Exhibit No. \_\_T (APB-1T) Dockets UE-072300/ UG-072301/UG-080064 Witness: Alan P. Buckley

#### BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

PUGET SOUND ENERGY, INC.,

Respondent.

DOCKET UE-072300 DOCKET UG-072301 (Consolidated)

**DOCKET UG-080064** 

**TESTIMONY OF** 

ALAN P. BUCKLEY

STAFF OF WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

Power Cost Adjustments

May 30, 2008

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Ţ		i. introduction
2		
3 .	Q.	Please state your name and business address.
4 _	-A.	My name is Alan P. Buckley. My office address is The Richard Hemstad Building,
. 5		1300 South Evergreen Park Drive Southwest, P.O. Box 47250, Olympia,
6		Washington 98504. My e-email address is abuckley@utc.wa.gov.
7	-	
8	Q.	By whom are you employed and in what capacity?
9	A.	I am employed by the Washington Utilities and Transportation Commission
10		("UTC") as a Senior Policy Strategist. Among other duties, I am responsible for
11		analyzing rate and power supply issues as they pertain to the investor-owned utilities
12		under the jurisdiction of the UTC.
13	,	
14	Q.	How long have you been employed by the UTC?
15	A.	I have been employed by the UTC since 1993.
16		
17	Q.	What are your education and experience qualifications?
18	A.	I received a B.S. degree in Petroleum Engineering with Honors from the University
19		of Texas at Austin in 1981. In 1987, I received a Masters of Business
20		Administration degree in Finance from the University of California at Berkeley.
21		From 1981 through 1986, I was employed by Standard Oil of Ohio (now
22		British Petroleum-America) in San Francisco as a Petroleum Engineer working on
23		Alaskan North Slope exploration drilling and development projects. From 1987 to

1988, I was employed as a Rates Analyst at Pacific Gas and Electric Company in
San Francisco. I was next employed by R.W. Beck and Associates, an engineering
and consulting firm in Seattle, Washington, conducting cost-of-service and other rate
studies, carrying out power supply studies, analyzing mergers, and analyzing the
rates of the Bonneville Power Administration ("BPA") and the Western Area Power
Administration.

I came to the UTC in December of 1993, where I have held a number of positions including Utility Analyst, Electric Program Manager, and the position that I now hold. I have been a witness in numerous proceedings before the UTC. I also have testified before BPA and the Federal Energy Regulatory Commission.

#### II. SCOPE AND ORGANIZATION OF TESTIMONY

A.

#### Q. What is the purpose of your testimony?

The principle purpose of my testimony is to present Staff's adjustments to Puget Sound Energy's ("PSE" or "the Company") Projected Rate Year Power Costs, as revised by the Company's April 14, 2008 Supplemental Filing. The results of my adjustments are reflected in Staff witness Weinman's Exhibit No. \_\_ (WHW-2).

I also discuss the overall context in which these recommendations are made.

That discussion also supports my additional recommendation that the UTC order the

Company in its next general rate case to prepare a study and alternative proposal of a

redesigned Power Cost Adjustment ("PCA") mechanism that better aligns risks and

1		benefits in light of the asymmetrical distribution of power supply costs over water
2		years,
3		
4	<b>Q.</b>	How is the remainder of your testimony organized?
5	A.	The remainder of my testimony is divided into four sections. Section III summarize
6		Staff's power supply recommendations and discusses the context in which those
7		recommendations are made. Section IV addresses the Company's revised Projected
8,		Rate Year Power Costs filed on April 14, 2008, and recommends that the UTC
9		accept those revisions. Section V presents a detailed explanation of Staff's
10		recommended adjustments to the revised Projected Rate Year Power Costs. Finally,
11		in Section VI, I support my recommendation to bring the Company's current PCA
12		design before the UTC for re-examination in the next general rate case.
13		
14	Q.	Did you prepare any exhibits in support of your testimony?
15	A.	Yes. They are the following:
16 17		<ul> <li>Exhibit No (APB-2), Summary of Net Power Supply Expense Adjustments</li> </ul>
18 19 20		<ul> <li>Exhibit No (APB-3C), Calculation of Colstrip Forced Outage Rate Adjustment</li> </ul>
21 22 23		• Exhibit No (APB-4C), Calculation of Water Filter Adjustment
24	Ш	. SUMMARY OF STAFF RECOMMENDATIONS AND CASE CONTEXT
25		
26	Q.	Please summarize your recommended Projected Rate Year Power Supply
27		adjustments.

