Oregon
Theodore R. Kulongoski, Governor

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May 9, 2005

Via Electronic Filing and U.S. Mail

OREGON PUBLIC UTILITY COMMISSION
ATTENTION: FILING CENTER
PO BOX 2148
SALEM OR 97308-2148

RE: **Docket No. UE 170** - In the Matter of PACIFIC POWER & LIGHT (dba PacifiCorp) Request for a General Rate Increase in the Company's Oregon Annual Revenues

Enclosed for filing in the above-captioned docket is the Public Utility Commission Staff's Direct Testimony. This document is being filed by electronic mail with the PUC Filing Center.

/s/ Judy Ogilvie

Judy Ogilvie
Regulatory Operations Division
Filing on Behalf of Public Utility Commission Staff
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cc: UE 170 Service List

PUBLIC UTILITY COMMISSION
OF OREGON

UE 170

STAFF TESTIMONY

OF

ED DURRENBERGER
THOMAS MORGAN
MING PENG
MICHAEL DOUGHERTY
JACK P. BREEN III
MAURY GALBRAITH

In the Matter of
PACIFIC POWER & LIGHT (dba PacifiCorp)
Request for a General Rate Increase in the Company's Oregon Annual Revenues

May 9, 2005

CASE: UE 170
WITNESS: Ed Durrenberger

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 100

Direct Testimony

May 9, 2005

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Ed Durrenberger. My business address is 550 Capitol Street NE Suite 215, Salem, Oregon 97301-2551. I am a Senior Revenue Requirements Analyst for Electric & Natural Gas Revenue Requirements in the Utility Program of the Public Utility Commission of Oregon.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. My Witness Qualification Statement is found in Exhibit Staff/101, Durrenberger/1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. As the revenue requirement summary witness for the Commission staff (Staff) in this proceeding, I am generally familiar with the adjustments to PacifiCorp's (Company) filing in this docket sponsored by myself and other Staff analysts. The purpose of my testimony is to speak in a general way about the status of the Staff proposed adjustments and indicate areas where agreement has been reached by parties to this docket.

Q. HAVE YOU PREPARED AN EXHIBIT FOR THIS DOCKET?

A. Yes. I have prepared Exhibit Staff/102, consisting of 10 pages. This exhibit explains the adjustments staff proposes for PacifiCorp's rate increase filing. The effect that these adjustments have on the Company's Oregon revenue requirement is also indicated.

Q. HAVE THE PARTIES MET TO TRY AND REACH AGREEMENT ON THE STAFF PROPOSED ADJUSTMENTS?

A. Yes. A series of settlement conferences were convened starting April 5, 2005. Staff, Citizens' Utility Board (CUB), Industrial Customers of Northwest Utilities (ICNU), Fred Meyer Food Stores (Fred Meyer) and the Company each proposed adjustments to the rate case filing. All parties had an opportunity to weigh in on the merits of the proposed adjustments and endeavor to reach an equitable settlement on the issues.

Q. WHAT WAS THE OUTCOME OF THE SETTLEMENT MEETINGS?

A. The outcome of the meetings was a partial settlement. Of a total of sixteen individual adjustments originally proposed by Staff, all parties were able to reach agreement on eleven. The revenue requirement, as originally filed by the Company, was $102 million; the adjustments that parties have agreed to reduce this total to $71 million. The remaining unsettled adjustments sponsored by Staff would reduce it further to $21 million.

Q. WHAT WAS SETTLED AND BY WHOM?

A. All the parties at the settlement meeting, including the Company, Staff, CUB, ICNU and Fred Meyer, were able to come to an agreement on a particular issue associated with an adjustment and its effect on the revenue requirement in the calendar year 2006 test year. Items from Staff's list (Exhibit Staff/102, pages 2-3) that have been agreed to by all parties as a result of settlement talks are:

S-00 Operating Revenue Deductions

S-1 Load Forecast Revision

S-2 Incentive Programs

S-5 Non-Labor A&G Costs

S-6 Revenue Growth Adjustments

S-7 Bridger Coal Costs

S-8 Federal and State Income Tax Adjustments

S-9 Production Activity Deduction

S-10 Hydro Relicensing Costs

S-11 Extrinsic Value of Resources

S-12 Aquila Hydro Hedge

S-14 Margin

Q. IS A STIPULATION BEING PREPARED AS A RESULT OF THE SETTLEMENT DISCUSSIONS?

A. Yes. A stipulated agreement is currently being prepared by the Company and will include provisions agreeable to all parties to equitably settle these items. This agreement, along with supporting testimony, will be forthcoming.

Q. WHAT ARE THE ADJUSTMENTS PROPOSED BY STAFF THAT WERE NOT SETTLED AT THE SETTLEMENT CONFERENCE?

A. One or more parties at the settlement meetings could not reach agreement on the following Staff's proposed adjustments:

S-0 Rate of Return

S-3 Pension Adjustments

S-4 Benefit Adjustments

S-13 GP Power Cost Adjustment

Q. WHAT IS THE NEXT STEP TO RESOLVING THE ADJUSTMENTS THAT HAVE NOT BEEN SETTLED?

A. The Staff analysts who have proposed each of these adjustments will submit direct testimony in support of their proposed adjustment. The S-0 Rate of Return adjustment and capital structure proposal are supported by testimony from Thomas D. Morgan (See Staff/200 through Staff/202). Ming Peng (See Staff/300) will discuss the cost of debt and cost of preferred stock. Mike Dougherty (See Staff/400) is submitting testimony in support of the Pension Adjustments (S-3) as well as the Benefit Adjustments (S-4). The GP Power Cost Adjustment (S-13) is supported in direct testimony from Jack Breen (See Staff/500). Maury Galbraith (See Staff/600) discusses Resource Valuation Modeling (RVM) issues in his direct testimony.

Q. HAVE THE PARTIES AGREED IN PRINCIPLE ON ISSUES RELATED TO TARIFFS FOR STANDBY ELECTRIC SERVICE FOR CUSTOMERS WITH SELF-GENERATION?

A. Yes. Staff, PacifiCorp, Industrial Customers of Northwest Utilities and Oregon Department of Energy (the initial Parties) have agreed in principle on modifications to the Company's tariff schedules for standby electric service for consumers that supply all or some portion of their load by self-generation on a regular basis ("partial requirements consumers"). The Parties also have agreed in principle on new tariff schedules that would provide partial requirements consumers with the opportunity to purchase energy from the Company or an Electricity Service Supplier to replace some or all of the consumer's on-site generation when the consumer deems it is more economically beneficial ("economic replacement power"). The Stipulation does

not address PacifiCorp's revenue requirement. PacifiCorp will file a Stipulation and supporting testimony on behalf of the Parties.

Q. DOES YOUR EXHIBIT STAFF/102 CONTAIN ANY OTHER INFORMATION YOU WOULD LIKE TO EXPLAIN?

A. Yes. My exhibit, Exhibit Staff/102 contains six separate elements which together summarize both settled positions and Staff's position on unsettled issues and the revenue requirement adjustments for UE 170.

1. Page 1 is a summary sheet that shows the Company's original results of operations as filed and the total adjustments that Staff has made. It also includes the effect on the revenue requirement. Column (1) contains the Company's original Oregon allocated results of operations for the CY 2006 test year as filed. Column (2) contains all the adjustments to revenue and rate base, both settled and not. The next column, column (3), is the adjusted results of operation (column (1) plus column (2)). Column (4) shows the required change in revenues and rate base (Revenue Requirement) for a reasonable rate of return. The last column is column (5) and it is the results of operations with a reasonable rate of return.

2. Pages 2 through 5 is the Adjustment Narrative. It contains an adjustment number, the initials of the Staff initiator, a brief narrative description and/or its settlement status and its effect on the revenue requirement. Other issues and audit recommendations are on page 4. A list of the Staff members who have sponsored adjustments and policy recommendations in the proceeding is shown on Page 5.

3. Page 6 contains the overall income tax calculation for the results of operations.

4. Page 7 shows the revenue sensitive costs.

5. Page 8 contains the Staff proposed capital structure

6. Pages 9 and 10 show the adjustments. On page 9 each adjustment is detailed by individual revenue and/or rate base effects. The revenue requirement difference for each adjustment is shown on line 41. Page 10 calculates the tax consequence for each individual adjustment.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

CASE: UE 170
WITNESS: Ed Durrenberger

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 101

Witness Qualification Statement

May 9, 2005

WITNESS QUALIFICATION STATEMENT

NAME: Ed Durrenberger

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Revenue Requirement Analyst

ADDRESS: 550 Capitol St. NE, Ste. 215, Salem, Oregon 97301

EDUCATION: B.S. Mechanical Engineering
Oregon State University, Corvallis, Oregon

EXPERIENCE: I have been employed at the Public Utility Commission of Oregon since February of 2004. My current responsibilities include staff research, analysis and technical support on a wide range of electric and natural gas cost recovery issues.

OTHER EXPERIENCE: I have over twenty years of operations and maintenance experience managing a boiler plant in a heavy industrial manufacturing environment. I have also managed manufacturing and production in high tech equipment manufacturing.

CASE: UE 170
WITNESS: Ed Durrenberger

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 102

Exhibits in Support of
Direct Testimony

May 9, 2005

PACIFICORP UE 170
OREGON ALLOCATED RESULTS OF OPERATIONS
YEAR ENDING DECEMBER 2006 ($000)
STAFF PROPOSED SUMMARYSHEET

	SUMMARY SHEET	2006 Results Per Company Filing (1)	Adjustments (2)	2006 Adjusted (3)	Required Change for Reasonable Return (4)	Results at Reasonable Return (5)
1	**Operating Revenues**					
2	Retail Sales	$815,356	$0	$815,356	**$20,630**	$835,986
3	Wholesale Sales	193,049	7,312	200,361	0	200,361
4	Other Revenues	40,217	2,146	42,363	0	42,363
5	**Total Operating Revenues**	$1,048,622	$9,457	$1,058,079	$20,630	$1,078,709
6	**Operating Expenses**					
7	Steam Production	$202,413	($4,385)	$198,028	$0	$198,028
8	Hydro Production	10,312	0	10,312	0	10,312
9	Other Power Supply	263,389	(9,404)	253,985	0	253,985
10	Transmission	32,321	0	32,321	0	32,321
11	Distribution	69,005	0	69,005	0	69,005
12	Customer Accounting	31,484	0	31,484	0	31,484
13	Customer Service & Info	3,683	0	3,683	56	**3,739**
14	Sales	1	0	1	0	1
15	Administrative and General	78,899	(19,144)	59,755	0	59,755
16	**Total Operation & Maintenance**	$691,507	($32,933)	$658,574	$56	$658,630
17	Depreciation	117,476	0	117,476	0	117,476
18	Amortization	17,815	0	17,815	0	17,815
19	Taxes Other than Income	44,872	0	44,872	467	45,339
20	Income Taxes	48,779	15,268	64,047	7,639	71,686
21	Miscellaneous Revenue and Expense	(160)	0	(160)	0	(160)
22	**Total Operating Expenses**	$920,289	($17,665)	$902,624	$8,162	$910,786
23	**Net Operating Revenues**	$128,333	$27,122	$155,455	$12,475	$167,930
24	**Average Rate Base**					
25	Electric Plant in Service	$4,330,591	($4,231)	$4,326,360	$0	$4,326,360
26	Accumulated Depreciation & Amortization	(1,901,412)	0	(1,901,412)	0	(1,901,412)
27	Accumulated Deferred Income Taxes	(337,175)	0	(337,175)	0	(337,175)
28	Accumulated Deferred Inv. Tax Credit	(8,523)	0	(8,523)	0	(8,523)
29	**Net Utility Plant**	$2,083,481	($4,231)	$2,079,250	$0	$2,079,250
30	Plant Held for Future Use	0	0	0	0	0
31	Acquisition Adjustments	22,395	0	22,395	0	22,395
32	Working Capital	22,877	(366)	22,511	170	22,681
33	Fuel Stock	14,766	0	14,766	0	14,766
34	Materials & Supplies	27,336	0	27,336	0	27,336
35	Customer Advances for Construction	6	0	6	0	6
36	Weatherization Loans	143	0	143	0	143
37	Prepayments	7,480	0	7,480	0	7,480
38	Misc. Deferred Debits	37,349	0	37,349	0	37,349
39	Misc. Rate Base Additions/(Deductions)	(37,385)	0	(37,385)	0	(37,385)
40	**Total Average Rate Base**	$2,178,448	($4,597)	$2,173,851	$170	$2,174,021
41	**Rate of Return**	5.89%		7.15%		**7.72%**
42	**Implied Return on Equity**	5.42%		8.29%		9.50%

PACIFICORP UE170
OREGON ALLOCATED RESULTS OF OPERATIONS
YEAR ENDING DECEMBER 2006 ($000)
STAFF PROPOSED ADJUSTMENT NARRATIVE

Item	Staff		Revenue Requirement Effect
		Revenue Requirement on the Company's Filed Results:	**$102,137**
		Proposed Staff Adjustments	
S-0	TM/BC	Rate of Return For the test period, Staff proposes an overall rate of return of 7.76 percent. This is based on a cost of long term debt of 6.18 percent a cost of preferred stock of 6.33 percent and a return on common equity of 9.50 percent.	**($35,884)**
S-00	ED	Operating Revenue Deduction Adjustment **All parties have agreed to this adjustment.**	**($138)**
S-1	BW	Load Forecast Revision (System Losses Adjustment) **All parties have agreed to this adjustment.**	**($9,160)**
S-2	LK	Incentive Programs **All parties have agreed to this adjustment.**	**($5,500)**
S-3	MD	Pension Adjustment Staff removes the company's forecasted cost level for FY 2006 and replaces them with CY 2004 costs. Calendar year 2006 costs are based on actuarial assumptions and variables that may not reflect actual FAS 87, FAS 106 and FAS 112 costs.	**($4,874)**
S-4	MD	Benefit Adjustment Staff proposes to adjust the rate of increase for medical benefits to more closely match both current expected growth trends and recent past historical rates.	**($3,631)**
S-5	MD	Non-Labor Administrative and General Cost Adjustments **All parties have agreed to this adjustment.**	**($6,123)**

PACIFICORP UE170
OREGON ALLOCATED RESULTS OF OPERATIONS
YEAR ENDING DECEMBER 2006 ($000)
STAFF PROPOSED ADJUSTMENT NARRATIVE

S-6	PR	Revenue Growth Adjustment **All parties have agreed to this adjustment.**	**($2,200)**
S-7	JB	Bridger Coal Costs **All parties have agreed to this adjustment.**	**($2,400)**
S-8	JJ	FIT and SIT Adjustment **All parties have agreed to this adjustment.**	**($591)**
S-9	JJ	Production Activity Deduction **All parties have agreed to this adjustment.**	**($854)**
S-10	ED	Hydroelectric Relicensing Cost Adjustment Staff withdraws this adjustment	**$0**
S-11	BW/MG	Extrinsic Value of Resources **All parties have agreed to this adjustment.**	**($2,847)**
S-12	BW	Aquila Hydro Hedge **All parties have agreed to this adjustment.**	**($504)**
S-13	JB	GP Power Cost Adjustment Staff reduced purchased power costs to reflect offsetting capital recovery and maintenance allowances under the GP contract.	**($2,107)**
S-14		Margin Adjustment **All parties have agreed to this adjustment.**	**($4,649)**
S-XX		Rounding Error Adjustment	**($45)**

Total Staff-Proposed Adjustments (Base Rates):	**($81,507)**
Staff-Calculated Revenue Requirements Change (Base Rates):	**$20,630**

PACIFICORP UE170
OREGON ALLOCATED RESULTS OF OPERATIONS
YEAR ENDING DECEMBER 2006 ($000)
STAFF PROPOSED ADJUSTMENT NARRATIVE

Other Issues (Audit)

S-A	MD	Code of Conduct Adherence Staff recommends that the company develop internal policies and procedures that specifically refer to, and are consistent with Oregon's Code of Conduct Rules	
S-B	MD	Interest Income Transfer PacifiCorp should make the appropriate adjustments to transfer $8.5 million in interest income from Account 421 to Account 419.	
S-C	MD	Madras Office Center PacifiCorp should file an application for Commission approval of the Madras Office Center pursuant to ORS 757.480 and OAR 860-027-0025.	
S-D	MD	Property Sales Reporting Staff and PacifiCorp should work together to revise the conditions (materiality, carrying charge, rate mechanism, and periodic reporting) of PacifiCorp's Property Sales Balancing Account.	
S-E	ED	Valuation of New Generating Resources PacifiCorp needs to file a request for a waiver to allow the cost of new generating resources in revenue requirement at cost, rather than market.	
S-F	JB	Colorado Coal Tax Credits Staff has had discussions with PacifiCorp representatives regarding an adjustment for tax credits related to the purchase of Colorado coal. PacifiCorp is in the process of identifying and proposing an adjustment amount. This settlement package does not	
S-G	ED	Test and Treat Pole Replacement and Vegetation Control Staff is evaluating the Teat and Treat Pole Replacement Program and the Vegetation Control Program. Discussions with the company have been scheduled but will not occur until after the Settlement Conferences. This settlement package does not include any adjustments that staff may propose as a result of this evaluation.	

