consider an
5 example of a neighborhood association owning a community park with one light fixture
6 and one power outlet, used for occasional group functions. It pays a customer charge for a
7 meter that has registered only one kilowatt-hour in the past two years. Does it really make
8 sense to read this meter every month? If all customers used very little energy, that is, were
9 only “essential use” customers, there would be sales of perhaps 100 kwh/month or so per
10 customer, and there would be no conceivable justification for reading meters and rendering
11 bills every month. It is only because most customers use significant amounts of energy,
12 and the amount that they use varies widely, that there is any conceivable justification for
13 monthly meter reading and billing. Those customers who DO use only small amounts of
14 electricity should not be forced to subsidize the cost of more frequent meter reading and
15 billing which may be justified (if at all) because of the high use of other customers.

16
17 **Q. Does the Company recognize and accept this logic?**

18
19 A. Yes. During cross-examination, Mr. Hirschhorn agreed that monthly meter reading
20 and billing was only justifiable due to the large and varying usage of customers. That is a
21 usage-related cost, not a customer-related cost.

22
23 **Q. Does the Commission have a rule on meter reading and billing frequency?**

24
25 A. Yes. WAC 480-100-101 requires companies to read meters and render bills no less
26 frequently than bimonthly.

1 **Q. What is the practice of major electric utilities in this state?**

2
3 A. Most of the other large utilities read meters and render bills bimonthly. These include
4 Seattle City Light, Tacoma City Light, and Snohomish PUD. Puget Sound Energy (Puget)
5 has historically read meters and rendered bills bimonthly; in areas with automated meter
6 reading equipment installed, it has moved to monthly meter reading since the merger, but I
7 believe that decision was driven by short-term profitability. In Puget's last rate case, they
8 were allowed working capital associated with the lag of bimonthly meter reading and
9 billing. By accelerating collections with monthly billing, Puget is enjoying both the benefit
10 of working capital in rate base and the benefit of more rapid cash flow. This was, perhaps,
11 an unintended consequence of the merger rate plan.

12
13
14 **Q. How is this customer charge issue different from the bimonthly meter reading**
15 **and billing cost revenue requirement issue you addressed in your principal testimony**
16 **on revenue requirement?**

17
18 A. The rate design issue is entirely independent of the revenue requirement issue. The
19 revenue requirement testimony addresses whether monthly meter reading and billing
20 should be performed and those costs allowed in the revenue requirement. If the
21 Commission accepts that recommendation, then the test year costs will be reduced, the
22 calculation of the meter reading and billing costs will go down, and the results shown in
23 my Exhibit ___(JL-RD-1) will be unarguably more appropriate than Mr. Hirschhorn's
24 exhibit.

25
26 This testimony shows that, even if monthly meter reading and billing is allowed, and the
27 revenue requirement is NOT decreased, that only about one-half of the cost of this should
28 be considered customer-related and included in the monthly customer charge. Therefore,

1 even if the Commission rejects my expense adjustment in my revenue requirement
2 testimony, it should rule that monthly meter reading and billing is not a customer-related
3 cost, and that those expenses should be recovered in usage charges.
4

5 **Q. What does the advent of high-technology meters mean to the inclusion of meter**
6 **costs in the customer charge?**

7
8 A. High-tech meters and automated meter reading equipment help to perform multiple
9 functions, including billing, outage location, and load research. These are not customer-
10 related functions. As utilities such as Avista incur additional costs for these non-customer
11 functions, a larger and larger portion of the costs of meters and associated equipment
12 should be treated as a usage-related cost.
13

14 **Q. What is the basis of the 45% reduction to meter reading and billing costs you**
15 **have applied?**

16
17 A. While I recommend that only half as frequent meter reading and billing be considered
18 customer-related, I have not reduced these costs by 50% because certain costs, such as
19 those associated with reading meters at the time of move in and move out, are not directly
20 related to billing frequency. Therefore I have applied only a 45% reduction in meter
21 reading and billing costs.
22
23
24
25
26
27
28

1 **B. Residential Rate Blocks**

2
3 **Q. What is the Company’s recommendation with respect to the current three-block**
4 **residential rate design?**

5
6 A. The Company is proposing to modify the existing rate design from three blocks to a
7 two-block rate design, and to actually reduce the rate it charges customers for usage over
8 1300 kwh/month.