1	A.	The UTC should adopt the Projected Rate Year Power Supply adjustments shown in
2		my Exhibit No (APB-2), lines 3 and 4. The total of these adjustments reduces
3		PSE's revised Projected Rate Year Power Costs by approximately \$12.463 million to
4		a total of \$1,136,188,000, as shown on line 6 of Exhibit No (APB-2). This
5	· · · · ·	compares to the Company's projection of \$1,148,651,000 presented in Exhibit No.
6		(DEM-10).
7		My recommended adjustments are summarized below:
8		Accept the overall \$13.3 million additional increase to Projected Rate Year
9		Power Costs included in the Company's April 14th Supplemental Filing. This
0		adjustment is consistent with the UTC's stated preference to update gas costs
1		using a well-established, straightforward, mechanical, and non-controversial
12		method and has been explicitly allowed in previous cases. Although
13	•	primarily offered to update gas costs and fixed price gas contracts, the
14		Supplemental Filing also corrects several items identified by Staff and other
15		parties. These corrections include an adjustment to PSE's wind integration
16		due to BPA tariff actions that affect Company resources. Also included is a
17		correction to PSE's Mid-Columbia Project costs.
18		• Reduce Projected Rate Year Power Costs by \$3.083 million due to revisions
19		to AURORA model Colstrip Forced Outage Rates. This adjustment provides
20	٠	a more appropriate sharing of risk when developing normalized base power
21		costs given PSE's frequent general rate cases, Power Cost Only Rate Cases

22

("PCORC"), and PCA filings.

1 ,	<ul> <li>Reduce Projected Rate Year Power Costs by \$9.380 million resulting from</li> </ul>
2	filtering water-year data. This adjustment also more appropriately shares risk
3 .	when developing normalized base power costs in an environment of frequent
4 -	general rate cases, PCORCs and PCA filings.
5	
6 <b>Q.</b>	Do you have any other recommendations in this proceeding?
7 A.	Yes, they are as follows:
8	Order the parties to determine a "no later than" date during general rate case
9 4	pre-hearing conferences for any update filings to power supply cost
. 0	projections during general rate cases, if such updates are to be allowed.
11	Order the Company to prepare a study and alternative proposal in its next
12	general rate case for a PCA dead band and sharing band design that provides
13	more balanced risks and benefits for ratepayers based on the asymmetrical
14	distribution of power supply costs over water years. Designs of this nature
15	have been cited by the UTC as a necessary refinement. WUTC v. PacifiCorp
16	Dockets UE-061546, et al. Order 08 at ¶¶ 87 and 101 (June 21, 2007).
17	
18 <b>Q.</b>	Please discuss the overall context in which your recommendations are made in
19.	this proceeding.
20 A.	Certainly. This filing is yet another in a long stream of rate filings by the Company.
21	Customers have seen, and are expected to continue to see, regular general rate case
22	filings, PCORCs, and annual PCA filings, as the cost of doing business increases.

1		Recently, these increases have been particularly acute in the area of power supply as
2	•	the cost of all sources of energy has risen at a historically rapid pace.
3		
4	-Q	Why is the pace and frequency of rate filings by the Company an issue?
5	<b>A.</b> .	It is an issue because the constant procession of filings, in light of their specific
6		designs, has shifted virtually all of PSE's power supply cost recovery risk to its
7		customers, with no apparent offsetting benefits.
8		
9	Q.	Do not the dead band and sharing bands in the current PCA maintain an
10		appropriate level of risk on the Company?
11	A.	Not necessarily. After six cycles, PSE's PCA has a total cumulative customer
12		deferral balance of approximately \$3.1 million. While it is true that the PCA has not
13		resulted in any rate adjustments to date, customers' base rates have increased
14		significantly. This is not surprising since the PCA's baseline power cost level is
15		constantly increasing through general rate cases and PCORCs.
16		
17	Q.	Are there other factors that have decreased PSE's exposure to costs, but
18		increased customers' exposure to costs without offsetting benefits?
19	A.	Yes. The Company has taken full advantage of the opportunity to update certain
20	* ,	power supply costs during general rate cases and PCORCs. On April 14, 2008 in
21		this proceeding, PSE filed supplemental testimony updating its Projected Power
22		Costs based on a previously approved gas cost update methodology. This update,
23		along with other corrections identified by other parties, resulted in an increase of