PACIFICORP UE170
OREGON ALLOCATED RESULTS OF OPERATIONS
YEAR ENDING DECEMBER 2006 ($000)
STAFF PROPOSED ADJUSTMENT NARRATIVE

Index of staff witnesses

JB	Jack Breen, 378-5942
BC	Bryan Conway, 378-6200
ED	Ed Durrenberger, 373-1536
MD	Michael Dougherty, 378-3623
MG	Maury Galbraith, 378-6667
JJ	Judy Johnson, 378-6636
LK	Lynn Kittilson, 378-6116
TM	Thomas Morgan, 378-4629
MP	Ming Peng, 373-1123
PR	Paul Rossow, 378-6917
BW	Bill Wordley, 378-5264

PACIFICORP UE 170
OREGON ALLOCATED RESULTS OF OPERATION
YEAR ENDING DECEMBER 2006 ($000)
INCOME TAX CALCULATION

	Income Tax Calculations	2006 Per Company Filing (1)	Adjustments (2)	2006 Adjusted (3)	Required Change for Reasonable Return (4)	Results at Reasonable Return (5)
1	Book Revenues	$1,048,622	$9,457	$1,058,079	$20,630	$1,078,709
2	Book Expenses Other than Depreciation	754,034	($32,933)	721,101	523	721,624
3	State Tax Depreciation	117,476	$0	117,476	0	117,476
4	Interest	68,346	($144)	68,202	5	68,207
5	Less: Schedule M Differences	(6,732)	$0	(6,732)	0	(6,732)
6	State Taxable Income	$115,498	$42,534	$158,032	$20,102	$178,134
7	Add OR Depletion Adjustment	0	0	0	0	0
8	Total State Taxable Income	$115,498	$42,534	$158,032	$20,102	$178,134
9	State Income Tax @ 4.540%	$5,244	$1,882	$7,126	$914	$8,040
10	State Tax Credits	826	0	826	0	826
11	Net State Income Tax	$6,070	$1,882	$7,952	$914	$8,866
12	Additional Tax Depreciation	0	0	0	0	0
13	Plus: Other Schedule M Differences	0	0	0	0	0
14	Federal Taxable Income	$109,426	40,652	$150,078	$19,188	$169,266
15	Federal Tax @ 35%	$37,679	$13,386	$51,065	$6,725	$57,790
16	Federal Tax Credits	0	0	0	0	0
17	Current Federal Tax	$37,679	$13,386	$51,065	$6,725	$57,790
18	ITC Adjustment		-			
19	Deferral	0	0	0	0	0
20	Restoration	0	0	0	0	0
21	Total ITC Adjustment	$0	$0	$0	$0	$0
22	Provision for Deferred Taxes	5,030	0	5,030	0	5,030
23	Total Income Tax	$48,779	$15,268	$64,047	$7,639	$71,686

PACIFICORP UE 170
OREGON ALLOCATED RESULTS OF OPERATIONS
YEAR ENDING DECEMBER 2006 ($000)
REVENUE SENSITIVE COSTS

REVENUE SENSITIVE COSTS	
Revenues	1.00000
Operating Revenue Deductions	
Uncollectible Accounts	0.00278
Taxes Other - Franchise	0.02220
- Other	0.00000
- Resource supplier	0.00046
State Taxable Income	0.97456
State Income Tax @4.540%	0.04425
Federal Taxable Income	0.93031
Federal Income Tax @ 35%	0.32561
ITC	0.00000
Current FIT	0.32561
Other	0.00000
Total Excise Taxes	0.36986
Total Revenue Sensitive Costs	0.39530
Utility Operating Income	0.60470
Net-to-Gross Factor	**1.6537**

For Settlement Purposes Only

PACIFICORP UE170
OREGON ALLOCATED RESULTS OF OPERATIONS
YEAR ENDING DECEMBER 2006 ($000)
STAFF PROPOSED CAPITAL STRUCTURE

COST OF CAPITAL - STAFF PROPOSED	% of CAPITAL	COST	WEIGHTED COST
Long Term Debt	51.40%	6.113%	3.1421%
Preferred Stock	1.10%	6.343%	0.0698%
Common Equity	47.50%	9.500%	4.5125%
Total	100.00%		**7.724%**

PACIFICORP UE 170
OREGON ALLOCATED RESULTS OF OPERATIONS
YEAR ENDING DECEMBER 2006 ($000)
STAFF PROPOSED ADJUSTMENTS

	Staff Adjustments	System Losses Adjustment (S-1)	Incentive Programs (S-2)	Pension Adjustment (S-3)	Benefit Adjustments (S-4)	Non-labor A&G Adjustments (S-5)	Revenue Growth Adjustment (S-6)	Bridger Coal Cost Adjustment (S-7)	FIT & SIT Adjustment (S-8)	Production Activity FIT Deduction (S-9)	Hydro Relicensing Adjustment (S-10)	Extrinsic Value Adjustment (S-11)	Aquila Hydro Hedge (S-12)	GP Power Cost Adjustment (S-13)	Margin Adjustment (S-14)		**Total Adjustments (Base Rates)**
1	**Operating Revenues**																
2	Retail Sales	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$0
3	Wholesale Sales	0	0	0	0	0	0	0	0	0	0	$2,778	0	0	4,534		7,312
4	Other Revenues	0	0	0	0	0	2,146	0	0	0	0	0	0	0	0		2,146
5	**Total Operating Revenues**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,146**	**$0**	**$0**	**$0**	**$0**	**$2,778**	**$0**	**$0**	**$4,534**		**$9,457**
6	**Operating Expenses**																
7	Steam Production	$0	$0	$0	$0	$0	$0	($2,335)	$0	$0	$0	$0	$0	($2,050)	$0		($4,385)
8	Hydro Production	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
9	Other Power Supply	(8,914)	0	0	0	0	0	0	0	0	0	0	(490)	0	0		(9,404)
10	Transmission	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
11	Distribution	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
12	Customer Accounting	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
13	Customer Service & Info	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
14	Sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
15	Administrative and General	0	(5,182)	(4,587)	(3,416)	(5,960)	0	0	0	0	0	0	0	0	0		(19,144)
16	**Total Operation & Maintenance**	**($8,914)**	**($5,182)**	**($4,587)**	**($3,416)**	**($5,960)**	**$0**	**($2,335)**	**$0**	**$0**	**$0**	**$0**	**($490)**	**($2,050)**	**$0**		**($32,933)**
17	Depreciation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$0
18	Amortization	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
19	Taxes Other than Income	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
20	Income Taxes	3,384	1,987	1,759	1,310	2,263	814	886	(357)	(516)	0	1,054	186	778	1,720		15,268
21	Miscellaneous Revenue and Expense	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
22	**Total Operating Expenses**	($5,530)	($3,195)	($2,828)	($2,106)	($3,697)	$814	($1,449)	($357)	($516)	$0	$1,054	($304)	($1,272)	$1,720		($17,665)
23	**Net Operating Revenues**	**$5,530**	**$3,195**	**$2,828**	**$2,106**	**$3,697**	**$1,332**	**$1,449**	**$357**	**$516**	**$0**	**$1,724**	**$304**	**$1,272**	**$2,814**		**$27,122**
24	**Average Rate Base**																
25	Electric Plant in Service	$0	($1,633)	($1,487)	($1,111)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		($4,231)
26	Accumulated Depreciation & Amortization	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
27	Accumulated Deferred Income Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
28	Accumulated Deferred Inv. Tax Credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
29	**Net Utility Plant**	$0	($1,633)	($1,487)	($1,111)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		($4,231)
30	Plant Held for Future Use	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0		$0
31	Acquisition Adjustments	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
32	Working Capital	(115)	(66)	(59)	(44)	(77)	17	(30)	(7)	(11)	0	22	(6)	(26)	36		(366)
33	Fuel Stock	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
34	Materials & Supplies	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
35	Customer Advances for Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
36	Weatherization Loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
37	Prepayments	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
38	Misc. Deferred Debits	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
39	Misc. Rate Base Additions/(Deductions)	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
40	**Total Average Rate Base**	**($115)**	**($1,699)**	**($1,546)**	**($1,155)**	**($77)**	**$17**	**($30)**	**($7)**	**($11)**	**$0**	**$22**	**($6)**	**($26)**	**$36**		**($4,597)**
41	**Revenue Requirement Effect**	**($9,160)**	**($5,500)**	**($4,874)**	**($3,631)**	**($6,123)**	**($2,200)**	**($2,400)**	**($591)**	**($854)**	**$0**	**($2,847)**	**($504)**	**($2,107)**	**($4,649)**		**($45,440)**

PACIFICORP UE 170
OREGON ALLOCATED RESULTS OF OPERATIONS
YEAR ENDING 2006 ($000)
STAFF PROPOSED ADJUSTMENTS (2)

	Adjustment Income Tax Calculations	System Losses Adjustment (S-1)	Incentive Programs (S-2)	Pension Adjustment (S-3)	Benefit Adjustments (S-4)	Non-labor A&G Adjustment (S-5)	Revenue Growth Adjustment (S-6)	Bridger Coal Cost Adjustment (S-7)	FIT & SIT Adjustment (S-8)	Production Activity FIT Deduction (S-9)	Hydro Relicensing Adjustment (S-10)	Extrinsic Value Adjustment (S-11)	Aquila Hydro Hedge (S-12)	GP Power Cost Adjustment (S-13)	Margin Adjustment (S-14)		**Total Adjustments (Base Rates)** 0
1	Book Revenues	$0	$0	$0	$0	$0	$2,146	$0	$0	$0	$0	$2,778	$0	$0	$4,534		$9,457
2	Book Expenses Other than Depreciation	(8,914)	(5,182)	(4,587)	(3,416)	(5,960)	0	(2,335)	0	0	0	0	(490)	(2,050)	0		($32,933)
3	State Tax Depreciation	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
4	Interest	(4)	(53)	(49)	(36)	(2)	1	(1)	(0)	(0)	0	1	(0)	(1)	1		($144)
5	Schedule M Differences	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
6	State Taxable Income	$8,918	$5,235	$4,636	$3,452	$5,962	$2,145	$2,336	$0	$0	$0	$2,777	$490	$2,051	$4,533		$42,534
7	Add OR Depletion Adjustment-Net	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
8	Total State Taxable Income	$8,918	$5,235	$4,636	$3,452	$5,962	$2,145	$2,336	$0	$0	$0	$2,777	$490	$2,051	$4,533		$42,534
9	State Income Tax	$405	$238	$210	$157	$271	$97	$106	($49)	$0	$0	$126	$22	$93	$206		$1,882
10	State Tax Credits	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
11	Net State Income Tax	$405	$238	$210	$157	$271	$97	$106	($49)	$0	$0	$126	$22	$93	$206		$1,882
12	Additional Tax Depreciation	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
13	Other Schedule M Differences	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
14	Federal Taxable Income	$8,513	$4,997	$4,426	$3,295	$5,691	$2,048	$2,230	$49	$0	$0	$2,651	$468	$1,958	$4,327		$40,652
15	Federal Tax @ 35%	2,979	1,749	1,549	1,153	1,992	717	780	(308)	(516)	0	928	164	685	1,514		$13,386
16	Federal Tax Credits	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
17	Current Federal Tax	$2,979	$1,749	$1,549	$1,153	$1,992	$717	$780	($308)	($516)	$0	$928	$164	$685	$1,514		$13,386
18	**ITC Adjustment**																$0
19	Deferral	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
20	Restoration	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
21	Total ITC Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
																	$0
22	Provision for Deferred Taxes	0	0	0	0	0	0	0	0	0	0	0	0	0	0		$0
																	$0
23	Total Income Tax	$3,384	$1,987	$1,759	$1,310	$2,263	$814	$886	($357)	($516)	$0	$1,054	$186	$778	$1,720		$15,268

	REVENUE REQUIREMENTS EFFECTS OF ADJUSTMENTS	System Losses Adjustment (S-1)	Incentive Programs 0 (S-2)	Pension Adjustment 0 (S-3)	Benefit Adjustments 0 (S-4)	Non-labor A&G Adjustment (S-5)	Revenue Growth Adjustment (S-6)	Bridger Coal Cost Adjustment (S-7)	FIT & SIT Adjustment 0 (S-8)	Production Activity FIT Deduction (S-9)	Hydro Relicensing Adjustment (S-10)	Extrinsic Value Adjustment (S-11)	Aquila Hydro Hedge (S-12)	GP Power Cost Adjustment (S-13)	Margin Adjustment 0 (S-14)		Total Adjustments (Base Rates) $0
24	Revenues and Expenses	($9,145)	($5,283)	($4,677)	($3,483)	($6,113)	($2,202)	($2,396)	($590)	($853)	$0	($2,850)	($503)	($2,104)	($4,654)		($44,853)
25	Rate Base	(15)	(217)	(197)	(148)	(10)	2	(4)	(1)	(1)	0	3	(1)	(3)	5	0	($587)
26	Total	($9,160)	($5,500)	($4,874)	($3,631)	($6,123)	($2,200)	($2,400)	($591)	($854)	$0	($2,847)	($504)	($2,107)	($4,649)		($45,440)

CASE: UE 170
WITNESS: Thomas Morgan

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 200

Direct Testimony

May 9, 2005

Introduction

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Thomas D. Morgan and my business address is 550 Capitol Street NE, Salem, Oregon 97310-1380.[1]

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed as a Financial Economist by the Public Utility Commission of Oregon (OPUC or Commission). I have been employed by OPUC since August 2001. I work in the Finance/Policy Analysis Division.

Q. HAVE YOU PREPARED EXHIBITS?

A. Yes. I include my Witness Qualifications Statement as Staff/2501 and I prepared an Appendix, Staff/202, which consists of 569 pages, containing ancillary testimony and reports. I have also provide Staff/203, which includes the exhibits outlining the results of my analyses.

Scope of Testimony

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My assignment was to develop cost of capital estimates for the rate-regulated property operated by PacifiCorp, dba Pacific Power and Light (PacifiCorp Company or PPL), an integrated electric utility company[2]. I will provide an estimate of the required rate of return (ROR) for PacifiCorp. Specifically, I analyzed or will report on PacifiCorp's (1) cost of debt; (2) cost of preferred stock; (3) capital structure; and, (4) cost of common equity.

[1] My telephone number is (503) 378-4629 and my e-mail address is thomas.d.morgan@state.or.us.
[2] PacifiCorp is a wholly owned subsidiary of Scottish Power and the Company's equity is owned by its parent. The Company does not have publicly traded common stock.

First I discuss my analysis and recommendations; second I discuss my review of PacifiCorp's testimony (UE 170/200) representing the views of Dr. Hadaway relating to the cost of capital.

In preparing my analysis, I reviewed the Company's responses to data requests, the Value Line Investment Survey (Value Line), and financial reports pertaining to the Company and its peers.

Q. DID YOU PREPARE A TABLE SUMMARIZING STAFF'S RECOMMENDED RATE OF RETURN?

A. Yes. Table 1 summarizes PacifiCorp's requested ROR and Staff's recommended ROR.

Table 1:

	Company Requested			Staff Recommended			Difference
Capital Component	**Cost**	**Ratio**	**Weighted Cost**	**Cost**	**Ratio**	**Weighted Cost**	
Long-Term Debt	6.351%	49.400%	3.137%	6.113%	51.40%	3.142%	0.005%
Preferred Stock	6.635%	1.100%	0.073%	6.343%	1.10%	0.070%	-0.003%
Common Equity	11.125%	49.500%	5.507%	9.50%	47.50%	4.513%	-0.994%
TOTAL		100.00%	8.7172%		100.00%	7.724%	-0.993%

Summary Recommendation

Q. WHAT IS YOUR RECOMMENDED RATE OF RETURN FOR PACIFICORP?

A. I recommend a 9.5% return on equity (ROE) that, when coupled with Staff Witness Peng's recommended embedded cost of debt and preferred stock results in a 7.724 percent overall rate of return.

Q. IN ADDITION TO THE POINT ESTIMATE FOR YOUR COST OF EQUITY RECOMMENDATION, IS THERE A RANGE OF ESTIMATES FOR ROE SUGGESTED BY YOUR ANALYSIS?

A. Yes. My range of estimates is 9.00 percent to 9.50 percent.

Q. DID YOU CONDUCT ANY SENSITIVITY ANALYSIS ON THE ROE ESTIMATES THAT REFLECT ALTERNATIVE ASSUMPTIONS?

A. Yes. The Discounted Cash Flow model relies on market-derived assumptions and inputs, including current prices and long-term growth. I conducted a sensitivity analysis of some input assumptions to gauge how the indications react to a range of alternatives. The results of my sensitivity analyses are included within my recommendations.

Q. DID YOU PREPARE A TABLE SUMMARIZING STAFF'S ANALYSIS FOR THE COST OF EQUITY RESULTS?

A. Yes. Table 2 summarizes the results of my analysis relating to the Cost of Equity.

Table 2:

	Range of Results
Single-stage DCF	8.3 percent to 9.3 percent
2-stage 5-year DCF	5.2 percent to 8.6 percent
2-stage 150-year DCF	8.4 percent to 9.2 percent
3-Stage 40-year DCF	8.8 percent

Q. IN WHAT CONTEXT DO YOU PROVIDE THE POINT ESTIMATE AND THE RANGE OF ESTIMATES?

A. The range of estimates provides the Commission guidance related to the upper and lower ends of the Cost of Equity estimates that Staff believes could reasonably be adopted. This analysis provides an upper bound to a range of

reasonable cost of equity, and is consistent with the Commission's internal operating guidelines.

Q. IS THE ROE RECOMMENDED BY THE COMPANY WITHIN THE RANGE OF STAFF'S ROE ESTIMATES?

A. No. The Company's 11.125 percent is more than 150 basis points higher than even the highest estimate. The Company's proposal is also beyond the range of actual book value returns, i.e., ROE, or accounting returns, achieved over the past few years, within the industry. It is also greater than the range of reasonable returns anticipated by Value Line on a forward-looking basis, for the electric utility industry.

Q. DO YOU HAVE ANY OTHER RECOMMENDATIONS?

A. Yes. I recommend that the Commission adopt my recommendation to apply the average capital structure of the comparable companies included in the Company's cost of equity analyses. This structure should reflect the current capital structure and not an anticipated structure that may be expected in the future.