9
10 **Q. Is the Company’s proposal justified?**

11
12 A. No. The current three-block rate design serves two separate functions, both of which
13 are still relevant. First, this rate design corresponds with the costs of the Company’s power
14 resources, effectively assuring every customer a fair share of the Company’s low-cost
15 hydroelectric energy resources and a fair share of the company’s mid-cost thermal
16 resources. It then allows customers using higher amounts of electricity than average (i.e.,
17 over 1300 kwh/month) to pay the full cost of additional energy resources. Second, this rate
18 design recognizes that space heat customers have much lower load factors, and therefore
19 higher distribution costs, than other residential customers.

20
21 **Q. What is the history of the three-block rate design.**

22
23 A. Prior to 1980, Washington Water Power had a two-block rate design, with usage over
24 1300 kwh priced at a higher level. This was intended to reflect the lower load factor, and
25 consequently higher cost of service for space heat usage.

26
27 In Cause U-78-05, the generic rate design proceeding, I recommended, and the
28 Commission adopted, the principle of “Baseline Rates” in which each customer received

1 an initial allocation of low-cost power to meet basic needs.¹ In testimony in that
2 proceeding, my colleague Dr. Teasley concluded that WWP could reserve up to 957
3 kwh/month of low-cost hydro power per residential customer (without affecting the share
4 of hydropower used to serve other classes) and had 586 kwh/month of medium-cost
5 thermal power available per month for residential customers (again, without affecting the
6 share of medium-cost power used to serve other classes).

7
8 Following the generic rate design proceeding, in Cause U-80-13, WWP proposed
9 continuing the two-block rate. The WUTC Staff recommended moving to a three-block
10 rate with the blocks at 0 - 600 kwh, 600 - 1300 kwh, and over 1300 kwh. This is the same
11 electric rate structure that currently exists today. The Commission ordered establishment
12 of a three-block baseline rate, with an increase to the first block one-half the size of the
13 increases to the tail block.

14
15 **Q. Does Avista still have low-cost resources, mid-cost resources, and high-cost**
16 **resources, consistent with the three-block rate design?**

17
18 A. Yes. The Company's hydro resources have costs of less than 1.5 cents/kwh. The older
19 thermal resources and certain purchased power contracts have costs of 1.5 cents to 3.0
20 cents/kwh. Finally, there are high cost resources like Kettle Falls, Colstrip 3/4, and
21 Rathdrum, which have average costs in excess of 3.0 cents/kwh. My Exhibit ___(JL-RD-
22 2), Page 1, shows this breakdown in general terms.

23
24
25

¹ Testimony of Jim Lazar and Howard Teasley on behalf of Fair Electric Rates Now, Washington
Utilities and Transportation Commission Cause U-78-05.

1 **Q. What would the appropriate rate blocks be if the blocks were set to reflect the**
2 **availability of low-cost and mid-cost power resources?**

3
4 A. The Company has approximately 800 kwh of hydro power available per residential
5 customer at a power cost of less than 1.5 cents/kwh. In addition, it has approximately 600
6 kwh of medium-cost energy available from thermal and purchased power resources at
7 prices between 1.5 and 3.0 cents/kwh. Customer usage above 1400 kwh per month forces
8 the Company to rely on higher cost resources such as Colstrip 3/4, Rathdrum, and Kettle
9 Falls, with costs in excess of 3.0 cents/kwh. This breakdown is quite compatible with the
10 current rate design.

11
12 **Q. If you were to convert these costs into approximate rate blocks, how would they**
13 **compare to the Company's current rate design?**

14
15 A. These are costs for power supply only, and average roughly 1.0 cents/kwh for the low-
16 cost hydro, 2.5 cents/kwh for the mid-cost resources, and 4 cents/kwh for the high-cost
17 resources. Transmission and distribution (T&D) costs must be added at an average of
18 about \$.025/kwh, as shown in Mr. Knox's cost of service study at Part 3, Page 2. With
19 the inclusion of T&D costs on an average basis, the rate blocks would look something like
20 this:

21
22 **Avista Rate Blocks Based On Resource Costs**

23
24

	Resource Cost-Based		Current Rate Design		
	Baseline Rate Design		Current Rate Design		
	Kwh	\$/kwh	Kwh	\$/kwh	
28	Block 1	800	\$0.035	600	\$0.039
29	Block 2	600	\$0.050	700	\$0.047
30	Block 3	All add'l	\$0.065	All add'l	\$0.056

31

1 In my opinion, the current rate design very accurately tracks the relative costs of the
2 resources which Avista uses to provide service to consumers.