1		\$13.3 million to power costs over the Company's original filing. Presumably, PSE
2		intends to submit further updates as this case proceeds to reflect additional "real-
3		time" increases which, if approved, will be made part of baseline power costs.
4_		I am not arguing at this time the amount of any increase or the Company's
5		ability to update costs. I am simply pointing out the greatly expanding cost risk that
6	,	has been shifted to ratepayers without any apparent consideration of offsetting
7		benefits. My adjustments for Colstrip forced outage rates and water-filtering are
8		designed to bring some benefits back to ratepayers when determining fair and
9		reasonable normalized base power supply costs in a manner consistent with having a
10	٠	PCA already in place.
11		
12	٠	IV. PSE'S SUPPLEMENTAL FILING
13		
14	Q.	Did you have the opportunity to review the Company's April 14 <sup>th</sup> update to the
15		Projected Rate Year Power Costs?
16	A.	Yes. However, updates to rate case cost projections, particularly in the area of power
17		supply, require significant effort to review input data and output data as the changes
18		flow through the AURORA model. Although the UTC has attempted to limit
19		updates to certain straightforward, non-controversial cost projections, power supply
20		updates cannot be made in a vacuum. Therefore, these updates have the real
21		potential to interrupt and complicate the preparation of other parties' response cases.
22		Although in this proceeding Staff did not contest the update, we remain sensitive to
23		the increased burden put on all parties by these filings.

2	Q.	Were there any mitigating circumstances in this proceeding that made a timely
3		review possible?
4	Α.	Yes. Prior to the filing of the update, I met with the Company to discuss several
5.		corrections and updates related to other power supply costs used to determine
6	·.	Projected Rate Year Power Costs. PSE's inclusion of several of these items in the
7		Supplemental Filing eliminated the need to address them in detail in my testimony.
8	•	These items include the update to Mid-C Power Contract costs and the costs
9		associated with integrating various PSE wind projects into the regional transmission
10		grid. The Company also made several updates to production operation and
11		maintenance costs that were overall favorable to ratepayers. Finally, PSE attempted
12		to address a concern regarding forced outage rates for Colstrip. That attempt went
13		some, but not the entire distance, in meeting my concerns regarding Colstrip forced
14		outages. I will discuss this issue later in my testimony.
15		
16	Q.	Despite these mitigating circumstances, do you have any suggestions on how to
17		reduce the burden placed on the parties by these updates?
18	A.	Yes. In future general rate cases, I recommend that a "no later than" date be set
19		during the pre-hearing conference for update filings, if such updates are to be
20	•	allowed. This will alleviate the burden placed on the parties without harm to PSE.
21		
22	Q.	Did you review all of the updated cost projections in addition to the other
23		corrections you described above?

1	Α.	Yes.
2		
3	Q.	Do you recommend the UTC accept the adjustments to Projected Rate Year
-4		Power Costs as presented in the Company's April 14th Supplemental Filing?
5	A.	Yes, with the adoption of Staff's recommended adjustments described in the next
6		section of my testimony.
7		
8		V. STAFF RECOMMENDED ADJUSTMENTS
9	٠.	
10	A.	Colstrip Forced Outage Rate Adjustment
11		
12	Q.	Please describe your Colstrip Forced Outage Rate Adjustment.
13	A.	This adjustment removes those years with both a higher and a lower than "normal"
14		range of historical forced outages when developing the forced outage rates used in
15		AURORA for PSE's Colstrip generating units. Forced outage rates refer to the
16		fraction of time that a generating unit is expected to be unavailable due to random
17		failures or unexpected breakdowns. Small changes in forced outage rates can result
18		in significant cost differences particularly when large, multi-unit, coal-fired
19		generating plants are involved.
20		
21	Q.	Is the methodology of your adjustment different from corresponding
22		adjustments in prior cases?