The decision that the Commission makes with regard to the Cost of Equity should be considered in conjunction with its decision regarding capital structure because these two factors are inextricably linked. The cost of capital standard that the Commission should follow should be based on the overall rates that are generated, and not by any one input to the cost of capital analysis.

Q. PLEASE EXPLAIN.

A. Yes. As an example, assume that an analyst finds that the appropriate ROE is 10 percent for a company based on a sample of 20 comparables, and finds that the typical capital structure for the comparables is comprised of 40 percent

equity and 60 percent debt. If a company were to propose using its own, less-leveraged capital structure of only 50 percent debt (and 50 percent equity,) then the overall risk of default lessens, and the impact on the after-interest cash flows is less than it would otherwise be. This reduces the riskiness of the company and therefore, its investors would require a lower return.

At this point, the analyst has two choices. First, the analyst could adopt the actual capital structure of the company in question and then adjust the ROE downward to reflect the decreased risk due to less leverage. The second choice is to simply adopt the typical or average capital structure of the comparables. An advantage of adopting the capital structure of the comparables is that you are ensured a good match between the required return and leverage. It also requires less subjective analysis to determine the "worth" or reduced risk associated with less leverage.

It is worth noting that adopting a capital structure that differs from the actual capital structure of the company does not restrict the ability of the company to manage its capital structure. Adopting the capital structure of the comparables is done simply to determine the appropriate overall rate of return. It is not done to try to influence the amount of debt or equity the company chooses to hold.

Q. WHAT IS A COMPANY'S CAPITAL STRUCTURE?

A. I have provided a general explanation of all of the components that comprise a company's capital structure in Staff/202, 533-534.

Q. DO YOU AGREE THAT THE COMPANY'S PROPOSED CAPITAL STRUCTURE IS REASONABLE?

A. No, the Company's proposed capital structure is not reasonable based on its proposed cost of equity derivation. Because the Cost of Equity is being

considered in relation to a peer-group analysis; the same group should be used to develop an average capital structure rather than a company-specific structure. Therefore, my recommended capital structure is as follows:

Capital Structure Requested by Parties

Company Recommended		Staff Recommended
Capital Source	Percentage	Percentage
Long Term Debt	49.40%	51.40%
Preferred Stock	1.10%	1.10%
Common Equity	49.50%	47.50%
Total:	100.00%	100.00%

The Cost of Debt and the Cost of Preferred Stock

Q. WHAT IS THE RECOMMENDED COST OF DEBT AND THE COST OF PREFERRED STOCK?

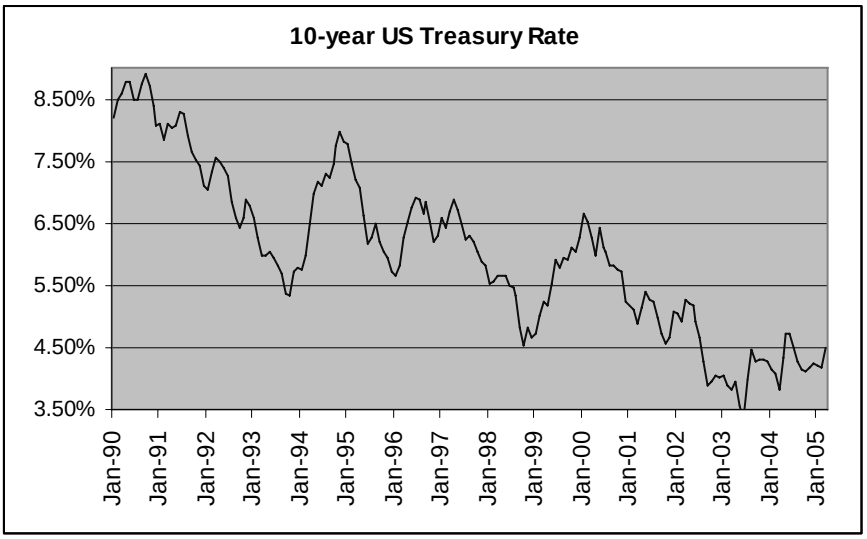
A. I recommend the Commission adopt a 6.113 percent cost of debt as outlined in the testimony of Ming Peng. Staff recommends a cost of preferred stock of 6.343 percent. These are detailed in Staff/300.

Q. PLEASE PUT CAPITAL COSTS IN PERSPECTIVE. DESCRIBE THE TREND IN INTEREST RATES OVER APPROXIMATELY THE PAST TEN YEARS.

A. Interest rates have declined significantly, and have recently reached record lows. The chart below graphs intermediate-term[3] U.S. Treasury rates from January 1990 through February 2005:

[3] US Treasury constant-maturity five-, seven-, and ten-year rates published by the U.S. Federal Reserve. http://www.federalreserve.gov/releases/H15/data.htm

Historical Perspective of Interest Rates



Summary statistics from the same series of interest rates is provided from the beginning of 1970 to the present. These statistics put recent rates in a longer-term perspective.

US Treasury Rates from 1970 to 2005

	10-Year Average
Min	3.33%
Max	8.89%
Average	6.01%
Median	5.97%
Current (03/05)	4.50%

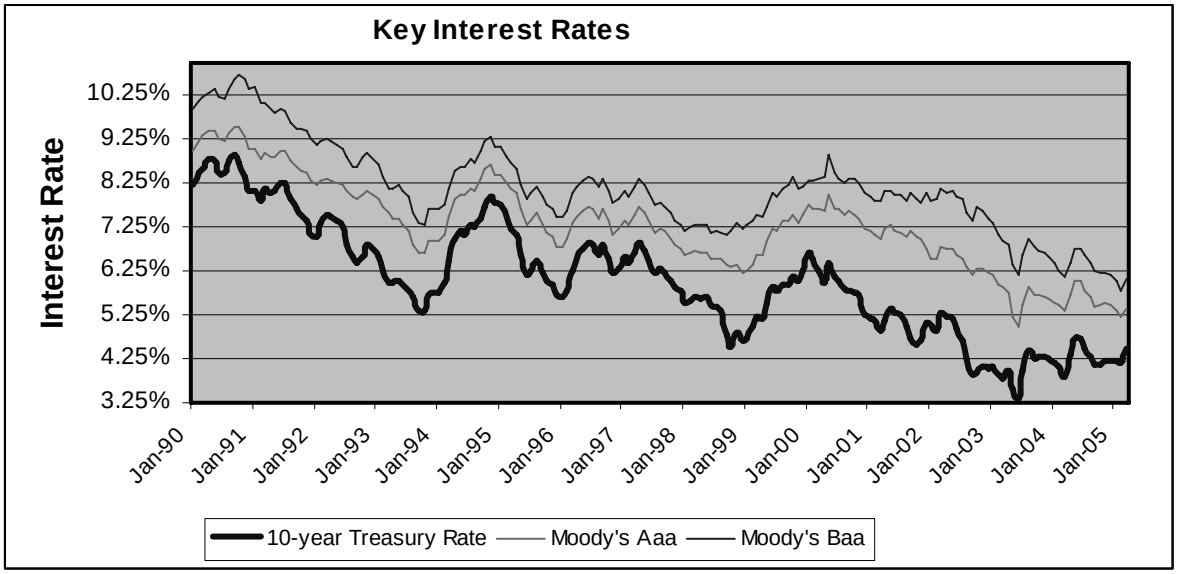
This table indicates the fact that current rates are moderately higher, i.e., about 25 basis points higher, than those in place during PacifiCorp's last rate case that became effective in 2003. Current rates are still among at the lowest levels that have existed since at least 1970. The outlook for the future is for rates to trend upward. Most analysts do not expect significant upward pressure, however, for the foreseeable future. These "risk-free" interest rates

contain a component for the risk of inflation, so any changes in the outlook for inflation, or other upward expectations, is already reflected in these rates.

It is important to note that overall future expectations of interest rates are currently incorporated within the cost of equity estimates derived in my analysis.

Q. WHERE ARE CAPITAL COSTS WITH RESPECT TO HISTORICAL COSTS?

A. The average cost of debt and equity is at or near its lowest point of the last 40 years. The following table reflects the cost of "Moody's Aaa" corporate debt. This debt rating reflects the best rates available to the corporate environment. The table also reflects the cost of "Baa" debt, which is the lowest rung on the "investment-grade" ladder. Additional series included in the table is the 10-year Treasuries. This data series is provided in order to reflect the typical spread between the 10-year Treasury and both Moody's Aaa and Baa-rated corporate debt.



This chart provides support for the contention that there is a reasonable spread between Treasury rates and the cost of debt capital for a

company. The recent very low Treasury rate environment has caused the spreads to "loosen" which is reflected as an increase between the Treasury rates and corporate bond rates. In fact, over the past few years, the average spread between the 10-year Treasury and the “Aaa”-rated debt has been about 1.25 percent. The "Baa"-rated debt has been about 75 basis points higher, at about 2.0 percent. Currently, these spreads are about 1.0 to 1.75 percent, respectively, indicating a nominal 25 basis point premium over these historic averages.

Q. DESCRIBE THE CHANGE IN INTEREST RATES BETWEEN PACIFICORP’S LAST SETTLEMENT AND TODAY’S INTEREST RATES.

A. Treasury interest rates have been relatively stable. Ten-year rates are up about 20 basis points.[4] Current interest rates are low by historical standards and so are capital costs for equity investors.

Q. PLEASE DESCRIBE HOW THE OVERALL MARKET HAS BEHAVED SINCE THE NEW MILLENIUM.

A. The stock market has declined precipitously. Many analysts have revised their predictions of the market's long-run expected performance.

Q. IS PACIFICORP’S REQUEST FOR AN 11.125 PERCENT ROE IN THIS DOCKET CONSISTENT WITH THE CURRENT INTEREST RATE ENVIRONMENT?

A. No. PacifiCorp’s request for 11.125 percent ROE in this docket is inconsistent with the substantially low interest rates that currently prevail. Although there is not necessarily a pure linear relationship between the return investors require for either bonds or equity investments and the rate provided by current

[4] As the maturity increases, the relative “term premium” narrows due in part to the dynamics of the term structure of interest rates, which underlies the derivation of the Treasury Yield Curve.

Treasury securities, there is a direct *correlation* that implies that as interest rates have decreased, the cost of equity capital has decreased as well.

Stocks and bonds compete with each other in the capital markets. Therefore, as interest rates decrease the demand for stocks may increase commensurately. This increase in demand, all else equal, would indicate that the relative returns required by equity investors have decreased.

A Historical Perspective of Stock Returns

Q. WHAT HAVE HISTORICAL NOMINAL RETURNS BEEN FOR AVERAGE-RISK SECURITIES?

A. I have provided tables pertaining to the historic returns for securities in Staff/202, Morgan/10. One should keep in mind that these series measure *actual* returns, not *expected* returns. However, any request for an allowed ROE above 10.60 percent exceeds the geometric mean return for the overall market, since 1929, which is representative of an *average-risk* portfolio.

Q. WHAT HAS BEEN THE LONG-TERM AVERAGE RETURN TO THE DOW JONES INDUSTRIAL AVERAGE?

A. The Dow Jones Industrial Average (commonly referred to as "The Dow") has tended to return about nine percent to ten percent (nominal) per year over the past one hundred years.

Q. DO YOU HAVE OTHER EVIDENCE REGARDING HISTORICAL RETURNS TO THE AVERAGE-RISK STOCK?

A. Yes, I do. I have included a detailed discussion starting at Staff/202 Morgan/238. As I discuss in more depth, public utilities are generally considered to be less risky than the overall market, on average. Because of this, an analysis of the historic market returns (ex post) and a consideration of

the market's outlook, should be informative when considering the required returns for investors of public utilities. From this perspective, the market's overall return outlook should set the "ceiling" for the required return for PacifiCorp's rate-regulated assets.

Staff Analysis

Q. WHAT METHODS DID YOU USE TO ESTIMATE THE COST OF EQUITY CAPITAL THAT WOULD BE APPROPRIATELY APPLIED TO PACIFICORP?

A. I used a single and multi-stage discounted cash flow (DCF) model. The Commission has used DCF models for many years and has adopted a series of approaches and it is reasonable to use the here.

Q. HOW DID YOU APPLY THE DCF MODEL AND WHAT COMPARABLE GROUPING OF COMPANIES DID YOU SELECT?

A. I applied the DCF model using single-stage, two-stage and three-stage models. I applied the DCF method employing market data, as well as forecasted data of various financial parameters for a comparable group of 16 electric utility companies. The comparable group of companies employed in my analysis comes from the same group of companies used by PacifiCorp's witness Dr. Hadaway in this case. Because I am basing my analysis on the same group of comparable companies as employed by Dr. Hadaway, the equity cost calculation issue is narrowed to the estimation methods and the model's assumptions.

Q. WAS STAFF ABLE TO DIRECTLY ESTIMATE THE COST OF CAPITAL FOR PACIFICORP?

A. No. PacifiCorp is not publicly-traded.[5] Because its shares are not priced in the market, the DCF model cannot be directly applied to the Company on a stand-alone basis. Staff reviewed operating documents from the Company and found the information useful; however, a PacifiCorp-specific cost of equity analysis could not be completed.

A. Staff accepted the representative sample of companies identified by Dr. Hadaway and used that sample in determining PacifiCorp's cost of equity.

Cost of Equity for the Rate-regulated Electric Industry

Q. WHY DID YOU APPLY THE DCF MODEL TO A SAMPLE OF ELECTRIC UTILITIES?

A. I applied the DCF model to a representative sample of companies that were chosen by Dr. Hadaway. Because PacifiCorp is not publicly-traded, its own share activity cannot be observed. Therefore, relying on a cohort sample is a reasonable approach. Additionally, estimating the growth term, *g*, for an individual company is sometimes difficult, and a representative industry sample average estimates may allow measurement errors to cancel themselves in a statistical distribution. The growth term is critical to properly applying the DCF model.

Q. DID YOU INCLUDE ALL THE COMPANIES FOR WHICH SUFFICIENT INFORMATION IS AVAILABLE?

A. No. Although information and data is available on several companies that are covered in Value Line, the initial starting point requires a filtering process that is

[5] The foundation of the DCF model is in the theory of security valuation. The price investors are willing to pay for a share of common stock today is determined by the income stream expected from the investment. The return the investor expects to receive over the investment time horizon is composed of: (i) dividend payments, and (ii) the appreciated sale value of the investment. Because the model requires "market-derived" share prices, company-specific analyses require publicly-traded securities.

designed to select companies that provide proper insight for the purpose of the analysis. The more a company represents a “pure play” rate-regulated utility company, the better candidate it becomes.

The purpose of the analysis is to estimate the cost of equity capital for the assets under rate-regulation that is owned and operated by PacifiCorp. The primary focus is to determine comparability, and to evaluate the commensurate riskiness of candidate companies for which data are available. Too broad a grouping, such as selecting companies that have strategic plans diverging from regulated operations, could skew the analysis to favor higher risk-return characteristics. Ideally, companies following a plan predominantly-rooted in their core utility operations makes the most favorable comparisons.

Q. WOULD A BROAD SELECTION OF COMPANIES BE SIMILAR ENOUGH TO ESTIMATE THE RETURN REQUIRED BY PACIFICORP’S RATE-REGULATED PROPERTY?

A. No. The earnings that are expected to be achieved by a grouping of industry companies vary over time. This variability will likely not be consistent with the past. It is the overall market consensus of variability that is used to price each company’s shares. The exact mechanism cannot be observed although financial theory suggests it as a basic tenet.

The "portfolio returns" of a cohort group are blended from the underlying stream of earnings from each component company. That earnings stream may, or may not, be considered similar to the returns provided from "pure play" companies. Generally, the better the “filtering” or selection process”, the more representative the results will be for such operations. Our concern is to consider the return requirement of companies engaged in the

electric industry that have "comparable risk" PacifiCorp. Therefore, any DCF analysis should strive to meet that goal.

Q. WHAT WERE YOUR PRIMARY SOURCES OF INFORMATION?

A. Reliable and unbiased data sources that were used in the analyses include Value Line, Multex Investors, Thomson (MSN), Zack's Investment Service, and Standard & Poor's.

The primary source of data from which I relied for the bulk of the assumptions used in the DCF analysis is Value Line. It is the only readily available source of information providing statistics on a "per share" basis. It has been available since the 1970s and has developed a reputation as being fair and reasonable. The Oregon PUC has used Value Line for many years and to my knowledge, its use has not been considered a contentious issue. Although other sources of supporting information can assist to make reasonable judgments that might diverge from the analysts at Value Line, those analysts are generally though to be objective.

The remaining sources of information are all available to the public and, having been used by staff in the past, are reasonably objective.

Q. WHAT SAMPLE OF COMPANIES DID YOU ADOPT TO DETERMINE THE COST OF EQUITY FOR PACIFICORP?

A. In order to reduce contending with too many individual variables in the analysis, staff supports using Dr. Hadaway's sample as a starting point. Even though this issue has been contentious in the past, in order of magnitude, it is not the most important issue.

To provide a little background, selecting a sample group ideally begins with considering the entire population of companies within the industry. Because of the requirement to pursue an analysis with supported sources of

information, Dr. Hadaway limited his selection to companies covered by Value Line. Staff agrees with the source of data.

Companies should be selected based on their future outlook focusing on the impact of any planned expansions into major non-regulated operations. Considerations include strategic plans (e.g., whether companies are retreating to a "core" regulatory focus versus expanding into unregulated ventures.) The selection process should also consider their historic and on-going performance. During the course of a rate case, requiring a period of several months, whichever metrics are chosen, deviations will occur; requiring adjustments among the specific companies that are analyzed. Access to data that provide input regarding the exact forward-looking level of earnings being contributed by unregulated activities is scarce.

One could be substantially selective when choosing among the potential cohort companies. To iterate the intent, it is important to select companies among peers that derive the majority of their revenues and net earnings derived from regulated operations.