3
4 **Q. In preparing these estimates, how have you divided these resources between**
5 **Idaho and Washington, and within Washington, between residential and non-**
6 **residential consumers?**

7
8 A. I did so in a manner that does not infringe on the amount of low-cost power available
9 to non-residential and non-Washington consumers. First I assigned 67% to Washington,
10 consistent with the Company's interstate allocation formula. Then I assigned 44% of the
11 Washington share to the residential class, since residential consumers use 44% of the total
12 energy on the system.

13
14 **Q. Is the multi-block rate design justified even without considering the different cost**
15 **of hydro versus thermal resources?**

16
17 A. Yes. Residential usage consists of distinct end-uses which have distinct usage
18 patterns. First, there is lights and appliances usage of 400 - 700 kwh/month, which is
19 stable through the day and through the year. Second, there is water heat usage for
20 customers with electric water heaters of 400 - 600 kwh/month which is stable through the
21 year, but imposes relatively sharp peaks during the day. Finally, there is space heat usage,
22 which is extremely peak-oriented and which can range up to 2,000 kwh/month or more in
23 the coldest months.

24
25 Because certain of the costs of an electric utility vary with peak demand, those loads which
26 have lower load factors (i.e., higher ratios of peak demand to annual usage) have higher
27 costs of service per kilowatt-hour. If the load factor of the three end uses is considered in

1 computing rates, even if all the power costs are averaged together, the three-block rate
2 structure is justified.

3
4 **Q. Does Avista recognize that higher levels of residential usage are associated with**
5 **lower load factors?**

6
7 A. Yes. In Mr. Hirschorn's workpapers at Page 5, he designates all usage in the first
8 residential block as "baseload" usage, and all usage in the third block as "weather-
9 sensitive" usage. The middle block is divided between these two. It appears to me that he
10 has categorized water heat usage as non-weather sensitive in this analysis. While I agree
11 that water heat usage is not weather-sensitive, this usage is more time-sensitive than
12 appliance usage. Because of diurnal water heat usage patterns (people use hot water
13 disproportionately during morning and early evening peak hours), water heat still has a
14 lower load factor than lights and appliances usage.

15
16 **Q. What did you conclude from your analysis?**

17
18 A. Based on the unit costs for demand and energy shown in Mr. Hirschorn's exhibit 493,
19 page 4, I estimated the cost of providing energy for the different end-uses as shown below:

20
21
22 **Avista Rate Blocks Based on End-Use Load Factors**

23	24	25	26	27	28
Block	Typical End-Use	Cost at Current Rate of Return	Cost at Proposed Rate of Return	Current Rate	
29	30	31	32	33	
0-600	Lights and Appliances	\$.035	\$.049	\$	
					.
					0
					3
					9
600 - 1300	Water Heat	\$.042	\$.051	\$.047	
1300+	Space Heat	\$.058	\$.074	\$.056	

1 **Q. What does this analysis suggest to you?**

2
3 A. This analysis shows that the current rate design underprices the energy provided for
4 space heating and that the Company should be proposing the largest increase for this type
5 of usage. Instead, it has actually proposed a decrease for this usage. I believe the
6 Company's proposal would encourage customers to use more electricity that, in the long
7 run, is more expensive than the proposed rate for space heat usage.
8

9 **Q. What load factors did you use in estimating the effect of load factor on the**
10 **appropriate rates by rate blocks?**

11
12 A. For space and water heating, I used load factors of 23% and 40%, respectively. Both
13 of these were taken from a report prepared by the Washington State Energy Office for
14 Public Counsel in 1989.² While the analysis was for Western Washington, I believe that
15 the relative load factors are not likely to be significantly different for eastern Washington.
16 If anything, because of the sharper temperature variations in Eastern Washington, I would
17 expect that the Avista space heat customers might have lower load factors, implying an
18 even higher cost of service for space heating energy than I have calculated. For lights and
19 appliances usage, the assumption of 60% was based on the residential subclass analysis
20 presented by Puget Power to the 1992 Rate Design Collaborative; I believe that this data is
21 generally appropriate for the WWP system. Lights and appliances have a more uniform
22 usage pattern than the morning and evening usage of water heat, and the winter peak period
23 usage of space heat will have the most erratic usage pattern.
24

² Byers, Analysis of Consumer and Marginal Costs for Electric and Natural Gas Space and Water Heat in Single Family Residences in Puget Sound Power and Light Company Service Territory, Exhibit in WUTC Docket U-89-2688-T, September, 1989.