Yes. Adjustments to forced outage rates have been proposed in the past. Typically
those adjustments have looked at trends, taking into consideration the history and
stability of the data, and controversial statistic-based arguments about whether
 outliers should or should not be included in the calculation.

I believe it is time to focus the adjustment on the important fact that a PCA already exists. This fact renders moot the issue whether or not outlier data years need to be included in model runs to determine Projected Rate Year Power Costs. Like the affect of extreme water years I discuss later, the Company's PCA already allows for the recovery and sharing of costs or benefits associated with outlier years if and when they occur. This warrants their exclusion based on a simple common sense approach that eliminates favorable and unfavorable historical forced outage rates, and allows those costs or benefits to pass through the PCA, as it is designed to do. My recommended adjustment utilizes a more normal and expected range of forced outage rates to determine the AURORA model input. Unlike past attempts, my proposal does not get bogged down in theoretical application issues.

My adjustment is shown on line 3 of Exhibit No. \_\_ (APB-2) and results in an estimated reduction to Projected Rate Year Power Costs of \$3.083 million. This adjustment is based on the Projected Rate Year Power Costs contained in the April 14<sup>th</sup> Supplemental Filing, so it is incremental to the Company's prior removal of the anomalous 2000 historical forced outage data for all Colstrip units.

Α.

Q. How did you determine the appropriate Colstrip forced outage rates to use in the AURORA model?

I used the same historical forced outage data in the Company's work papers for
Colstrip Units 1 and 2 and Units 3 and 4. However, I eliminated not only the 2000
year data for all Colstrip units, as did the Company, but also the 2004 data for
Colstrip Units 1 and 2 and the 2002 data for Colstrip Units 3 and 4. The historical
forced outage rates during these periods were well above the normal trend observed
since the year 2000. Finally, to recognize that, under the Company's PCA
mechanism, positive benefits may also accrue through the management of generating
resources, I removed the 2007 data for Colstrip Units 3 and 4. This year represents
recently increased performance levels of plant operations for these units, providing
benefits to the Company under the PCA.
The resultant forced outage calculations and the average rates used in the
ALIPOR A model for Colstrin Units 1-4 are shown in my Exhibit No. (APR-3C).

The resultant forced outage calculations and the average rates used in the AURORA model for Colstrip Units 1-4 are shown in my Exhibit No. \_\_ (APB-3C), lines 1 through 9, with the eliminated data indicated as the shaded blocked values. Using these adjusted forced outage rates in AURORA results in an estimated incremental reduction in Projected Rate Year Power Costs of \$3.083 million, as indicated on line 12 of Exhibit No. \_\_ (APB-3C). To facilitate the analysis, I used PSE's Average Water Year from its AURORA model data base. Should the UTC accept my recommendation, an exact adjustment amount can be determined consistent with this and other adopted adjustments, using the approved water year methodology.

Ţ	Q.	Do you believe your adjustment is conservative.
2	A.	Yes, for several reasons. My calculation still incorporates some forced outage data
3 .		from years before plant upgrades that have favorably affected outage rates in more
-4	-	recent years. The 2007 Colstrip 3 and 4 unit data that I removed to recognize the
5	٠	symmetry of the PCA reflects this trend. Finally, the forced outage rates that I used
6		in AURORA are still above the equivalent forced outage rates for peer groups
7		determined from NERC Generator Availability Reports, as presented in PSE's
8		previous PCORC, Docket U-070565. (Testimony of Donald W. Schoenbeck, Exhibit
9		No. 103CT (DWS-1TC).)
10	•	
11	<b>Q.</b>	You state your Colstrip adjustment has the benefit of not relying on
12		complicated and controversial statistics-based methods. Can you explain?
13	Α.	Yes. There are three reasons to get away from the statistics-oriented arguments of
14		past proceedings. First, of course, is the presence of the PCA itself, which allows for
15		any outlier events to be addressed during the annual PCA review, rather than through
16		analyses of events years after their actual occurrence.
17		Second, some variation in forced outage rates and their affect on power costs
18		should be a function of the PCA dead bands, which were designed to allow the
19		Company to manage its resources to receive the associated benefits or to absorb a
20		certain amount of risk from generation operations.
21		Third, and recognizing the last point, by removing a favorable outage rate my
22		adjustment includes an "upside" allowance that will benefit PSE if the units can be