Q. HOW WAS THE SAMPLE OF ELECTRIC UTILITIES DETERMINED?

A. In a cost of capital analysis for rate-regulated property, the correct measure should be compared with the returns on investment, from the shareholders' viewpoint, generated from investments of "comparable risk". This standard requires that the comparable company selection process should have a risk profile that is as similar as possible to the subject Company. This principle is relied upon when developing any comparable group of companies.

Dr. Hadaway filtered his selection, limiting the sample to those that derive at least 70 percent of their revenues through regulated utility operations. He then selected companies that were within the "A" range of credit ratings

among S&P and Moody's. His sample selection narrowed to a final sample of sixteen electric companies that are followed by Value Line.

To summarize, Dr. Hadaway assembled his sample of companies from those:

(1) that are covered by *The Value Line Investment Survey*

(2) that are primarily local distribution companies, composed primarily of rate-regulated activities,

(3) for whom *Value Line* is forecasting continued dividend payments; and,

(4) that have an "A" credit rating.

Q. WHAT IS THE SAMPLE OF ELECTRIC UTILITIES?

A. The companies in the sample are shown below:

	Name	Ticker
1	Ameren Corp.	AEE
2	CH Energy Group	CHG
3	CLECO Corp	CNL
4	Con Edison	ED
5	DTE Energy Co.	DTE
6	FPL Group Inc.	FPL
7	MGE Energy Inc.	MGEE
8	Northeast Utilities	NU
9	NSTAR	NST
10	Progress Energy	PGN
11	SCANA Corp	SCG
12	Sempra Energy	SRE
13	Southern Company	SO
14	Vectren Corp	VVC
15	Wisconsin Energy	WEC
16	XCEL Energy Inc.	XEL

The Single-Stage DCF

Q. WHAT WERE THE RESULTS OF YOUR SINGLE-STAGE DCF ANALYSIS?

A. My single-stage DCF analysis produces estimates of the cost of equity (ROE) between roughly 9.0 percent and 9.5 percent

Q. WHAT INPUTS DO YOU NEED FOR A SINGLE-STAGE DCF MODEL?

A. A single-stage DCF model, also known as a perpetuity model, requires a dividend growth estimate, current stock price and an initial dividend.

Q. WHAT DID YOU USE FOR THE CURRENT STOCK PRICE?

A. I obtained values for P_o (the current stock price) from Microsoft Network Money (MSN Money). The most current spot prices are the correct prices to use for P_o because, based upon the efficient market hypothesis, current spot prices include all current and past information.

Q. WHY DID YOU USE AN ONLINE SOURCE FOR THE STOCK QUOTES INSTEAD OF THE WALL STREET JOURNAL?

A. The electronic source is widely available and can be integrated into a financial model relatively easily for updating purposes.

Q. WHAT DID YOU USE FOR THE INITIAL DIVIDEND, D_1?

A. I obtained estimates of D_1 (the expected dividend per share over the next twelve months) from the April 22, 2005, Value Line Investment Survey Summary and Index, See Est'd Div'd next 12 mos, at Staff/202, Morgan/382-402). This provides the dividends expected over the ensuing twelve-month period (D_1).

Dividend Growth

Q. WHAT DID YOU USE FOR THE ESTIMATES OF GROWTH?

A. To begin with, I calculated the growth rates achieved by the respective companies. I also considered the current forecasts of growth. I created a

sensitivity analysis by using estimates of growth rates ranging from 4.0 to 5.0 percent in each model.

Q. HOW DID YOU ESTIMATE DIVIDEND GROWTH?

A. Consistent with Staff's prior approach to the DCF method, I looked at past dividend growth as an indicator of the marginal investor's expectations of future growth. For my sample of electric companies, I looked at both the arithmetic and geometric means across the sample of historical dividend growth.[6]

In addition, I considered the historic growth rate in both earnings per share and book value. Over the long run, a convergence among these measures of growth should exist. This is true because book value represents the equity earnings base from which earnings are derived. In the short run, growth rates in the two may diverge due to fluctuations in earned rates of return and dividend payout percentages.

Q. DO YOU AND DR. HADAWAY AGREE ON THE GROWTH RATES TO BE USED OVER THE FEW YEARS?

A. Yes, it appears that we generally agree on the growth rates that should be applied for the near term. It is the long-term growth that is the primary contested issue.

Convergence in Growth Rates

Q. PLEASE EXPLAIN WHAT IS MEANT BY "CONVERGENCE".

A. Convergence relates to the tendency for the growth in book value, dividends, and earnings to move toward the same level, to a "steady-state". The underlying notion is that the "asset base" of a company, reflected by book value, that is the ultimate driver for earnings. It is the interplay between the

[6] For a discussion of geometric and arithmetic averages, see Staff/202, Morgan/522)

earnings and the residual amount, after paying dividends, which allows for continued reinvestment, i.e., an increase in the book value. This “re-investment” or “plowback” provides the impetus, or value driver, that supports sustained growth in earnings.

Q. HAS DR. HADAWAY PROVIDED INPUT ON THE CONVERGENCE ISSUE?

A. Yes. In its response to a data request[7] in UG 152 (NW Natural’s 2003 rate case,) Dr. Hadaway did not indicate that convergence had occurred over any historic period. The response appears to indicate that convergence will occur only "at the horizon" after the first "stage" of the DCF model, that is, after the next five-year period.

Q. IS THIS APPROPRIATE?

A. No. Because convergence among growth rates has not occurred in the past, Dr. Hadaway’s analysis requires that there must be a "transition" phase or other “regime shift” that will occur only in the future. It is not appropriate to assume that convergence can only occur "in the model" since the model is supposedly the tool that "mirrors the market."

However, it is unclear from where the book value growth will occur that would support the high rates of growth in earnings (6.60 percent) that Dr. Hadaway presumes will happen. Based on his growth rate assumption, it is difficult to understand when convergence is expected to occur. Clearly, a careful review of historic growth rates is required to consider the convergence issue. Historic figures should be used to temper analysts' forward-looking growth rates.

[7] Company Response to Data Request 765, UG 152. *See* Staff/202 Morgan/515.

If convergence only occurs over a future period specified in the model, there is a clear disconnect between the results of the model and the underlying market forces and drivers of value.

We could always assume higher growth rates into the future and assume that such a convergence may occur, based on those assumptions. The problem is that such an argument is circular. This implies that offering a higher cost of equity based on higher growth rate assumptions would then allow higher growth rates to be used in the model. Therefore, convergence must have a basis in past results.

Q. WHAT IS YOUR CONCLUSION?

A. All else equal, over time, earnings growth rates (per share) cannot exceed the growth rate in book value (per share), which will drive the available resources to provide the dividend growth (per share). This relationship holds more closely for rate-regulated property. If book values have not grown over time at the rate Dr. Hadaway proposes will occur into the future, earnings growth would not suddenly "ramp up" to support the inflated levels Dr. Hadaway projects.

Q. DO YOU HAVE FURTHER DISCUSSION OF THE DCF METHOD?

A. Yes. Current *Dividend Yields*[8] are simple to estimate. The most difficult aspect of implementing the DCF method is estimating the future growth rate. If a company's past trend in earnings or dividend growth has been erratic, it is difficult to project future growth on the basis of past trends. Because the DCF method requires a constant or sustainable growth rate, growth rates based upon recent realized rates of earnings or dividend may be too volatile to provide a basis for future projections for some companies.

[8] Dividend Yield is calculated as the Annual Dividends divided by Current Price per Share. This equation reflects the "interest" achieved by purchasing a share today and holding it for income over the ensuing year. It does not include share appreciation growth, which is related to overall earnings growth.

Q. HOW IMPORTANT IS THE ESTIMATE OF GROWTH IN THE DERIVATION OF THE COST OF EQUITY ESTIMATE PROVIDED BY THE DCF?

A. It is a very important estimate. Because the dividend yield can be readily and relatively accurately estimated from market data, the long-run change to dividends or the underlying drivers of dividends such as book value and earnings becomes the only major component that cannot be directly observed and quantified.

Q. WHAT ARE SOME METHODS USED TO DETERMINE THE LONG-RUN GROWTH RATE?

A. Certainly, there are major signs that can be used to estimate growth. Among these are (1) the historic patterns in book value earnings, dividends and asset base; (2) market consensus estimates; and, (3) company estimates.

Analyst Growth Rate Consensus

Q. ARE ANALYST'S FORECASTS OF GROWTH APPROPRIATE FOR USE IN THE DCF MODEL?

A. Yes, generally. Both the Company and I have incorporated analysts' forecasts. Analyst growth rates are not generally supportable for assumptions of perpetual growth. Analyst estimates are appropriate for projections of the period that they explicitly are designed to cover. Such estimates are not necessarily rates that should be used for the indefinite future.

Q. ARE ANALYST ESTIMATES RELIABLE FOR USE IN A DCF MODEL INTO PERPETUITY?

A. Not necessarily.

I provide a recent published conclusion, analyst growth estimates actually provide inflated growth rate estimates. This was written by McKinsey &

Company and is titled, “Prophets and Profits”. A copy of this article is included in Staff/202 and begins at Morgan/169.

Further, I provide an article, starting at Staff/202, Morgan/173, that addresses this issue. The article is from a recent edition of the Journal of Finance (JOF) and is titled, "The Level & Persistence of Growth Rates." It indicates that analyst forecasts are not appropriate for perpetual use, and that the market does not assume that they are useful for such purposes. However, analyst estimates are useful, when combined with historic results and reasonable future expectations.

One could conclude from the McKinsey analysis that, beginning with the long-term growth forecast (e.g. 5-years) a downward adjustment of as much as 20% may be warranted for analyst estimates of earnings growth rates, when applying them even to their own forecast period. The “Journal of Finance” article indicates that the 5-year growth rate is useful as a forecast only over that approximate period, not necessarily into perpetuity. As this article explains, long-term forecasts have been generally lower, on average, than expected by the reported analyst results.

Q. HOW MANY ANALYSTS PROVIDE INPUT TO THE CONSENSUS ESTIMATES OF GROWTH?

A. In Staff/202, Morgan/360, I have provided tables that illustrate the growth rates anticipated by market analysts. In those tables, I include the number of analysts or brokers that provided input for each figure. The number of brokers ranges from an average of about 5.5 (Thomson/Firstcall) to 7.0 (Reuters). The final table I provide indicates the aggregate view of the earnings growth rates from the three services that I reference above.

Q. WHAT DOES THE MARKET EXPECT FOR GROWTH RATES?

A. All the growth rate estimates for the next five years provide significant support for growth rates of less than five percent. Growth rates should not be as contentious as they are, given that every resource I identify is in line with Dr. Hadaway's own analysts' estimates. The only reason we diverge is because of Dr. Hadaway's reliance on a long-term historic measure of overall economic growth.

Q. ARE THERE OTHER METHODS OF FORECASTING GROWTH RATES?

A. Yes. Another method used by academics and security analysts is to estimate future growth based on a technique that I will refer to as the "retention growth" rate method. A minor variation of it is referred to as a "sustainable growth" method will be explored later. Both of these techniques provide similar results.

The retention growth method is calculated by taking the product of the percentage of retained earnings and the rate of return on book equity. The percentage of earnings retained (b), multiplied by the rate of return on equity (ROE), creates a long-horizon future growth estimate (g) [g = b x ROE].

As an example, if a company earns 10% on equity, but pays all the earnings out in dividends, the "plowback" factor will be zero and earnings per share will not grow. Conversely, if the company retains all of its earnings and pays no dividend, it would grow at an annual rate of 10%.

The retention growth rate method provides a useful check on the supportability of adopted growth rates decided by the Commission. For any particular growth rate, the combinations of retention rates and returns on equity necessary to produce that growth rate can be determined.

Q. WHAT IS THE HISTORIC RELATIONSHIP FOR GROWTH RATES ACHIEVED IN THE MARKET?

A. The following table and excerpt are from Stocks for the Long Run:

Long-Term Growth of GDP, Earnings, and Dividends, 1871-2001

	Real GDP Growth	Real Per-Share Earnings Growth	Real Per-Share Divdend Growth	Dividend Yield	Payout Ratio
1871-2001	3.91%	1.25%	1.09%	4.54%	58.75%
1871-1945	4.51%	0.66%	0.74%	5.07%	66.78%
1946-2001	3.11%	2.05%	1.56%	3.53%	51.91%

> "The data show that real per-share earnings growth over the entire 130 years has been a paltry 1.25%, considerably below the nearly 4 percent growth rate of real gross domestic product (GDP). Because of the funding requirement, EPS growth does not match aggregate economic growth over the long run."

Over the entire period, the payout ratio was just under 70% and the dividend yield is just over 4.5%. The data clearly show that assuming that the earnings growth of the overall market will mirror the GDP is inappropriate and that the earnings growth in the stock market lags overall growth in GDP. Dr. Hadaway's DCF model implies that the appropriate measure of growth for regulated companies, in the long run, should be consistent with the growth in the overall economy.

Q. IS THERE THEORETICAL SUPPORT FOR THE COMPANY'S RECOMMENDATION THAT THE COMMISSION CONSIDER GROWTH RATES OF THE COUNTRY'S OVERALL ECONOMY?

A. No. The basic underlying assumption relied on by Dr. Hadaway is that electric utility earnings growth will parallel the growth in the economy. This reliance is unfounded and Dr. Hadaway has given no support for his assertion.

Dr. Hadaway's supposition that the earnings growth in the regulated utility industry will grow at the same rate of growth in the overall economy is a

poorly-supported hypothetical assumption. I am unaware of any studies that support this position. On the other hand, there are theoretical explanations that support rejecting the reasoning that growth in the market overall will mirror growth in GDP. One factor relates to the fact that a significant portion of growth in the overall economy is comprised from companies that are not "in the market," that is, companies whose shares are not publicly traded because they are start-up companies. This aspect may be referred to as "leakage."

For example, the following table provides more current periods' data in both real and nominal terms. This information is similar to the data provided in the *Annual Stock Market Returns, 1802-2001* tables provided as an attachment to my testimony (Staff/202 Morgan/9-10):

Period	Nominal Growth Rate[9]	Real Growth Rate[10]
1929-2002	7.38%	3.66%
1970-2002	7.24%	3.01%
1980-2002	5.89%	3.09%
1990-2002	5.20%	3.23%

Additional support for GDP growth is available from a UBS Global Asset Management report from September 2002 in which real earnings per share of the S&P 500 over the 1960-2001 period declined from about 3.0 percent to about 2.0 percent and that, looking forward over approximately the next decade, real earnings growth for the S&P 500 is expected to be only 2.0 to 3.3 percent.

[9] From the Bureau of Economic Analysis, an agency of the U.S. Department of Commerce; http://www.bea.doc.gov/bea/dn/gdplev.xls
[10] From The Federal Reserve Bank of St. Louis, http://research.stlouisfed.org/fred/data/gdp/gdpca

Even without considering the impact of leakage, using real historic GDP growth rate assumptions and projecting them forward based on current expectations of inflation would not support the Company's conclusion of nominal growth rates near seven percent. Because growth is a function of investment and earnings, companies that pay out a large portion of their earnings in dividends will not grow as fast as companies that retain all of their dividends, all other things equal. Over the past 70+ years, real economic growth was no more than 3.66 percent, on average.

Based on a table included later in this report, ex-ante, or forward-looking growth is anticipated at about three percent. If we assume a two percent inflation rate over the foreseeable future,[11] total *nominal* GDP growth is estimated at less than five percent. Second, the average dividend from the S&P 500 is currently 1.91%.[12] Companies that pay out high proportions of their earnings as dividends have less available cash from which to "intrinsically" grow. Therefore, on a per share basis, high dividend companies can be expected to grow slower than low- or no-dividend companies, all else equal.

Low dividend payments may actually increase the risk for investors because lower dividends provide less of a cushion during bear markets when a company may be able to reduce dividend payouts to absorb the impact of decreased earnings.[13]

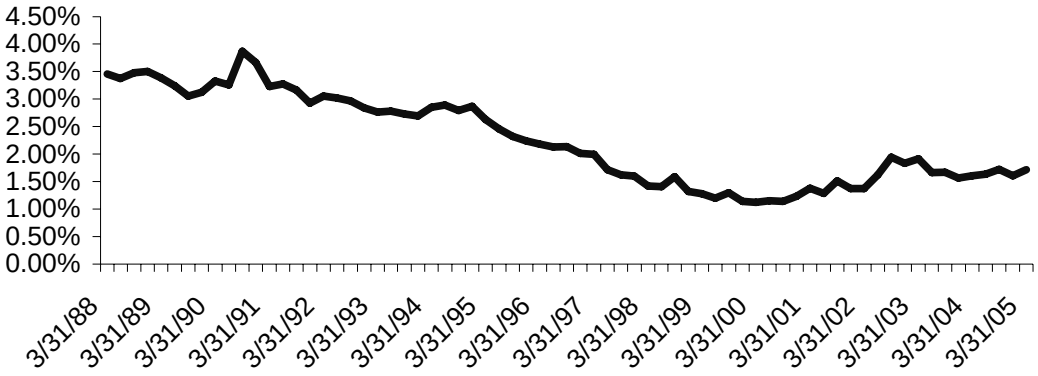
The following table reflects the declining dividend yield on the S&P 500 from 1988 through March 2005:

[11] Estimated as the arithmetic difference between the U.S. Treasury security rate (3.86 percent for 2/2012 maturity) and an inflation-indexed U.S. Treasury security rate of similar maturity (2.07 percent for 7/2012 maturity) quoted in the online edition of the *Wall Street Journal,* on March 26, 2003. http://online.wsj.com/documents/tsyquote.htm

[12] 5/03/2005 data from Standard & Poor's, www2.standardandpoors.com/spf/xls/index/SP500EPSEST.XLS

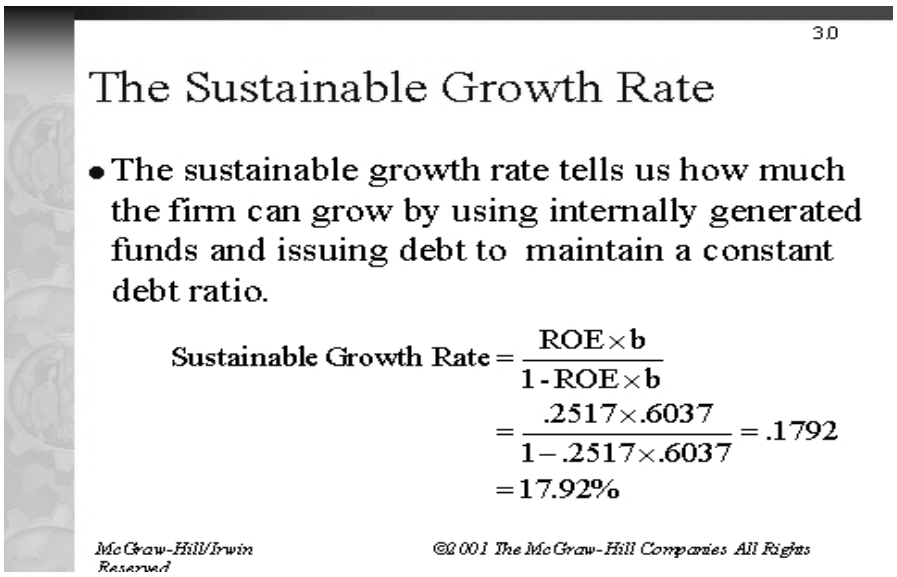
[13] See: "Economic Trends: Warning Signs, Low Dividends", at Staff/202 Morgan/555.