1 **Q. What do you conclude from this analysis of both the baseline rate concept and**
2 **the load-factor based cost analysis?**

3
4 A. Regardless of whether the Commission relies on unbundled power supply costs
5 coupled with average delivery costs, or average power supply costs computed using end-
6 use specific load factors, the three-block rate design is justified.

7
8 **Q. What position has the Commission taken in addressing residential rate design**
9 **most recently?**

10
11 A. In the rate design proceeding for Puget, UE-920499 (in which Washington Water
12 Power was an intervenor), the Commission concluded that each rate block should reflect
13 specific resources and end-uses:

14
15 *“The break between the two blocks should occur at 600 kwh per month, as*
16 *proposed by Public Counsel. The level of 600 kwh will best reflect the actual cost*
17 *of new resources in the end block, so customers can make economically efficient*
18 *decisions at the margin. It will also equitably allocate the limited amount of low-*
19 *cost power on Puget’s system.”*
20

21 [UE-920499, 11th Supplemental Order,. P. 97]

22
23 In that Puget docket, there was a justification for only a two-block rate, because Puget
24 simply does not have as large or as distinct pools of low and medium cost resources as
25 does Avista. I believe that the same logic applies to the Avista system as was used for
26 Puget, but as my Exhibit __ (JL-RD-2) shows, there is a cost-based justification for a three-
27 block rate on the Avista system based on resource costs. There is also a cost-based
28 justification for a three-block rate based on the different load factors of different end uses.
29

1 **Q. Were there other reasons why a two-block rate was acceptable for Puget, but is**
2 **less appropriate for Avista?**

3
4 A. Yes. Discussions within the 1992 Rate Design Collaborative indicated that the
5 majority of Puget's electric heat customers live in multi-family housing, with much lower
6 average usage per customer. Discussions with Avista have indicated that this is less true in
7 the Spokane area.

8
9 **Q. Are there potential changes on the horizon in the utility industry which you**
10 **believe further justify the multi-block rate design?**

11
12 A. Yes, there are a few changes which increase the applicability of a multi-block rate
13 design. First, as the power supply market is changing from a demand / energy pricing
14 scheme to an hourly energy pricing scheme, the fact that water heat and space heat usage
15 take place during high-cost hours is a justification for the multi-block rate design. Second,
16 a number of pricing schemes for transmission service have been discussed, and many of
17 these would have demand-based charges which would be extremely compatible with multi-
18 block rate designs, given the different load factors of different end uses.

19
20 **Q. Have you estimated the impact on residential usage of the Company's proposed**
21 **change in the residential rate design?**

22
23 A. Yes I have. My Exhibit __ (JL-RD-3) shows the effect of a modest estimate of price
24 response to the Company's proposed rate design compared with a uniform percentage
25 increase to the customer charge and rate blocks. Assuming approval of the Company's
26 residential rate design proposals, I would predict that residential usage would increase by
27 about 26 million kwh per year.

1 **Q. Why would you predict usage to increase?**

2
3 A. The increased usage would be the result of lower prices for electric heat. With the
4 proposed rate decrease to the third block, customers would use more electric heat, and
5 would be less likely to convert to gas heat. I assumed a relatively low elasticity factor of -
6 .2 in this calculation. At a higher or lower elasticity estimate, this result would rise or fall.

7
8 **Q. Wouldn't the higher rates for the initial blocks tend to offset that, given any**
9 **particular level of revenue requirement?**

10
11 A. No. Only a small portion of this increase would be offset by higher prices in the first
12 block, because nearly every customer has usage in excess of the first block, and does not
13 see that price as their "marginal cost" for any usage-related decision. My analysis, from
14 the Company's Bill Frequency Analysis, shows that 11% of residential usage is by
15 customers whose usage ends in the first block, while 50% of usage is by customers whose
16 usage ends in the tail block over 1300 kwh/month. Therefore only a small amount of usage
17 is subject to additional usage in the early blocks.