1		held to favorable forced outage rates over time by positive management of the
2		resources.
3		On the negative side, I still relied upon the more recent actual forced outage
-4		rate data. I agree that this method is not repeatable, in that it does not provide a set
5		methodology to determine model input. But, I believe that reasonable and fair
6.		results are obtained for an item that has been the subject of contested, complicated
7 ·		and unresolved statistical analysis in the past.
8		
9	Q.	Are there other benefits to your Colstrip forced outage methodology?
10	A.	Yes. Historically, major outages at large thermal generating stations such as Colstrip
11		warrant some prudence review before ratepayers are burdened with cost recovery.
12		Addressing outlier issues in the PCA as they occur provides the opportunity for
13		review prior to cost recovery, thus providing some benefit to ratepayers, compared to
14		simply embedding the historical forced outage rates into the calculation of Projected
15		Rate Year Power Costs.
16		
17	В.	Water Filtering Adjustment
18		
19	Q.	What is the purpose of your Water Filtering Adjustment?
20	A.	Like my Colstrip adjustment, the water filtering adjustment aligns the methodology
21		for determining base power supply costs with a regulatory environment that includes
22		an annual PCA, as compared to the traditional normalized power supply cost
23		methodology. The water filtering adjustment removes the power supply cost

1		uncertainty associated with extreme, or outlier, water years from the calculation of
2		Projected Rate Year Power Costs, and appropriately leaves the review and recovery
3		of costs associated with those years to the annual PCA review.
5	Q.	Why is it appropriate to make this adjustment?
6	Á.	Historically, the Company has based its adjustment on power cost models runs for a
7		number of water years and then calculated a "normalized" level of net power supply
8		costs. The number of water years and their timing has been a contentious issue in
9		many past rate proceedings. The effects on normalized power supply costs of the
10		extreme water years, both wet and dry, have been particularly troublesome.
11		However, with the PCA it is possible to eliminate this controversy by narrowing the
12		range of water years used to determine base power supply costs to those years
13	•	representing what is more normally expected to occur.
14		
15	Q.	How did PSE calculate its adjustment?
16	A.	Consistent with several past rate cases, PSE used the average of the 50-year Mid-C
17		stream flow history from 1928 through 1977 to determine power costs for the rate
18		year. The theory is to set rates using a range of actual power supply expense levels
19		assumed to be experienced over time, and, thus, actual under-recovery of costs in
20		some years is balanced by over-recovery in others. This methodology is acceptable
21		absent the PCA. However, net power supply cost normalization needs to be aligned
22		with the presence of the PCA.

23

1	Q.	You stated that both "review and recovery" of the extreme, or outlier, water
2		year costs belong in the PCA. Please explain.
3	A.	This is perhaps the most important feature of my adjustment to set base power costs
4-		using a narrower range, or more typical, number of water years. It is probably not
-5		surprising that the more extreme years typically result in the more "interesting" years
6		costs-wise, particularly on the dry or drought side of the spectrum. By not including
7.		in base rates the effects of those extreme years on power supply costs, Staff and
8		other parties, as well as the UTC, may evaluate the costs in the annual PCA filings
9'		without concern as to whether they have already been recovered in base power cost.
10		This removes what I believe is a valid concern regarding double recovery of costs by
11		the Company.
12		
13	Q.	Has the UTC favored a water filtering adjustment for utilities with a PCA
14		mechanism?
15	Å.	Yes. The UTC has agreed that water filtering is appropriate in the context of a PCA:
16 17 18 19 20 21		If the Company and its customers will share the costs and benefits of unusual power cost extremes, there is no need to include those extreme circumstances in the calculation of normalized power costs, particularly if they are controversial We agree with Staff and PacifiCorp that water filtering is appropriate in the context of a PCAM, but not appropriate if there is no PCAM in place.
22 23		WUTC v. PacifiCorp, Dockets UE-061546, et al. Order 08 at ¶¶ 88-89 (June 21,
24		2007). Ultimately, a power cost mechanism was not adopted for PacifiCorp and a
25		water filtering adjustment was not implemented.
26		