1988-2003 S&P 500 Dividend Yield Trend



Sustainable Growth

The sustainable growth rate can be estimated by the "b x r" formula described previously. A variation of the model, designed with the assumption of on-going debt issuances to maintain a "balanced" capital structure while reinvesting a portion of earnings ("plowback") is described below:



Using this simple formula, and assuming: (1) the highest estimate that is expected as a long-run ROE for LDCs of 11.0 to 11.50%[14], and, (2) a reasonable long-run expectation of dividend reinvestment of 40%, results in a growth estimate no greater than approximately **4.75%**. As a sensitivity analysis, we might assume a 10% ROE and a 30% retention, resulting in a growth indication just under **3.10%**. The following table presents a summary of the calculations described above:

SUSTAINABLE GROWTH RATE

ROE	Dividend Payout, "d"	Retention Rate "b" = (1-"d")	ROE x "b"	[1- ROE x "b"]	Expected Growth
10.00%	**70%**	**30%**	3.00%	97.00%	**3.09%**
10.50%	**70%**	**30%**	3.15%	96.85%	**3.25%**
11.00%	**65%**	**40%**	4.40%	95.60%	**4.60%**
11.50%	**60%**	**40%**	4.60%	95.40%	**4.82%**

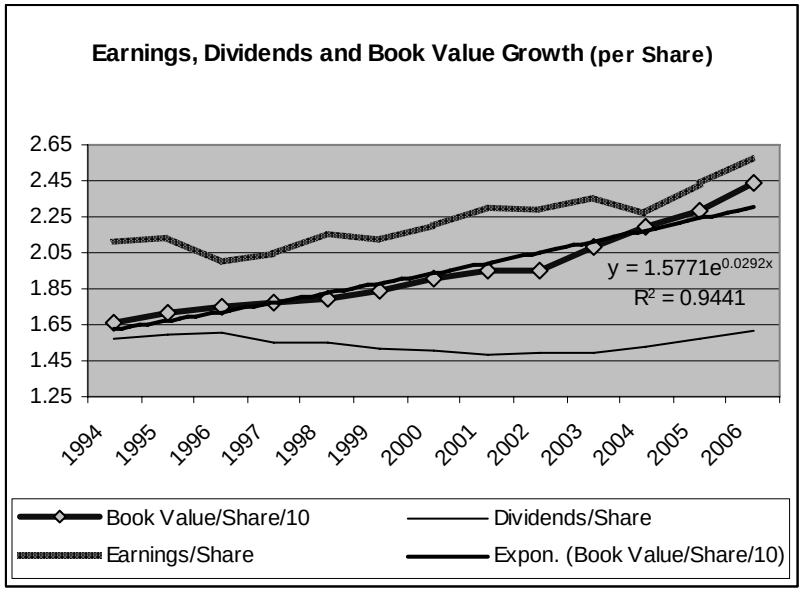
Q. DO YOU HAVE OTHER INFORMATION AVAILABLE REGARDING THE COMPARABLE COMPANIES AND THEIR GROWTH?

A. Yes. For the comparable electric grouping chosen by Dr. Hadaway, and considering the last fifteen-year period, the median growth in Book Value, EPS and Dividends, were all ***less than 5.0%***. Because there is no evidence that the historic 10-15 year period was the result of unfair earnings performance, this past period shows that the expected growth in the company's earnings can be expected to be somewhere in the range of 4.0% to 5.0%. This conclusion is based on the underlying fundamental driver of earnings growth. Earnings

[14] Value Line' report: *"The flip side of regulation is, however, that the maximum allowed return on equity for utility operations is capped, typically in the 10% to 12% range."*

growth is predicated upon the ability of a company to "retain earnings" and to invest these earnings at a reasonable return. This figure is directly observable by observing the change in the book value of each share.

For the comparable electric grouping chosen by Dr. Hadaway, the following chart shows the relative performance in EPS, Dividends and BV since 1994:



It is clear that a primary driver of earnings, i.e., book value, is more appropriate for assumptions of growth in order to remove the volatility in earnings that could historically be expected. The trend line placed on BV indicates an approximate growth rate of about 3.0%.

Q. WHAT ARE THE HISTORIC GROWTH RATES OF THE COHORT SAMPLE YOU HAVE SELECTED?

A. Based on Value Line's most current data, the following three pages present three tables. These tables detail the historic growth rates in cash flow,

earnings per share (EPS), dividends and book value.[15] The last table, provides Value Line's forecasts for these financial metrics.

From this data, growth rates over the past five and 10 year period have averaged less than ***four percent***.

HISTORIC 10-YEAR GROWTH RATES

	Earnings	Dividends	Book Value
Ameren Corp.	1.00%	1.00%	2.00%
CH Energy Group	0.50%	1.00%	2.50%
CLECO Corp	4.50%	2.50%	4.50%
Con Edison	2.00%	1.50%	3.00%
DTE Energy Co.	-2.00%	0.50%	3.50%
FPL Group Inc.	5.50%	0.50%	5.50%
MGE Energy Inc.	1.00%	1.00%	1.50%
Northeast Utilities	-4.50%	-11.50%	0.50%
NSTAR	5.00%	2.50%	3.00%
Progress Energy	4.50%	3.00%	6.50%
SCANA Corp	3.50%	0.50%	4.50%
Sempra Energy	4.50%	-3.50%	1.50%
Southern Company	2.50%	2.00%	0.50%
Vectren Corp	0.00%	0.00%	0.00%
Wisconsin Energy	2.00%	-5.00%	2.50%
XCEL Energy Inc.	N/A	N/A	N/A
Average	2.00%	-0.27%	2.77%
Std. Deviation	2.70%	3.65%	1.82%
Maximum Value	5.50%	3.00%	6.50%
Minimum Value	-4.50%	-11.50%	0.00%
25th Percentile	0.75%	0.25%	1.50%
Median	2.00%	1.00%	2.50%
75th Percentile	4.50%	1.75%	4.00%

[15] Most current data provided by Value Line.

HISTORIC 5-YEAR GROWTH RATES

	Earnings	Dividends	Book Value
Ameren Corp.	2.50%	N/A	2.50%
CH Energy Group	-2.00%	0.00%	2.00%
CLECO Corp	5.00%	2.50%	4.50%
Con Edison	0.50%	1.00%	2.00%
DTE Energy Co.	N/A	N/A	3.50%
FPL Group Inc.	4.50%	4.00%	6.00%
MGE Energy Inc.	7.00%	1.00%	3.50%
Northeast Utilities	0.00%	-1.00%	0.50%
NSTAR	4.50%	2.50%	2.50%
Progress Energy	6.00%	3.00%	9.00%
SCANA Corp	3.00%	-3.00%	4.50%
Sempra Energy	9.00%	-8.50%	2.00%
Southern Company	1.50%	1.00%	-2.50%
Vectren Corp	0.00%	0.00%	0.00%
Wisconsin Energy	9.50%	-12.00%	3.50%
XCEL Energy Inc.	N/A	N/A	N/A
Average	3.64%	-0.73%	2.90%
Std. Deviation	3.36%	4.47%	2.57%
Maximum Value	9.50%	4.00%	9.00%
Minimum Value	-2.00%	-12.00%	-2.50%
25th Percentile	0.75%	-1.00%	2.00%
Median	3.75%	1.00%	2.50%
75th Percentile	5.75%	2.50%	4.00%

The following table provides Value Line's current growth rate forecasts. Around 4.0 percent to 4.5 percent is the highest reasonable estimate for the group:

FORECAST 5-YEAR GROWTH RATES

	Earnings	Dividends	Book Value
Ameren Corp.	0.50%	0.00%	4.00%
CH Energy Group	1.50%	0.50%	1.50%
CLECO Corp	5.00%	0.00%	3.50%
Con Edison	-0.50%	1.00%	2.50%
DTE Energy Co.	7.00%	0.50%	5.00%
FPL Group Inc.	4.00%	7.50%	6.00%
MGE Energy Inc.	6.00%	0.50%	7.00%
Northeast Utilities	7.00%	9.50%	3.50%
NSTAR	3.50%	3.50%	5.00%
Progress Energy	-2.00%	2.00%	3.00%
SCANA Corp	5.00%	5.50%	5.00%
Sempra Energy	5.00%	N/A	13.50%
Southern Company	4.50%	3.00%	6.00%
Vectren Corp	4.50%	3.50%	4.00%
Wisconsin Energy	4.00%	4.50%	6.50%
XCEL Energy Inc.	2.50%	-1.00%	0.50%
Average	3.59%	2.70%	4.78%
Std. Deviation	2.50%	2.92%	2.84%
Maximum Value	7.00%	9.50%	13.50%
Minimum Value	-2.00%	-1.00%	0.50%
25th Percentile	2.25%	0.50%	3.38%
Median	4.25%	2.00%	4.50%
75th Percentile	5.00%	4.00%	6.00%

Q. WHAT ARE THE METHODS YOU USED TO ESTIMATE LONG-TERM GROWTH?

A. My growth rate analysis is supported by using separate supporting methods and available market expectations. Specifically, I considered the following:

1. GDP Growth;
2. Sustainable Growth;
3. Financial Analysts; and,
4. Cohort Sample Historical Growth Rates.

Q. WHAT IS YOUR PERPETUAL GROWTH RATE CONCLUSION?

A. Based on my analysis of the growth rates as provided above, I conclude a 4.0 to 5.0 percent growth rate in earnings is supportable.

The Multi-Stage DCF

Q. WHAT IS A MULTI-STAGE DCF AND HOW DID YOU APPLY IT?

A. A multi-stage DCF model is one in which dividend growth is separated into two or more stages. Dividend growth can be separated into the following three stages: (1) short to near term; (2) near to long term; and, (3) long term, i.e., by using a reversionary price that implicitly contains the impact of on-going growth. Like the single-stage model, the multi-stage model requires a current stock price and an initial dividend.

The primary difference between a single-stage and multi-stage DCF model relate to the underlying changes in growth rates. A single-stage model assumes that the growth is steady and stable at the outset while a multi-stage model allows the growth to change explicitly over a period of time before making the assumption of a final, or horizon, constant growth forecast.

The growth rate that is adopted as an input for any DCF model is paramount to the outcome. It is a highly controversial issue and immense consideration should be given to this issue since the outcome is highly sensitive to the rate used.

Some witnesses will estimate both short-term and long-term growth rates and assume a convergence over a transition period. The convergence may occur in one year or over several years via arithmetic smoothing. Any transition period is subjective.

Q. COULD YOU PLEASE DESCRIBE YOUR 3-STAGE MODELS?

A. Yes. My 3-Stage models are similar in most regards to the models ultimately relied upon in the Commission last two contested rate cases, UE 115 and UE 116. In those dockets, the Commission adopted a 40-year DCF.

In addition to developing that model, I also developed a 5-year DCF.

Q. LIKE THE SINGLE-STAGE MODEL, IS THE MULTI-STAGE DCF ALSO HIGHLY SENSITIVE TO GROWTH RATE ASSUMPTIONS?

A. Yes. The growth rate that is adopted as an input for any DCF model is paramount to the outcome.

Q. WHAT DID YOU USE FOR THE CURRENT STOCK PRICE?

A. I obtained values for P_0 (the current stock price) from MSN Money[16] as of the close of the market on April 25, 2005. The most current spot prices are the correct prices to use for P_0 because current spot prices include all current and past information.

Q. WHAT DID YOU USE FOR THE INITIAL DIVIDEND, D_1?

A. I obtained estimates of D_1 (the expected dividend per share over the next twelve months) from the April 22, 2005, "Summary and Index" to *The Value Line Investment Survey* (Est'd Div'd next 12 mos). This gave me D_1, or dividends expected over the twelve months.

Q. WHAT DID YOU USE FOR THE INITIAL DIVIDENDS FROM YEARS ONE THROUGH FOUR?

A. Each model uses the same dividend forecasts for the initial four-year period. These are forecasts that were provided by Value Line. Basing the initial period

[16] http://moneycentral.msn.com/investor/home.asp : Quotes supplied by Standard & Poor's ComStock, Inc.

of dividend payments on Value Line's forecast is identical to the input assumption used by Dr. Hadaway.[17]

Q. WHAT WAS THE PERIOD OF FIRST-STAGE GROWTH (SHORT TO NEAR TERM) AND HOW DID YOU ESTIMATE GROWTH DURING THIS PERIOD?

A. My first stage of dividend growth was FY 2003 through FY 2004 because *Value Line* publishes dividend growth for this very period. I relied on *Value Line*'s implied forecasted dividend growth rate from 2006 to 2008-2010.

Q. WHAT IS THE PERIOD OF YOUR SECOND STAGE GROWTH AND HOW DID YOU ESTIMATE IT?

A. I defined my second stage growth as the period beginning beyond the explicit period provided in Value Line's forecasts, that is, after 2010 and through the end of the 40-year analysis. I developed a sensitivity analysis that projects growth rates in the 4.0 to 5.0 percent range.

The growth rate is applied mechanically within the model, based on the assumptions of earnings and retention rates, using the best sources of information available. The sources are based exclusively on the industry sample.

Q. BECAUSE THE DCF RELIES ON ESTIMATES OF DIVIDEND GROWTH, IS AN ANALYSIS OF HISTORIC GROWTH RATES USEFUL?

A. Generally, yes. There are several reasons why the historic pattern of dividend growth may not provide an accurate representation of the expectations looking forward. In fact, dividend growth tends to lag both earning growth and growth in book value. Companies tend to cushion dividend payments over time in order to reduce any decreases that may be a signal to the market of underlying riskiness. That is, they will consistently pay lower dividends than might be

[17] My analysis of the Company's case begins in detail on page 44.

otherwise afforded to provide cash flow for contingencies or reinvestment. This smoothing effect would cause a lag in growth in the short run.

Most companies manage their dividends to a long-run target level of about 60% to 70% of earnings. Most companies have also consistently paid dividends. If a company were to significantly cut its dividend payment on a per share basis, the market may perceive the move negatively. Such a signal might inadvertently affect share prices. Also, if the company requires funds for new construction, it may slow the rate of growth in the short run.

The better focus for growth is related to the level of growth in the underlying assets, i.e., book value growth, or the growth in earnings, from which dividends are paid. Eventually, there must be a long-run convergence in growth rates of book value and earnings.

The DCF model assumes that this convergence accrues to the equity-holder through dividends. The alternative market mechanism, assuming dividends are withheld or not grown over time, is an increase in share prices, i.e., capital appreciation. Multi-stage reversionary DCF models attempt to capture the share price appreciation, although forecasting future sale prices for shares is fraught with estimation error.

Many companies may withhold dividend increases in order to provide funds for fast-growing operations. In such a case, the eventual impact is for earnings growth that would be manifested in share appreciation. The DCF model can either implicitly or explicitly consider the increase in share price, i.e., price appreciation, as a "dividend" payment or as a reversionary benefit. Either market mechanism would arrive at the same conclusion.

Q. HAS THE COMMISSION DETERMINED IN EARLIER ORDERS TO NOT BASE FORECASTS OF DIVIDEND GROWTH ON PAST HISTORY OF DIVIDENDS?

A. Yes. However, I believe reviewing historic dividend growth can be useful and should not be discarded out of hand.

Q. WHY?

A. Historic dividend growth reflects the company's economic performance and dividend policies. If we review historic dividend growth and it is reasonably stable, then, all else being equal, one would presume the historic dividend growth would continue unless there are substantive changes in general economic conditions, business operations or practices. Dr. Hadaway forecasts that future dividend growth will increase significantly from past results. However, there is no explanation for the cause of this change. To fund a higher dividend growth level, the company would need to improve its financial performance. It is not clear from where this improved performance would occur. Dr. Hadaway has provided no economic analysis that would support a divergence in growth from what has been experienced in the recent past. Based on the historic results and based on the views of independent analysts' future expectations, neither actual performance, nor market professionals support his view.

Forward-Looking Growth Rates

Q. WHAT LONG-TERM GROWTH RATES DID YOU RELY UPON IN YOUR DCF ANALYSIS?

A. I relied extensively on the forward-looking expectations in the market from several published sources. Historic growth rates were used as a check of reasonableness and support growth rates in the 3.5 percent to 4.0 percent

range. In this docket, I conclude that a range in growth from 4.0 percent to 5.0 percent is supportable.