18
19 **Q. How does this increase in usage compare to the effect of the Company's**
20 **residential conservation effort?**

21
22 A. Mr. Folsom's exhibit 316 shows that residential conservation efforts have saved a
23 total of 72 million kwh on a cumulative basis since the programs were initiated under the
24 Tariff Rider Program. The Company's proposed rate design would offset about 40% of
25 this cumulative savings through higher usage of high-use customers.

1 **Q. What would the short-run impact of the Company's proposed residential rate**
2 **design changes be on revenues and net income?**

3
4 A. In the short run, revenues would rise by the level of retail rates multiplied by the
5 increased sales, while expenses would rise only at the short-term market cost of power.
6 Based on an assumption of a market price for power of \$.03/kwh (somewhat above the
7 estimate made by the Company to replace Centralia power; see my Exhibit ___(JL-RR-6)),
8 this would bring additional revenues of about \$1.4 million, and additional expenses of
9 about \$0.8 million. Therefore, the Company's operating income would be expected to
10 increase by about \$646,000. This amount should probably be removed from the revenue
11 requirement. if the Company's rate design changes are accepted.
12

13 **Q. What would the expected changes in revenues and expenses be in the long run?**

14
15 A. In the long run, the Company would need to construct additional transmission and
16 distribution capacity to accommodate increased sales levels. The long-run costs, therefore,
17 would be the sum of marginal distribution costs and marginal energy costs. The Company
18 did not prepare a marginal cost study. The embedded costs of older transmission and
19 distribution capacity used in my Exhibit ___(JL-RD-2) show that the cost of meeting space
20 heating load exceeds the revenue from such sales. In the long run, the proposed rate design
21 would lead to increased costs and additional pressure on electric rates. With approximately
22 a \$.02/kwh gap between incremental costs and proposed end-block rates, the additional
23 sales would ultimately cause about \$0.5 million in additional rate increase pressure.
24
25
26
27
28

1 **Q. Please summarize your recommendations on electric rate spread and rate design.**

2

3 A. Public Counsel has joined with Staff and ICNU in a joint recommendation on electric
4 rate spread. The Commission should reject the Company's cost of service study and adopt
5 the rate spread recommendation contained in the joint testimony.

6

7 I recommend that the electric monthly customer charge for the residential class be
8 increased to \$3.82 per month if a significant rate increase is granted. This is sufficient to
9 recover the costs of meters, services, and bimonthly meter reading and billing, plus
10 associated general plant and administrative and general support. If a rate increase of less
11 than 3% is granted, or a rate decrease ordered, the customer charge should remain
12 unchanged.

13

14 Finally, I recommend a uniform percentage increase or decrease to each of the three
15 residential rate blocks. The Company's proposal to move to a two-block rate is unjustified
16 on the basis of cost, conflicts with the Commission's previous decision to adopt baseline
17 rates, and would cause unnecessary, undesirable, and uneconomic increases in electric heat
18 usage.

19

20 **Q. What if a rate decrease is ordered?**

21

22 A. If a rate decrease is ordered, the Commission should hold the customer charge at
23 current levels, and apply the decrease uniformly to the three rate blocks. All customers
24 should share in the decrease.

25

26

27

28

1 **IV. COST OF SERVICE - GAS**

2
3 **Q. Should the Commission rely on the Company's gas cost of service study in**
4 **spreading the rate adjustment in this proceeding?**

5
6 A. No. The Commission should rely on the Joint Testimony of WUTC Staff, Public
7 Counsel, and the Industrial Customers of Northwest Utilities, and should spread any
8 change in overall gas revenue requirements in accordance with the exhibit to that
9 testimony.

10
11 **V. RATE DESIGN - GAS**

12
13 **Q. What components in the Company's proposed gas rate design do you take issue**
14 **with?**

15
16 A. The Company's proposed increase to the monthly customer charge is excessive. The
17 current gas customer charge of \$4.00 is adequate, and should not be increased. Any
18 allowed gas rate increase (or decrease) should be applied to the usage charge.