1	Q.	Have you prepared an exhibit showing the calculation of your water filtering
2		adjustment?
3	A.	Yes. The calculation is shown in my Exhibit No (APB-4C). I began with the
4		fifty years of water year data converted to generation energy on an annual basis, as
5		used by PSE as input to AURORA and that I obtained from Company work papers.
6	٠	It is important to recognize that the adjustment uses water year data, not power cost
7	ě	data as the basis for filtering. The water year data is normally distributed and has
8		been converted to generation on a resource by resource basis.
9		I then tabulated the total annual generation (water flow equivalent) for each
0		of the Mid-Columbia hydro projects used in the AURORA model for each of the
1		water years, and then totaled each water year's energy across the resources. This
2		annual data is shown in Column (b) in Exhibit No (APB-4C) for the years 1929
13		through 1978.
14		In order to narrow the number of water years used to determine a base level
15		of power costs, I calculated a one standard deviation "filter" band on each side of the
16		normally distributed energy data (or water flow equivalent). I then applied that filter
17		to the fifty water years of generation, removing from the calculation those years in
18	•	which total annual generation was below or above the band. The generation bands
19	٠	are shown on lines 53 and 54 of Exhibit No(APB-4C) and the water filter test
20		results are in Column (c).
21		To calculate the Water Filtering Adjustment, I first applied the test results to
22		each of the AURORA model output costs for each of the years shown in Column (e)
73		The Company's modeled AURORA costs shown on line 52. Column (e) were then

1		compared to the average of the Water Filtered cost shown on line 51, Column (e) to
2		derive my adjustment.
3		
4	-Q	What was the basis for choosing a one standard deviation band for "filtering"
5		the fifty year average water year generation data?
6	A.	Applying a plus or minus one standard deviation band to the mean values is a simple
7	٠.	and straightforward application to the normally distributed energy (water flow
8		equivalent) data. It clearly eliminates the outlier water years when extreme water
9		conditions exist, both favorable and unfavorable. It is an easy to understand step
10		away from using the full 50 year water record and the traditional normalized
11		methodologies for determining baseline power costs under a PCA environment.
12		More drastic steps under a PCA environment may be to simply utilize a single
13		"typical" or "average" water year for power cost modeling and let the PCA
14		mechanism address all variations from that level.
15		
16	Q.	If extreme, or outlier, water years and their associated power supply costs are
17		removed from the rate setting process, does the Company recover, or
18		ratepayers receive the benefits of, the costs the Company incurs in such years?
19	A.	Yes. These incremental costs are simply not recovered as part of overall revenue
20		requirements. This is reasonable because, under the PCA mechanism, customers
21		will pay a portion of these costs and receive a portion of the benefits, when and if
22		they actually occur.
22		

1	Q.	Earlier you stated that the water filtering adjustment provides benefits to
2		ratepayers by more appropriately realigning risk sharing. Please elaborate?
3	A.	The water filtering adjustment, while not eliminating the potential for increased
-4		costs, does take at least one "risk" factor out of base power costs (and thus base
5	•	electric rates) and puts it in the PCA where it belongs. The application of Staff's
6		water filtering adjustment to PSE's normalized power cost methodology results in
7		downward adjustments to base power costs. This tells me that ratepayers may have
8	÷	been paying a premium for extreme water year costs whether or not they actually
9		ever occurred. Approving the water filtering adjustment for PSE and removing this
10		premium would provide some appropriate relief for ratepayers in this ever increasing
11		cost environment, at the same time allowing for the pass through of costs or benefits
12		of extreme water years should they occur.
13		
14	Q.	What is the effect on Projected Rate Year Power Cost of Staff's Water Filtering
15		Adjustment?
16	A.	As shown on line 54 of my Exhibit No(APB-4C), the Water Filter Adjustment
17	-	reduces Projected Rate Year Power Costs by \$9.380 million.
18		
19	Q.	What is the combined effect of Staff's two power supply related adjustments?
20	Α.	The Colstrip Forced Outage Rate and the Water Filtering adjustments reduce the
21		revised Projected Rate Year Power Costs by \$ 12.463 million to \$1,136,188,000.
22		

### Q. What is your issue regarding the distribution of net power costs?

A. The results of the water filtering adjustment indicate a bias in the overall modeled net power cost methodology. This bias is the same as I have observed with the other regulated electric utilities that use water year-based, normalized power supply modeling methodologies to set rates.