Nonconstant Growth Market Price DCF Model

Another model that can be applied is referred to as a *two-stage model*. It is a model that is based on an explicit forecast of dividends for a 4-year period with reversion, i.e., sale, at the end of the fourth year. Again, the recommended dividend components (D_1 through D_4) are taken from *Value Line* forecasts.

The second stage of growth occurs in D_5, the terminal growth period. The selling price at the horizon is predicated upon the current P/E ratio multiplied by the expected earnings per share at the end of the fourth year. Since the dividends can be estimated fairly over the ensuing four-year period, the reversionary, or *terminal*, value will contain the primary return variable. This simple two-stage model is based on the assumption that the future, i.e., reversionary price can be estimated accurately. The volatility of the P/E ratio was not considered or discussed in the model provided and therefore considered poorly supported.

The long-run P/E ratio is the primary basis for the future price, as it implicitly contains the impact of all future returns. To provide a sensitivity range, the current market-to-book multiplier can be applied to the future estimate of the net book value, to provide an estimate of the reversionary price. This model does not require growth as an explicit input. Growth is implied by the reversionary price assumed in the model. Because the reversionary figures provide a wide range of outcomes, this model is not given considerable weight in the overall reconciliation of the cost of equity indications.

Final Cost of Equity Estimates for PacifiCorp

Q. PLEASE SUMMARIZE YOUR COST OF EQUITY RECOMMENDATION FOR PACIFICORP AND GIVE YOUR FINAL RANGE.

A. I recommend 9.5 percent. My range of cost of equity estimates is 9.0 percent to 9.5 percent. I recommend that the ROE be set equal to the cost of equity.

ROR Recommendations for PacifiCorp

Q. WHAT IS YOUR POINT RECOMMENDATIONS FOR PACIFICORP'S ROR?

A. I recommend the Commission adopt the ROR of 7.76 percent as shown on page 4 of this testimony.

Q. WHAT IS THE DIFFERENCE BETWEEN THE ALLOWED RATE OF RETURN ON EQUITY (AROR) AND THE RETURN ON EQUITY (ROE)?

A. The easiest method to describe the relationship between allowed earnings on Book Equity (AROR) and the market-required returns on the underlying financial asset, i.e., stock, can be described by the following example:

$$MV / BV = ROE / r$$

As long as the market value (MV) of equity is greater than the book value (BV) the market is, in essence, indicating that it requires a lower return to equity than the company is being allowed to earn.

Q. DOES THIS RELATIONSHIP ALWAYS HOLD?

A. In theory, yes. However, the more that a company earns on assets not under rate-regulation, the weaker the relationship becomes. In a largely diversified company, such analysis can be afforded little weight. In a completely pure-play

company, the relationship can be relied upon more greatly. PacifiCorp has no unregulated operations and, therefore, the relationship can be relied upon more heavily.

Another factor impacting that relationship requires an understanding of the impact of the comparable companies' non-regulated activities on the companies' earnings. Dr. Hadaway's cohort group was chosen based on the assumption that unregulated operations have minimal influence, and can be considered predominantly rate-regulated.

Q. WHAT DO YOU CONCLUDE FROM YOUR OBSERVATION THAT THE MARKET-TO-BOOK RATIO IS SIGNIFICANTLY GREATER THAN 1.0 FOR PUBLIC UTILITIES?

A. The market-to-book ratio has hovered above 1.5 for the past few years. When the market sets the prices of equity shares in predominantly rate-regulated companies greater than book value, this is an indication that the market is expecting the company to earn accounting ROEs above its cost of equity.

For a company engaged entirely in rate-regulated activities, this indicates that the market is requiring returns somewhat less than what is allowed by the regulators. Such premium pricing is prima facia evidence that an increase to the earnings allowed is not warranted. The Company, without any increase in AROR in this rate case, would still be capable of attracting debt capital at fair rates of interest and other terms. I conclude that the market is telling us that cost of equity requirements are less than ten percent.

Institutional investors hold large share-blocks of the float for many public utilities. This creates less uncertainty and may reduce downward pricing pressures for the underlying shares. Assuming that the underlying property is functioning well and maintains long term value, the share prices may not be

expected to be priced below net book value, e.g., the rate base for which the return is being set. Some price greater than net book value may be correctly assumed due to the historic premiums gained from past investments.

Analysis of PacifiCorps' Testimony

Q. PLEASE SUMMARIZE THE TOPICS OF YOUR DISCUSSION.

A. I discuss the Company's recommended capital structure and the costs of debt, preferred stock and common equity.

PPL/300, Williams, Capital Structure and Cost of Debt

Q. WHAT IS THE COMPANY'S RECOMMENDED CAPITAL STRUCTURE AND WHERE IS IT FOUND?

A. The Company recommends 49.4 percent long-term debt, 1.1 percent preferred stock, and 49.5 percent common equity. These recommendations are found at PPL/300, Williams/3.

The Cost of Debt

Q. WHAT IS THE COMPANY'S RECOMMENDED COST OF DEBT? ?

A. The Company recommends 6.351 percent. This recommendation is shown at PPL/300, Williams/3. Staff Witness Ming Peng addresses cost of debt in Staff/300.

The Cost of Preferred Equity

Q. WHAT IS THE COMPANY'S RECOMMENDED COST OF PREFERRED EQUITY?

A. The Company recommends 6.635 percent. This recommendation is shown at PPL/300, Williams/3. Staff Witness Ming Peng addresses cost of preferred stock in Staff/300.

PPL/200, Hadaway, Cost of Equity

Q. WHAT IS DR. HADAWAY'S RECOMMENDED RETURN ON EQUITY?

A. He recommends an 11.125 percent return on equity, as indicated at PPL/200, Hadaway/27. Dr. Hadaway's presumption is that PacifiCorp should be granted a rate of return on equity that is simply a broad average of the results from a cross-section of companies.

Q. SHOULD THE COMMISSION GIVE DR. HADAWAY'S 11.125 PERCENT RECOMMENDATION ANY WEIGHT?

A. No. His analysis presumes a growth rate that is greater than the company or industry has experienced, on average, over history. His growth rate estimate is based on historic growth in nominal Gross Domestic Product. Growth is a key component of the DCF, and Dr. Hadaway's assertion that the GDP growth provides the appropriate proxy for dividend growth is not founded in economic principles. He has not provided a credible analysis to support the relationship he claims. In addition, the evidence provided by the Company from its own financial planning does not support Dr. Hadaway's growth rates.

Dr. Hadaway's Analyses

Q. WHAT ARE THE PRIMARY ISSUES THAT YOU UNCOVERED IN YOUR REVIEW OF COMPANY-WITNESS HADAWAY'S ANALYSIS?

A. The issues that I will discuss include the following:

- Dr. Hadaway uses dividend/earnings growth forecasts that I believe are unrealistic and unsupportable based on general economic principles. He derives a "leap of faith" calculation and does not provide sufficient back-up data or discussion. The growth rate that he derives is unsustainable over the long-run.
- Dr. Hadaway promotes a risk-premium model that the Commission has previously rejected.

Q. PLEASE DESCRIBE THE RECOMMENDED DCF MODELS AND THE SAMPLE SELECTION PROCESS USED BY DR. HADAWAY.

A. He created three models and places little reliance on the results of one of his models. He directly recommends two primary DCF models.

The analysis submitted by PacifiCorp consists of a 16-company grouping of integrated electric companies. The assumed groups are based on a filtering process that considers the following:

1) Companies covered by Value Line in its Electric Utility Industry;
2) Companies covered by Standard & Poor's; and,
3) Companies covered by Value Line that comprise at least 70 percent of their revenues from the regulated electric utility.

Constant Growth DCF Model

This model is based on current dividend yields and assumptions of constant growth into perpetuity. The model uses the most current 3-month average share price coupled with the expected dividend per share for 2005.

Q. HOW DOES DR. HADAWAY ESTIMATE PERPETUAL GROWTH AND ARE HIS TECHNIQUES APPROPRIATE?

A. Dr. Hadaway's expectation of long-run growth is based on the average of (1) the five-year forecast provided by Zack's; (2) Value Line's estimates for the ensuing three to five years; (3) the "b x r" sustainable growth model, and (4) a calculation of historic growth of Gross Domestic Product (GDP).

Dr. Hadaway does not discuss any limits regarding to relying on nominal GDP estimates as a proxy for growth in the overall market. He seems to imply that long-run nominal GDP growth is useful for growth in *any* DCF model, notwithstanding the fact that, compared to his other growth estimates, his GDP figure overstates growth by fifty percent.

Dr. Hadaway's use of analyst forecasts of growth (from both Value Line and Zack's) and equally weights them with the "b" x "r" ("br") sustainable growth rate calculation. As I have stated in my analysis, in the "br" calculation, the "b" represents the reinvestment, i.e., residual of the net income less the dividends paid out. As a retention rate, the method relies upon the ability of retained earnings to grow the future earnings of the company. The earnings growth depends upon ex ante earnings expectations and should be normalized. The "r" variable represents the long-run return on book value equity (ROE) variable applied to the long run forecast of retained earnings.

The Company's model assumes that the current, *simple average*, of the ROEs expected to be earned over a single period will be representative of, and appropriate for, the forecast for the indefinite future. Specifically, Dr. Hadaway has used the expected earnings per share in the '07-'09 period and the net book value per share as of the same time to calculate the expected ROE during that period. He then uses this ROE figure as the best indication for the foreseeable future.

Such an approach is not supportable. Using a long-run ROE expectation, as I have, for the "terminal" figure that can be attained into perpetuity is appropriate. Dr. Hadaway has not indicated that projected ROE results are indeed the long-run, “steady-state” or normalized returns expected for each company. His assumptions are not clearly stated and his reliance on a single-period's *expected* figures projected perpetually into the future is not theoretically sound. Further, Dr. Hadaway relies on *Value Line*’s forecast short- to near-term retention ratios as his proxy for indefinite (perpetual) retention rates to calculate his “br” figure.

His method is not appropriate because *Value Line*’s ROE and retention rate forecasts are short- to near-term in nature and are not intended to represent a long-term horizon's perpetual growth. Firms’ accounting ROEs can be a function of many variables, including accounting conventions and temporary business or financial booms/busts that make short-term forecasts inappropriate proxies for the indefinite future. Short- to near-term accounting ROEs are subject to cyclical and temporary influences that make them inappropriate as a proxy for indefinite growth.

Additionally, Dr. Hadaway averaged an historic GDP calculation with the “br” and the “long term” earnings growth estimates by Value Line and Zacks. Dr. Hadaway argues that the future growth rate indications are too low to stand by themselves. As I will discuss below, he actually throws out all three of these figures and favors his historic GDP calculation, exclusively.

By not considering the long-run implications of growth rates and the figures being used to calculate growth, Dr. Hadaway’s results are unreliable and cannot be considered to be representative of true, perpetual growth in the industry.

Q. WHAT CREATES THE DIFFERENCE BETWEEN YOUR GROWTH RATE AND DR. HADAWAY'S?

A. If Dr. Hadaway had not relied on his weighting of the 40-year historic nominal GDP growth, he likely would produce results in-line with those I suggest.

Q. WHAT GROWTH RATES DOES DR. HADAWAY ULTIMATELY ESTIMATE?

A. Dr. Hadaway initially estimates that investors expect sustainable growth to be 4.92 percent for the average of the companies in his sample. Because the indications other than his historic GDP figure are "too low", he completely disregards the other three indications of growth and relies exclusively on his historic GDP calculation of 6.6 percent. Dr. Hadaway's simplifying assumptions are not realistic. It seems difficult to imagine such a growth rate being forecast over the indefinite future by well-informed investors. Dr. Hadaway provided no support that investors are rationally forecasting a growth rate of 6.6 percent in dividends, earnings or book value. His recommendation is based on a "leap of faith" that is not supported by economics.

Q. IS DR. HADAWAY'S GROWTH ESTIMATE SUPPORTABLE?

A. No. The long-term growth rate in earnings is not considered to be sustainable growth for electric companies based on an analysis that I detailed earlier. (*See* Staff/200 Morgan/) I provided evidence that long-run growth in GDP is not reflected in the long run average growth in the stock market. Even if it were, the retention rate of earnings for the stock market overall allows it to grow at a faster rate that high dividend-paying companies such as regulated utilities.

Dr. Hadaway did not provide the supporting documentation for his assertions. He did, however, provide a table (PPL/206) in his testimony for PacifiCorp's current rate case that provides some data relative to GDP for the period from 1961. I have an observations and concern about his data.

It is not clear why Dr. Hadaway did not consider real growth rates rather than nominal growth rates in order to reflect the impact of inflation as a direct adjustment, based on forecasts. It is interesting to note that Dr. Hadaway failed to provide support provided by ex ante expectations, even though they are available and are consistent with a forward-looking analysis that is required in this docket.

Q. WHAT IS THE COMPANY'S POSITION ON THE GDP ISSUE?

A. The Company's assumption that GDP growth is the correct proxy for utility-specific companies is based on a short excerpt from a basic finance textbook. (*See* Staff/202 Morgan/33) This textbook takes a real GDP growth rate and adds an inflation component to create a nominal growth rate estimate. The excerpt indicates, "One might expect the dividend of an 'average' or 'normal' company to grow at the nominal growth rate in the economy."

Dr. Hadaway indicates that as providers of an essential service, utility companies likely fit the "normal" company concept referred to in the Brigham, Gapenski, and Ehrhardt excerpt. As I have indicated, public utilities are less risky than the "average" or "normal" company due to being rate-regulated. They also pay out a significant portion of their earnings in dividends, tempering their growth rate potential from that of the overall economy.

Historic GDP Results

Q. WHAT ARE THE HISTORIC GROWTH RATES IN GROSS DOMESTIC PRODUCT?

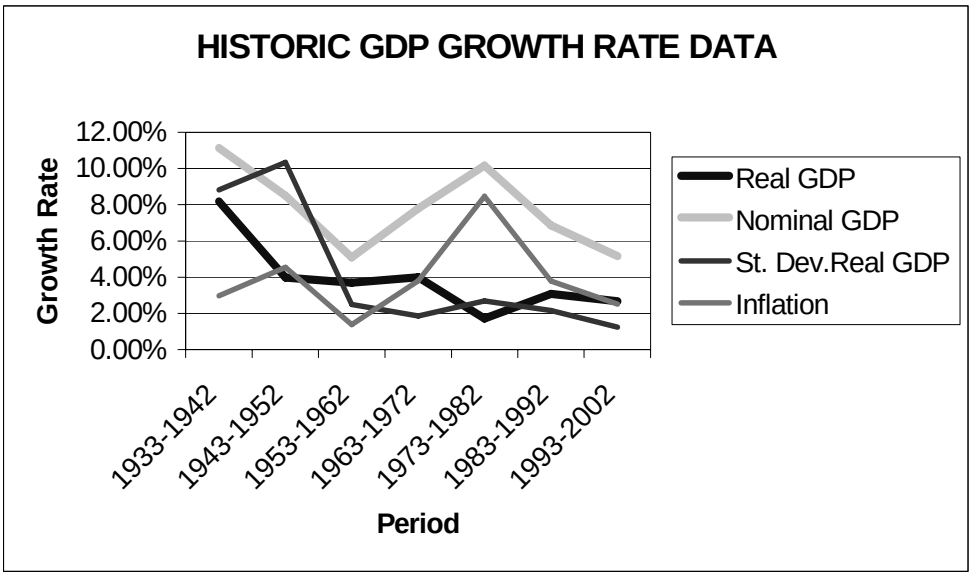
A. The following table and chart provide a summary of Gross Domestic Product results for the period 1933 through 2002. This table includes thirty additional years and includes each decade in non-overlapping series.

HISTORIC GDP GROWTH RATE DATA

PERIOD	AVERAGE		MEDIAN		STANDARD DEVIATION	
	Nominal GDP	Real GDP	Nominal GDP	Real GDP	Nominal GDP	Real GDP
1933-1942	11.14%	8.18%	10.58%	10.10%	10.90%	8.82%
1943-1952	8.50%	3.97%	9.94%	3.46%	7.29%	10.34%
1953-1962	5.08%	3.70%	5.43%	2.72%	2.85%	2.48%
1963-1972	7.79%	3.99%	8.24%	4.00%	1.70%	1.85%
1973-1982	10.17%	1.72%	11.46%	1.27%	2.65%	2.67%
1983-1992	6.86%	3.07%	6.82%	2.47%	2.14%	2.14%
1993-2002	5.16%	2.66%	5.57%	2.82%	1.19%	1.22%
Average	7.82%	3.90%	8.24%	2.82%	3.61%	3.72%
Median	7.79%	3.70%	8.24%	2.82%	2.65%	2.48%

1929-2002		
CAGR*	**6.52%**	**3.40%**
1973-2002		
CAGR*	**7.36%**	**2.99%**

*CAGR = Compounded Average Growth Rate



The table and corresponding chart clearly show a decreasing rate of growth in real GDP over the past 70 years. Further, focusing on the inflation component indicates that the period from 1973-1982 was affected by a tremendous 8.46 percent average inflation rate. Adjusting for inflation, that period has the lowest real growth rate over the entire 70-years (1.72%). Additionally, compounded growth rates are appropriate for use in the DCF model. Over the past 70+ years, the real compounded average growth rate (CAGR) was 3.40 percent and from 1973 through 2002, the real CAGR was 2.99 percent.

Looking forward, for the period from now through 2025, the expected annual growth rate in real GDP is expected to be about 2.5 to 3.0 percent.[18] If we assume a 2.0 to 2.5 percent inflation rate over that period[19] total GDP growth would be no greater than 5.5 percent, a far cry from the 6.6 percent growth Dr. Hadaway expects the Commission to consider on a looking-forward basis. His argument does not include any discussion of the divergence from earnings growth for the economy overall and the earnings growth for individual companies.