19
20 **Q. What analysis have you prepared in support of your recommendation?**

21
22 A. Exhibit ___(JL-RD-4) shows my calculation of the required residential customer
23 charge for gas, taking into account the bimonthly meter reading and billing position in my
24 revenue requirement testimony. This exhibit shows that the cost-based customer charge is
25 approximately \$2.03/month, calculated on line 44 on page 2. Even with monthly meter
26 reading and billing, it would be only \$2.68/month. A further increase above \$4.00 is not
27 justified.

1 **Q. How does your calculation differ from Mr. Hirschhorn's calculation of \$10.17 in**
2 **his Exhibit No. 64?**

3
4 A. There are three principal differences. The most important of these is that Mr.
5 Hirschhorn includes the cost of a service connection pipe in his calculation, and I do not.
6 The second is that I use Mr. Hill's cost of capital, while Mr. Hirschhorn presumably has
7 relied on Dr. Avera's cost of capital. Finally, my analysis relies on bimonthly meter
8 reading and billing costs as what is reasonably appropriate for inclusion in the customer
9 charge.

10
11 **Q. Why do you exclude the cost of service connection from your calculation?**

12
13 A. The electric and gas line extension policies are fundamentally different. The
14 Company's electric line extension policy (Schedule 51) provides a minimum \$600
15 allowance of company investment per customer, regardless of usage levels. This is
16 adequate to cover the cost of a service line installation. The natural gas line extension
17 policy (Schedule 151) makes no such allowance and the Company makes investments in
18 services for gas customers only if their anticipated usage justifies the investment.

19
20 A very small gas user, for example, a cooking-only customer, would have to pay the cost of
21 installing the service in a Contribution in Aid of Construction (CIAC), and indeed, Ms.
22 Knox, at Page 1 of Exhibit 55 indicates that all of the contribution in aid of construction
23 has been received from the residential class. To include the cost of the service connection
24 pipe in the monthly customer charge (independent of usage), while forcing a small user to
25 pay cash up front to the Company for installation of the service would cause double-
26 counting of this cost to small customers. By including the cost of the service connection
27 pipe in the usage charge, any portion not covered by CIAC will be recovered in usage
28 charges.

1 The Commission's rules require that a meter be provided at no installation cost to the
2 Customer regardless of expected usage levels (WAC 480-09-131). Since small use
3 customers will not pay this cost in a contribution in aid of construction, it is appropriate
4 that the cost of this be recovered in a customer charge unrelated to usage. The same is not
5 true for services. The Company's investment in services must be justified by expected
6 usage or paid for up front in CIAC, and the cost of services should be recovered on the
7 same basis that it becomes a component of rate base (as opposed to CIAC), and that is on
8 a usage basis.

9
10 The Company's investment in services is huge – some \$59 million in total, or over one-
11 third of the total gas distribution plant investment -- compared with only \$1 million of
12 investment in electric services (I am suspect of the Company's record-keeping, but have
13 not examined it in sufficient detail to challenge either of these figures). This is the most
14 important difference. Just subtracting the cost of the service from Mr. Hirschhorn's
15 exhibit leaves only \$4.12/month. While Mr. Hirschhorn does not show how he derived his
16 figures, even if they are correct they justify only the current customer charge, not an
17 increase.

18
19 **Q. Is there another reason you feel that service connection costs should be excluded?**

20
21 A. Yes. The Company has identified some \$59 million of distribution investment costs as
22 being service drop related. This is an extraordinarily large amount, and I am frankly
23 suspicious that it may include costs of facilities shared by multiple customers, what are
24 known in the industry as "twins." I was unable to examine that issue in the time available
25 in this case, but the overall amount is so high that my suspicion was aroused. Because
26 Public Counsel has joined with ICNU and WUTC Staff in the joint position on rate spread,
27 this potential error in the cost of service study became unimportant for rate spread analysis.

1 As I stated above, the line extension policy for gas includes service connection costs, so I
2 did not pursue the issue as I would if it were to affect both rate spread and rate design.

3
4 **Q. What is the effect of removing services from the customer charge calculation**
5 **presented by Mr. Hirschhorn?**

6
7 A. Mr. Hirschhorn's Exhibit 496, Page 5 shows the following costs for meters, meter
8 reading, and billing; for convenience, I have also shown the effect of bimonthly meter
9 reading and billing as I recommend:

10
11 **Hirschhorn Customer Charge Calculation Without Service Pipes**

	Monthly	Bimonthly @ 55%
Meters	\$2.20	\$2.20
Meter Reading	\$.56	\$.31
Billing	\$1.36	\$.75
Total Customer Cost:	\$4.12	\$3.26
Current Gas Customer Charge:		\$4.00

12
13
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22
23 Thus, even with the cost of capital proposed by Dr. Avera, and the rest of the Company's
24 assumptions, no increase in the monthly gas customer charge should be approved.