As the water filtering methodology is applied to a utility's normalized power costs based on assumptions of normal water year distributions, the resulting average net power supply cost is reduced. This indicates something other than a normal distribution for power costs. This effect makes intuitive sense since power costs have greater volatility and magnitude movement during extreme drought years than during extreme wet years. Thus, the effect of removing extreme drought years through water filtering is greater than removing extreme wet years, and a downward adjustment in power costs for the remaining "normal" water years results. Again, this indicates some other distribution for net power costs as compared to the more normally distributed water flows or associated energy.

## Q. Why is this observation important?

The water filtering adjustment results in Power Cost Baseline Rates much closer to what can be expected in a more normal water year. In an environment of constant general rate cases, PCORCs, and PCA filings, additional means to realign risks between the Company and ratepayers should be examined. A redesign of the PCA

1		dead bands and sharing bands is an option worth examining. Perhaps asymmetrical
2		dead bands and sharing bands will provide the potential for increased benefits to
3		ratepayers in the more extreme years, either though additional revenues on one side
_4	<del>.</del>	or reduced exposure to costs on the other. Notwithstanding the ever increasing
5		baseline power costs, I recognize that the PCA is generally working as planned
6		during years with relatively normal water conditions and that redesigned dead bands
7		and sharing bands will most likely have little effect during those periods.
8		
9	Q.	How is PSE's PCA designed now?
10	A.	The PCA compares modified actual power costs relative to a power cost baseline.
11		The PCA has symmetrical dead bands (+/- \$20 million annually), as well as various
12		symmetrical sharing bands: from \$20 to 40 million annually there is a 50/50 sharing
13		of costs or benefits between customers and the Company; between \$40 to \$120
14	•	million annually there is 10/90 sharing of cost and benefits between Company and
15		customers, respectively; and finally, for over \$120 million in costs annually, 95
16		percent of the costs or benefits goes to the customers. Excess costs or revenues are
17		deferred, but no refunds or surcharges are triggered until the deferral balance
18	•	generally reaches, or is expected to reach, \$30 million. That trigger has not been
19		reached to date.
20		
21	Q.	Has the UTC recognized the validity of asymmetrical power cost mechanism

designs?

22

1	A.	Yes. The UTC has recognized the importance of this issue in the overall design of
2	•	an appropriate PCA. WUTC v. PacifiCorp, Dockets UE-061546, et al., Order 08 at
3		$\P$ 96-101 (June 21, 2007). Clearly, the UTC expects the relationship of risks and
_4		benefits to be addressed properly in a PCA.
5		
6	Q.	Were you involved in the design of the Company's PCA or the various
7		discussions and settlements that led to its current design?
8	<b>A.</b>	No. I do understand that the PCA was the result of many compromises among many
9		parties. However, the PCA has been in place for a number of years now and I do not
10		believe anyone anticipated the steady stream of general rate cases and PCORCs that
11		have taken place in addition to the annual PCA filings. I believe that the design of
12		the PCA should not be set in stone.
13		
14	Q.	Do you recommend changes to the PCA design at this time?
15	A.	No. At the present time Staff's resources are severely limited and the modeling
16	<b>'</b>	effort to make an intelligent recommendation to adjust the PCA dead band and
17		sharing bands is significant.
18		
19	Q.	What is your recommendation then in this proceeding?
20	A.	Recognizing that it is the Company that continues to make one filing after another, I
21		recommend that the UTC order PSE, in its next general rate case, to submit a study
22		and a proposal for redesigned PCA dead band and sharing bands to provide for
23		additional benefits to ratepayers by taking into consideration the asymmetrical nature

l	of net power costs. The Company should be ordered to meet with interested p	parties
2	prior to filing the next general rate case in order to consider their comments or	1

- 3 possible redesign alternatives specific to this area.
- 5 Q. Does this complete your testimony?
- 6 A. Yes.