Dr. Hadaway assumes that the long-run historic growth in the Gross Domestic Product (GDP) is a reasonable proxy for earnings growth in the electric utility industry. He simply states that his assumption is appropriate. I provided evidence that long-run growth in GDP is not an extremely accurate correlation for the long-run average growth in the stock market. Even if it were, the retention rate of earnings for the stock market overall should allow it to grow

[18] See the Annual Energy Outlook with Projections to 2025 from the USA Dept. of Energy, on Page 2, "Economic Growth" at http://www.eia.doe.gov/oiaf/aeo/index.html. Also see Welch's (1998) survey of leading professors and financial economists. The results of Dr. Welch's survey indicate that the highest long-run growth forecasts for real gross domestic product are on the order of 2.5% per year.
[19] Support for which was included in my discussion of growth in my DCF analysis. *See* Staff/202 Morgan/1-8 and Morgan/227-228)

at a faster rate than high dividend-paying companies such as regulated utilities. Lastly, the comparative risk profile of rate-regulated companies in lower than that of the overall market. All things being equal, the market *should* be growing at a higher rate than a rate-regulated public utility.

Q. HAS DR. HADAWAY'S RELIANCE ON GDP GROWTH BEEN CONSISTENTLY APPLIED?

A. No. Dr. Hadaway implemented a change in his method of calculating the GDP growth rate measure. In his previous testimony, such as the last PacifiCorp case filed in 2003, Dr. Hadaway employed a simple 20-year historical average of GDP growth for his long-term earnings growth proxy, which indicated a 6.0% GDP growth estimate. This is the figure that was weighted into his analysis.

Currently, Dr. Hadaway introduces a change in his methodology for calculating the historical GDP long-term growth rate. Rather than using the 20-year GDP average of 6.0%, Dr. Hadaway takes an average of four different GDP growth averages. He uses a weighting scheme that averages four overlapping, historical growth results, in nominal terms.

Dr. Hadaway provided no explanation or basis for his changed methodology, the net impact of which increases the "long-term growth" estimate used in his analysis from 6.0% to 6.6%.

The following table identifies the four periods that are calculated and the overall average of them. It should be noted that this method weights the last decade's growth most heavily, because it is included in each period's results.

Dr. Hadaway's Historic GDP Growth Calculations

10-year GDP nominal average	5.3%
20-year GDP nominal average	6.0%
30-year GDP nominal average	7.6%
40-year GDP nominal average	7.5%
Four-period Average	6.6%

Q. COULD YOU OFFER AN EXAMPLE THAT WOULD ILLUSTRATE USING GDP AS A PROXY FOR GROWTH IN EACH SECTOR OF THE ECONOMY?

A. Yes. The following table is from an article from a December, 2002 Wachovia Securities publication, titled, "Who Will Benefit?"[20] This table reflects what would happen if we assumed that the Company-promoted *6.6 percent nominal GDP growth rate assumption* was applied to several S&P industry sectors.

[20] Wachovia Securities, Outlook 2003, "Pursuing Total Returns". A complete copy is provided in Exhibit Morgan/202. Note: These figures do not reflect the impact of the recent dividend tax changes. This impacts the required dividend yield from utilities by more than 50 basis points, given the current yield specified by the cohort sample chosen by Dr. Hadaway.

"Who Will Benefit?"[1]

S&P 500 Industry Group Dividend Yields	Yield	+ Hadaway's calculation of historic nominal GDP growth	ROE?
Real Estate	7.09%	6.60%	13.69%
Utilities	4.95%	6.60%	11.55%
Automobiles & Components	3.30%	6.60%	9.90%
Banks	3.14%	6.60%	9.74%
Telecommunication Services	3.06%	6.60%	9.66%
Food, Beverage & Tobacco	2.86%	6.60%	9.46%
Materials	2.64%	6.60%	9.24%
Energy	2.58%	6.60%	9.18%
Capital Goods	2.20%	6.60%	8.80%
Consumer Durables & Apparel	1.98%	6.60%	8.58%
Household & Personal Products	1.90%	6.60%	8.50%
Diversified Financials	1.87%	6.60%	8.47%
Pharmaceuticals & Biotechnology	1.81%	6.60%	8.41%
Insurance	1.20%	6.60%	7.80%
Transportation	1.09%	6.60%	7.69%
Food and Drug Retailing	0.99%	6.60%	7.59%
Hotels, Restaurants and Leisure	0.96%	6.60%	7.56%
Commercial Services and Supplies	0.84%	6.60%	7.44%
Retailing	0.68%	6.60%	7.28%
Media	0.52%	6.60%	7.12%
Health Care Equipment & Services	0.44%	6.60%	7.04%
Technology Hardware and Equipment	0.40%	6.60%	7.00%
Software and Services	0.08%	6.60%	6.68%

Q. WHAT DO THE RESULTS IMPLY?

A. The results imply that public utilities would have the highest cost of equity of any sector, other than real estate investment trusts (REITs). This indicates that an "economy-wide" growth rate is not an appropriate assumption for use as a proxy in earnings per share growth rates for every sector in the economy. Some sectors can be expected to grow faster than the economy, such as those that pay out no dividends, while other sectors, especially those who pay out large portions of their earnings as dividends, may be expected to grow at a more modest rate.

If it were the case that the GDP growth rate was appropriate for utilities, then all other sectors would need to grow faster due to reduced dividend payments. Using GDP growth as a proxy for PacifiCorp is simply not supportable. The table data indicate that only utilities and real estate REITS, two classes of securities that provide the *highest* payout rates, would provide the *highest* returns in the marketplace. This result would be illogical.

Q. DO YOU HAVE ANY OTHER OBSERVATIONS?

A. Yes. Further, assuming that an extreme, average ROE actually were expected in the market for electric companies, it would likely be no more than the observations for which Dr. Hadaway provided regarding the ROE rate case orders from the past several years. Assuming a typical dividend payout policy for regulated utilities and assuming a 13.5 percent allowed ROE, the resulting growth rate still equals no more than 5.4%. This shows the fallacy of assuming both a dividend payout AND a growth rate equal to the market's average.

Retention Ratio	ROE	Fundamental Growth
40%	13.50%	5.40%

Based on the data I provided in my DCF analysis, *it is clear that a long-run growth rate of 6.60%, or a figure near it, is not supportable for the electric industry over the long run.*

The expectations of Value Line for "earned" ROEs are readily available and are closer to the credible long-run estimates for the earnings that might be expected to accrue to companies within the industry. Value Line estimates future ROEs at about 11.0 percent. Using this figure to estimate growth for the discounted cash flow model, along with a 4.0 percent retention rate, provides a

growth rate estimate of 4.4 percent. This indication is a superior forecast of growth, because it is based on future expectations for the specific industry.

Low Near-Term Growth Two-Stage Growth DCF Model

This model is similar to the Non-constant Growth Market Price DCF Model, although dividends are explicitly forecast for the remainder of a 150-year forecast period. This assumption replaces the terminal price expectations. The growth rate applied from years 5 to 150 is based only on Dr. Hadaway's historic GDP calculation. He again ignores the other growth rates figures, such as the "br" calculation and Value Line and Zack's.

Therefore, as with the Constant Growth DCF model, Dr. Hadaway's forecast of "terminal growth" is 6.60 percent. This terminal growth rate is calculated in a simplistic fashion and, as discussed above, is not supportable.

Q. DO YOU RECOMMEND THAT THE COMMISSION ADOPT DR. HADAWAY'S NEW METHOD OF COMPUTING LONG-TERM DEBT?

A. No. I find no theoretical (economic or mathematical) reason to employ an average of the 10, 20, 30, and 40-year averages of GDP growth. If historic GDP growth is determined to be a reasonable proxy for use in the DCF, either by itself or weighted with other data, some financial economists might argue that more recent GDP growth data is more important, and the 10-year GDP average of just over five percent would be a better proxy for earnings growth. If the GDP is to be used as one of the growth rate estimates, then (1) it should include forward-looking estimates of inflation and real growth; and (2) it should be tempered by a factor (e.g., 60 to 80 percent) to rationally reflect the diminished growth rates for earnings in public utilities.

Conclusion on Company's Testimony

Using large samples of companies with widely varying market positioning will create a large variation in the average results and the underlying metrics that support a credible analysis is a clear and supportable fact in this analysis.

The primary factor unobservable and is driving the indications provided by the DCF technique is the forecast for long-term growth. Dr. Hadaway's model should assume normalized retention rates and return on equity forecasts, which are properly applied in a cost of equity estimate. He has instead disregarded all other tools and estimates due to his contention that they are simply "too low" because they are "not consistent with consensus economic projections for higher interest rates." (See PPL/200 Hadaway/23, lines 7-8) It should be noted that Dr. Hadaway provides no evidence to support the validity of these assumptions. I know of no resources that support such a methodology or assumption.

Further, Dr. Hadaway did not fully develop an explanation to support his estimate of the highly-sensitive effect of growth on the overall cost of equity indications within his models. Being an important predicator of value, the lack of development and support of his figures should be reason enough to heavily discount his results.

The methodologies employed and the underlying assumptions are poorly supported by Dr. Hadaway's testimony. The primary separation between Dr. Hadaway's analysis and my analysis is the variance in ***earnings growth*** rates assumed in the alternative models. His reliance on a poorly-supported historical calculation of GDP growth does not appropriately consider the long-run growth commensurate with the regulated utility assets owned and operated by PacifiCorp.

In a sustainable fashion, growth rates for regulated utility property are limited by the underlying growth rate in new construction and the ability for increased market penetration. Under a regulated framework, earnings at "normalized levels"[21] cannot readily be expected to figure into returns in the mid- to high-teens levels. Therefore, any extreme observations should not be afforded much weight in the final analysis.

> "Once earnings are normalized, the growth rate used should be consistent with the normalized earnings, and should reflect the real growth potential of the firm rather than the cyclical effects."[22]

Staff's analysis indicates that Dr. Hadaway's overly optimistic forecast of "terminal growth", at 6.6%, is not supportable, and a 4.0 to 4.5% growth rate in earnings is a more credible range for perpetual growth for use in the Cost of Equity estimate.

Q. DO YOU RECOMMEND THAT THE COMMISSION ADOPT DR. HADAWAY'S DCF RESULTS?

A. No. I do not recommend the Commission adopt any of Dr. Hadaway's DCF calculations. The critical indefinite growth rate of dividends is improperly estimated and lacks theoretical foundation.

Q. ARE THERE OTHER ASPECTS OF THE COMPANY'S TESTIMONY THAT YOU WISH TO ADDRESS?

A. Yes. I wish to respond to Dr. Hadaway's Risk Premium Analysis. This is a model that is unique to Dr. Hadaway and one that I have never seen in practice. As far as I know, it has not been peer-reviewed. His proposal relates Authorized Equity Rates of Return from 1980 through 2003 to some average

[21] Normalized Net Income = Expected ROE * Current Book Value of Equity
[22] http://pages.stern.nyu.edu/~adamodar/New_Home_Page/AppldCF/derivn/ch12deriv.html#ch12.4

interest rates for bonds, as reported by Moody's Investors Service. First, the results of this analysis include the early 1980's, when interest rates were extremely high. The results of this analysis are dependant on the time-periods, or "relevant range" assumed to apply to the future.

Over the period contained in Dr. Hadaway's analysis, the allowed returns ranged from a high of 15.78 percent and a low of 10.77 percent. The yield on debt ranged from a low of 6.61 percent to a high of 15.62 percent.

Q. IS THE RISK PREMIUM CONCEPT REASONABLE?

A. Yes. The Risk Premium concept, in general, merits support. However, I would not consider Dr. Hadaway's analysis to truly be a "risk premium" model. Applying the risk premium model requires appropriate data to determine such things as the relevant range and the appropriate independent variables.

Most often the concept utilizes a base interest rate, such as a company's borrowing rate, and expresses the cost of equity as a premium over that base. Dr. Hadaway's approach compares annual average "authorized" ROEs for the years 1980 through 2003, with the yield on Moody's annual average public utility yield.

The flaw of this approach is that we are not able to determine what these allowed ROEs actually represent. No relevant information was provided pertaining to: (1) what companies are used in the analysis; (2) what data underlie the ROEs, such as: (a) whether they were arrived at through stipulation, (b) what the underlying capital structures or actual bond ratings were, (c) what risks the electric utility industry was facing at the time, (d) what the capital markets were doing, (e) what methods were used to arrive at the cost estimates.

In order to be useful, the data analyzed should be based on a time series of a company's actual equity returns in conjunction with the yields on the company's debt. Alternatively, a cross-sectional analysis of similar companies would be useful.

A major problem is that the interest rates presumed are not well defined and span across many types of utilities including natural gas, telecommunications, water and electricity. Each segment has varying risk-return characteristics and each underlying company has different capital structures and debt ratings. Further, the model does not clearly indicate whether the bond averages are for secured or unsecured debt; however my understanding is that the yields that are tracked reflect senior-unsecured debt.

In summary, Dr. Hadaway's model is inappropriate and requires the Commission to directly compare the ROE's authorized by other state commissions as the proper proxy for the subject company under examination. As I indicated, his model is also flawed due to the reliance on Moody's "average utility bond yields" without regard to the actual ratings of each company used in his analysis.

Because there are no other independent variables in the analysis, the model assumes that "average" cost of debt of wide-ranging companies is the only relevant variables that affect allowed rates of return. Because it is the only dependent variable in the OLS regression that was developed by the witness, and since many other factors may be directly relevant, such as leverage, overall rate base, performance-based regulation or other regulatory approaches, the overall model should be disregarded as being poorly specified.

Dr. Hadaway's model is not refined well enough to merit the support of the Commission. Therefore, Staff recommends that the Commission give no

weight to Dr. Hadaway's allowed ROE approach. His reasoning is circular and is not based on any substantial capital market theory. In short, the cost of equity is set by the market, not regulatory commissions.

Q. WHY WOULD IT BE INAPPROPRIATE TO USE ROES IN OTHER JURISDICTIONS TO DETERMINE PACIFICORP'S COST OF EQUITY?

A. ROE is only one component in establishing overall revenue requirement. A process whereby the Oregon Commission is asked to base Oregon rates on an ROE or an average of ROEs, from another state(s) is equivalent to taking one cost element in isolation out of other jurisdictions' rates and put it into Oregon rates. I do not agree that such a practice is appropriate for estimating PacifiCorp's cost of equity.

Additionally, if all regulators adopted this practice, no commission would be free to update ROE and they would always be based on outdated information. For an example of the circularity, assume only two states exist, Washington and Oregon. If a regulated company files a case that includes ROE the Commission would look to Washington's most recent order and use its value. If a Washington utility filed next, the Washington PUC would simply look towards Oregon and adopt its most authorized ROE—the same value that was previously authorized in Washington. At this point we have reached a stalemate and no further adjustments would be made to authorized ROEs except for perhaps mechanically updating the ROE for interest rate changes.

The second scenario where Oregon and its utilities must wait for other state commissions to rule on ROE is also fatally flawed. If an Oregon utility needs to increase its cost of capital but must wait for a utility in another state to request a general rate case, the Oregon utility would potentially suffer

tremendous harm and the Oregon Commission would be unable to adjust rates based on prior precedent.

Another important point is that the model includes data spanning a period where interest rates were the highest in history. Applying the model to the current and forecast capital markets may indicate a lagging effect. In fact, this model has been applied by Dr. Hadaway to support his argument that his single-stage DCF results are too low and "unreasonable". If the Commission rejects this model, then Dr. Hadaway's single-stage DCF appears in-line with the results I have recommended. If my results are adopted, Dr. Hadaway's model would continue to reflect higher indications than are reasonable. Because his model reflects results that are greater than the expected returns from the overall market, it is not supportable.

Finally, the cost of equity is just one of many ratemaking issues. Theoretically, other state commissions could deny cost recovery in some areas only to provide more generous allowed returns such that overall revenue requirements generate just and reasonable rates. In addition, it could be that the allowed returns and the commissions' regulatory policies are not independent. For example, the use of power cost adjustments, deferred accounting, future test periods, could result in lower costs of equity required by investors, compared to states that have different policy practices. Therefore Staff believes it is ill advised to identify one issue in isolation that requires equal treatment by all commissions.

Q. HAS THE COMMISSION RULED ON THIS ISSUE BEFORE?

A. Yes, Order 99-697 states,

> "NW Natural contends that, in setting a target ROE in this proceeding, this Commission should rely on recent

> common equity return decisions made in other jurisdictions. We disagree. As Staff and NWIGU point out, there is frequently a substantial lag between the time evidence is prepared in a rate case and when a decision is finally rendered. Because interest rates have been steadily declining during the past several years, the failure to account for the regulatory lag could result in an overstatement of cost of capital. Moreover, as noted above, the authorized ROE is just one component of setting rates and is often tied to other, unknown elements in a rate case. Therefore, while other ROE determinations may provide evidence to confirm a decision, we are reluctant to base an award for NW Natural on unknowable parameters from other cases, set in other jurisdictions and different capital market conditions."

Additionally, the Commission ruled in UE 102, Order No. 99-033, "We also accept Staff's argument that PGE's use of information on the cost of equity allowed by other commissions is not of much value. PGE's cost of equity is determined by the market, not by other regulators."

The Commission was correct in rejecting generic analyses in the past and should do so in this docket.