25
26 **Q. Did you prepare an independent assessment of the cost of providing metering and**
27 **billing on the Avista gas system?**

28
29 A. Yes, and this is set forth in detail in my Exhibit ___(JL-RD-4). That analysis shows
30 that the cost of bimonthly metering and billing is approximately \$2.03/month. For monthly
31 service, it would rise to \$2.68/month. Based on that analysis, I conclude that no increase to
32 the monthly customer charge is justified.

1 **Q. Do the same principles apply to your assumption of bimonthly meter reading for**
2 **gas as do for electricity?**

3
4 A. Yes, and the justification is much stronger for gas. First, the only justification for
5 monthly meter reading and billing for gas, as for electricity, is that customers use
6 significant amounts of gas and incur significant costs. This is a usage-related issue, not a
7 customer-related issue, and even if costs for frequent meter reading and billing are allowed,
8 they are usage-related. Those customers with low usage should not have to subsidize the
9 monthly meter reading costs which, if justified at all, are justified only by the high use of
10 other customers. Thus, even if the Commission determines that monthly meter reading and
11 billing is appropriate for the Avista system, it should not include the costs of more frequent
12 meter reading and billing than is required by rule in the customer charge. Those costs
13 should be recovered in the usage charge.

14
15 A second reason is that for about half of the year (May - September), most gas customers
16 have very low usage, and it is a bit absurd to be rendering bills for only a few dollars of
17 usage per month. The average summer usage of residential customers is around 20 therms
18 per month, for a usage charge of around \$10.00 per month. To assess an additional \$2.00
19 per month – a full 20% – for meter reading and billing is excessive. Even if monthly meter
20 reading and billing were appropriate in the winter months, during the summer months,
21 when electric and gas usage is down, the Company could revert to bimonthly billing and
22 re-deploy meter readers to support activities associated with connecting new customers to
23 the system during the construction season.

24
25 **Q. Please summarize your recommendations on gas rate spread and rate design.**

26
27 A. Any increase or decrease in gas rates should be spread among the classes as set forth in
28 the Joint Testimony of WUTC Staff, Public Counsel, and Northwest Industrial Gas Users.

1 The customer charge for Schedule 101 should not be increased, and any allowed increase
2 or decrease should be reflected in the usage charge. Finally, the Company should be
3 directed in the future to present the results of cost studies on a revenue to cost ratio basis so
4 that the results can be reviewed on that basis.

5
6 **VI. SUMMARY AND CONCLUSIONS**

7
8 **Q. Please summarize your conclusions and recommendations with respect to electric**
9 **rate design issues.**

10
11 A. First, I recommend that the Commission adopt the electric rate spread proposal jointly
12 sponsored by WUTC Staff, Public Counsel, and ICNU. If this is not adopted, each class
13 should receive a uniform percentage increase. Second, the electric customer charge should
14 be increased to a maximum of \$3.82 per month. Any remaining increase (or any decrease)
15 should be applied to the three residential rate blocks on a uniform percentage basis.

16
17 **Q. Please summarize your conclusions and recommendations with respect to gas rate**
18 **design issues.**

19
20 A. The Commission should adopt the joint position of WUTC Staff, ICNU, and Public
21 Counsel on gas rate spread. The gas customer charge, already \$4.00/month, should not be
22 increased. Any residual increase (or decrease) should be applied to the usage charge.

23
24 **Q. Is there additional direction the Commission should provide for future rate**
25 **filings?**

26
27 A. Yes. The Company should be directed to present future rate comparisons on the basis
28 of the ratio of revenues at current rates to the revenues needed to produce a uniform rate of

1 return equal to the current rate of return. By using a revenue-to-cost ratio, the Company
2 would better assist the Commission and parties in examining the fairness of electric and
3 gas rates. The Commission has relied on revenue to cost ratio as a principal guide to
4 measurement of cost of service for many years.

5
6 **Q. Does this complete your testimony on rate design issues?**

7
8 **A. Yes.**