Q. FROM A FINANCIAL ECONOMIST'S POINT OF VIEW, WHAT CAN YOU INFER FROM THESE AUTHORIZED RETURNS?

A. I infer that commissions are currently authorizing ROEs clearly higher than the companies' costs of equity. My conclusion is based on the observation that market-to-book ratios currently average about 1.7, and the market-to-book ratio has been significantly greater than 1.0 for many years now. When the market-to-book ratio is greater than 1.0, investors expect that accounting ROEs will exceed the cost of equity. This result applies very strongly to companies that are "pure-play" regulated utilities. The assumption is weakened as a company increases its reliance on non-regulated ventures, where the relationship

between ROEs and the required returns varies by the success of those unregulated operations.

If we assume that the comparable class of companies chosen by Dr. Hadaway does mirror the riskiness of PacifiCorp's regulated assets, the only thing Dr. Hadaway has shown is that commissions are authorizing ROEs that exceed their costs of capital. Clearly, this Commission should not set PacifiCorp's ROE greater than its cost of equity just because this economically and financially improper policy may occur in other states and for other companies.

Dividend Tax Cut

Q. ARE THERE MACROECONOMIC FACTORS, OTHER THAN CHANGES IN INTEREST RATES, THAT WERE OMITTED FROM THE COMPANY'S ANALYSIS?

A. Yes. For companies that pay a large amount of dividend, like this Company, the most important change relates to President Bush's tax cut program, enacted in 2003. With the reduction in tax rates, the equity investor for a public utility can be expected, all else equal, to "bid up" the price. Because dividends are now taxed at a lower overall rate, more investors would demand the shares.

Dr. Hadaway missed the opportunity to enter into any discussion about what is probably one of the most important changes in the tax law in a long time. Because he omitted the discussion, I will not belabor the issue, although the change would be expected to contribute significantly to the price of shares in high-dividend paying companies.

I have reviewed Dr. Hadaway's testimony since the 2003 tax cut was implemented and failed to locate where this highly significant issue has been factored into his analyses.

Conclusions

Q. WHAT DO YOU CONCLUDE GIVEN THE INFORMATION YOU REVIEWED?

A. I conclude that the Commission should authorize a ROE based on the best estimate of PacifiCorp's cost of equity. The Commission should reject Dr. Hadaway's recommended 11.125 percent recommended ROE to be applied to the rate-regulated property owned and operated by PacifiCorp because it is based on the assumption of growth rates that are not representative of pure play companies. Based on the weaknesses that I have pointed out regarding Dr. Hadaway's position, I believe that the results of his analysis should be dismissed and reliance should be placed on my cost of equity proposal.

The best estimates of PacifiCorp's cost of equity are presented in my analyses. The Commission should adopt a 9.5 percent ROE, and the 7.724 percent ROR, shown on Staff/200, Morgan/4.

Q. DOES THIS COMPLETE YOUR PREPARED DIRECT TESTIMONY?

A. Yes, it does.

CASE: UE 170
WITNESS: Thomas Morgan

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 201

Witness Qualifications Statement

May 9, 2005

WITNESS QUALIFICATIONS STATEMENT

NAME:	Thomas D. Morgan
EMPLOYER:	Public Utility Commission of Oregon
TITLE:	Senior Financial Economist, Economic & Policy Analysis
ADDRESS:	550 Capitol St NE Suite 215, Salem, Oregon 97301-2551.
EDUCATION:	Bachelor of Science in Business Administration, Finance; 1993, University of Oregon, Eugene, Oregon *summa cum laude*. I am currently completing the Master of Science in Finance program through the University of Leicester (UK).
RELEVANT WORK EXPERIENCE:	Since August 2001, I have been employed by the Public Utility Commission of Oregon as a financial analyst in the Economic Research & Financial/Policy Analysis Division. Current responsibilities include conducting research and providing technical support for cost of equity issues for electric, telecommunications, and gas utilities. From October 1997 to August 2001, I worked for the Oregon Department of Revenue as a Senior Appraiser Analyst in the Utility Program, Valuation Section of the Property Tax Division. Duties included appraising a variety of public utility and transportation properties. The valuation process included developing cost of capital studies for use in the discounting of cash flows in the Income Capitalization Approach to value. Duties included valuation of the property owned by gas, electric, telecommunication and airline companies. I am a certified general property appraiser and have been involved in the valuation of commercial properties since 1993.

CASE: UE 170
WITNESS: Ming Peng

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 300

Direct Testimony

May 9, 2005

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Ming Peng. My business address is 550 Capitol Street NE, Suite 215, Salem, Oregon 97301-2148. My telephone number is (503) 373-1123. I am employed by the Public Utility Commission of Oregon (OPUC) as a Utility Analyst of the Economic and Policy Analysis Section in the Economic Research and Financial Analysis Division.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. My Witness Qualifications Statement is found on Staff Exhibit Staff/301, Peng/1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I reviewed PacifiCorp's long-term debt cost and preferred stock applicable to the respective portions of the company's capital structure.

Q. DID YOU PREPARE EXHIBITS FOR THIS DOCKET?

A. Yes. I prepared Exhibit Staff/301, my Witness Qualifications Statement.

Summary Recommendation

Q. HAVE YOU PREPARED A TABLE THAT SUMMARIZES STAFF'S RECOMMENDATION?

A. Yes, Table 1 summarizes Staff's position with regard to the cost of long-term debt and the cost of preferred stock.

Table 1: Costs of Long-term Debt and Preferred Stock.

Issue	Company Proposal	Staff Recommendation
Cost of Preferred Stock	6.64%	6.34%
Cost of Long-Term Debt	6.35%	6.11%

Embedded Cost of Preferred Stock

Q. WHAT PREFERRED SECURITIES DOES PACIFICORP HAVE OUTSTANDING AND WHAT DOES PACIFICORP REQUEST FOR THE EFFECTIVE COST OF THIS PREFERRED STOCK?

A. PacifiCorp is expected to have 11 issues of preferred securities as of March 31, 2006. The total book value during the test period is $90 million, and the weighted average cost proposed by the Company is 6.635 percent, requiring an annual dividend of $5.73 million.

Q. HOW DID PACIFICORP ARRIVE AT THEIR 6.635% FIGURE?

A. PacifiCorp first determined the cost of money for each preferred stock issuance. Next, the Company multiplied the cost of money for each preferred stock series by the principal amount outstanding for each issuance to yield the annualized cost for each issue. The Company then took the sum of the annualized costs over all of the preferred stock issues and divided it by the total amount of preferred stock outstanding, resulting in the weighted average cost over all issues, or the Company's embedded cost of preferred stock.

Q. WHAT IS STAFF'S RECOMMENDED COST OF PREFERRED STOCK?

A. I recommend the Commission adopt an embedded cost of preferred stock equal to 6.343%. The reduction of 30 basis points of cost of preferred stock represents approximately $0.63 million annually.

Q. WHAT ADJUSTMENTS DID YOU MAKE TO PACIFICORP'S EMBEDDED COST OF PREFERRED STOCK?

A. Staff made three discrete adjustments to the cost of PacifiCorp's preferred stock. They are enumerated below.

(1) An unamortized expense of $151,974 was removed from the Company's calculations because Staff determined that the unamortized expenses from an early retirement of a hybrid security, referred to as QUIDS (Quarterly Income Debt Securities) should not be included in rates.

(2) Staff also adjusted the balance of the "No Par Serial Preferred, $100 Stated Value" (issued in 1992) to reflect the reduction of an additional $5.75 million in principal, and eight basis points (8 bps), or about $0.475 million in all-in, embedded interest costs, lower than the Company's proposal. This decrease is due to the annual five percent sinking fund requirement.

(3) For amortization purposes, Staff adjusted the issuance costs for the "No Par Serial Preferred, $100 Stated Value", issued in 1992. This adjustment is to reflect the expected outstanding balance, as of December 31, 2006, of $41.25 million, instead of the $84.04 million amount that was initially issued.

Q. PLEASE EXPLAIN WHY YOU MADE ADJUSTMENT NUMBER ONE.

A. The unamortized expense associated with the QUIDS should not be reflected in rates because the QUIDS are no longer outstanding and no replacement

debt was issued, the expenses are non-recurring in nature, and there is no evidence that customers benefits from the early redemption of the QUIDS.

Q. HAS THE COMMISSION REVIEWED THIS ISSUE IN THE PAST?

A. Yes, the Commission excluded the unamortized expense associated with the QUIDS in Order 01-787[1].

> "If the Commission had been given persuasive evidence as to how customers specifically benefited from PacifiCorp's decision to redeem the QUIDS, we would be inclined to allow the expense. However, the mere fact that the cost of debt costs fell does not establish that the overall cost of capital also fell. Further, as the expense is non-recurring, it is not appropriate for it to be recovered as some other type of expense."

Q. PLEASE EXPLAIN WHY YOU MADE THE SECOND ADJUSTMENT.

A. A sinking fund is an account managed by a bond trustee for the purpose of repaying the bonds. Typically, the company makes annual payments to the trustee. Most sinking funds begin between 5 and 10 years after issuance. PacifiCorp's "No Par Serial Preferred, $100 Stated Value" was issued in June 1992, and its annual 5% sinking fund began 10 years later, on June 15, 2002. Staff estimated that every six months, an equal payment of 2.5% would accrue over the remaining life of the security.[2] Over the following three-year period, through June 2005, the balance decreased to the $48.75 million. This is the figure that is proposed for inclusion in rates by the Company.

From here, I have considered what the balance on this account will be after an additional 18-month period. This period represents the expected time-

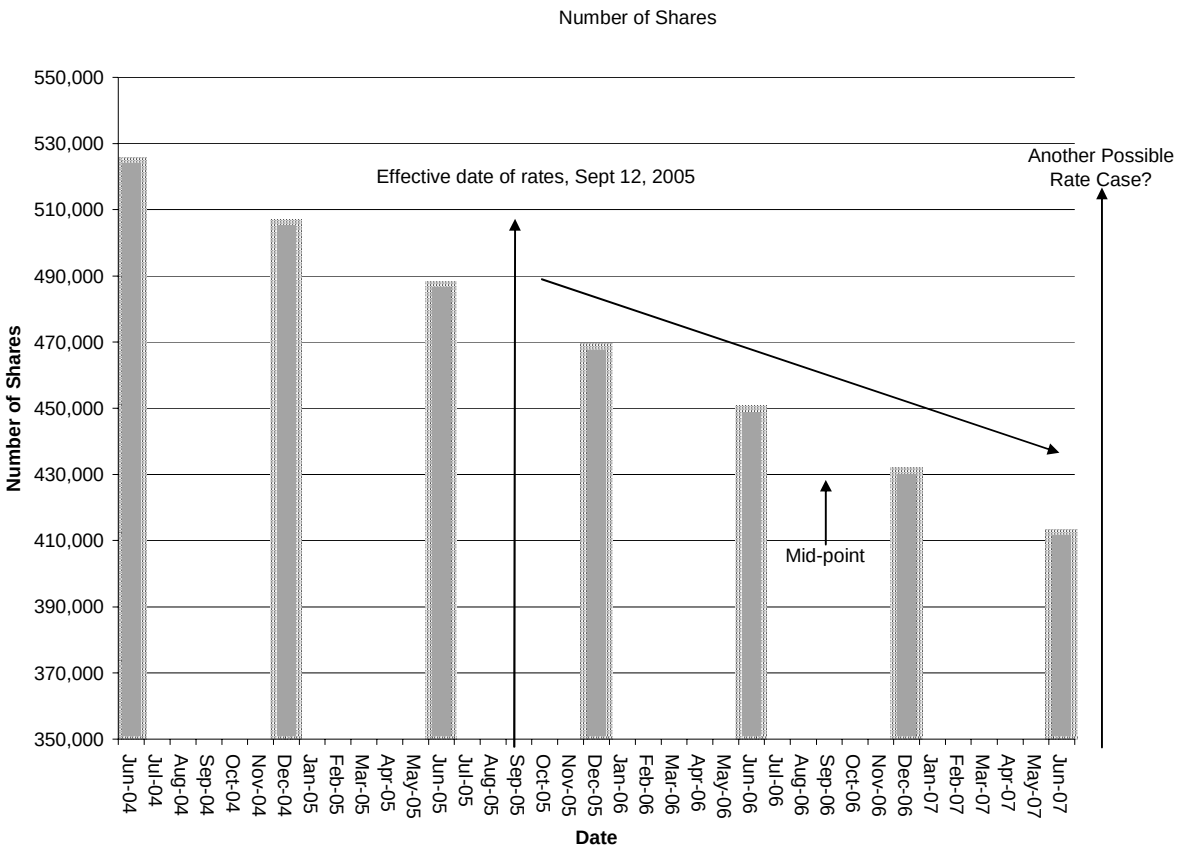
[1] Order No. 01-787, UE 116, CONTESTED ISSUES, I. Rate of Return, C. Cost of Preferred Stock, Commission Resolution, page 19.

frame between the current rate case and the next reasonably probable rate case. The balance at the end of 2006 will be roughly $43 million dollars, consisting of 430,000 remaining shares, each with a par value of $100. (*See* Chart 1) This represents that best estimate of the amount that should be captured in rates.

The mid-point of the 5% sinking fund and the graph is that the soonest we would expect another resetting of rates is 18 months and the maximum is probably around 5 years. Additional payments assumed by Staff help ensure customers are not overpaying.

[2] The 2.5% figure represents a semiannual (6 month) payment, half the annual 5% sinking fund rate.

Chart 1. Sinking Fund Adjustment



Q. PLEASE EXPLAIN WHY YOU MADE THE THIRD ADJUSTMENT.

A. As indicated in the narrative description I just provided relating to the prior adjustment, the outstanding balance of these preferred shares will have decreased over the time that rates are in effect. Because the principal balance of the issuance will have decreased, it is not appropriate to assume that the historical amount of about $84 million should be used to calculate the future, anticipated issuance costs to be captured in rates. The unamortized expense is a non-recurring, sunk cost and should therefore be set an amount to reflect

a single pass-through of costs in rates, and should be based on the actual amount of funds for which the capital cost is being calculated.

The three adjustments described above reduce the cost of preferred stock from the Company's calculation by 29 basis points, from 6.64% to 6.34%. The reduction of 29 basis points of cost of preferred stock represents approximately $0.63 million annually.

Embedded Cost of Long-Term Debt

Q. WHAT IS LONG-TERM DEBT?

A. The Commission has historically defined long-term debt as debt with a maturity of more than one year.

Q. WHAT IS PACIFICORP'S RECOMMENDED COST OF LONG-TERM DEBT?

A. PacifiCorp recommends its embedded cost of long-term debt be 6.35%. (*See* Exhibit PPL/301)

Q. HOW DID PACIFICORP ARRIVE AT THE 6.35% FIGURE?

A. PacifiCorp follows a weighted-average process similar to that used to calculate the embedded cost of preferred stock.

Q. WHAT IS PACIFICORP'S ESTIMATED AVERAGE COST OF LONG-TERM DEBT DURING THE TEST PERIOD, AS OF MARCH 31, 2006?

A. As of March 31, 2006, PacifiCorp will have approximately four (4.0) billion dollars in long-term debt outstanding. This is based on the Company's filing, which is comprised of 78 individual issuances (Table 2):

Table 2. PacifiCorp's Cost of Long Term Debt as of March 31, 2006

DESCRIPTION	ANNUAL DEBT OUTSTANDING	ANNUAL DEBT SERVICE COST	COST BY SEGMENT
15 - First Mortgage Bonds (FMB)	$2,344,039,000	$151,699,447	6.472%
40 - Medium-Term Notes (MTN)	$969,500,000	$74,135,295	7.647%
15 - Pollution Control Obligations	$398,394,119	$16,578,219	4.161%
8- Pollution Control Revenue Bonds	$299,775,000	$12,390,556	4.133%
TOTAL LONG-TERM DEBT	$4,011,708,119	$254,803,517	
COST OF LONG-TERM DEBT	6.351%		

Q. WHAT INTEREST RATE IS ASSOCIATED WITH EACH OF THESE SOURCES OF DEBT?

A. PacifiCorp's debt carries various interest rates, ranging from 4.30% to 9.15%.

Q. WHAT DEBT COST DO YOU RECOMMEND FOR THIS PROCEEDING?

A. I recommend that the Commission adopt Staff estimate of 6.11% as the appropriate cost of long-term debt. The reduction of 24 basis points of cost of long term debt represents approximately $9.55 million annually.[3] The following table, Table 3, reflects Staff's adjustments to the cost of debt.

[3] The Company's annual cost of debt proposal totals $254,803,517. Staff's adjustment reduces this to $245,229,797, reflecting a reduction in costs by $9,553,786 annually (3.75 percent).

Table 3. Staff Adjusted Cost of Long Term Debt as of March 31, 2006

DESCRIPTION	ANNUAL DEBT OUTSTANDING	ANNUAL DEBT SERVICE COST	COST BY SEGMENT
15 - First Mortgage Bonds (FMB)	$2,344,039,000	$144,087,216	6.147%
40 - Medium-Term Notes (MTN)	$969,500,000	$72,743,735	7.503%
15 - Pollution Control Obligations	$398,394,119	$16,271,014	4.084%
8- Pollution Control Revenue Bonds	$299,775,000	$12,123,832	4.044%
TOTAL LONG-TERM DEBT	$4,011,708,119	$245,229,797	
COST OF LONG-TERM DEBT	6.113%		

Q. WHAT ADJUSTMENTS DO YOU MAKE TO PACIFICORP'S EMBEDDED COST OF LONG-TERM DEBT?

A. I made two adjustments to PacifiCorp's forecast of its embedded cost of long-term debt and came up with the recommended cost of debt at 6.11%.

(1) I adjusted the interest rate on the "Pro-forma Debt" ($638 million) to reflect an average of interest rate, or coupon, of five percent (5%), which is consistent with the current interest rate environment. This reflects a reduction from the 6.12% interest rate assumed by PacifiCorp. Staff further adjusted the amortization of issuance expenses to match a 10-year maturity term.

(2) For amortization purposes, Staff adjusted the redemption expenses to reflect the estimated principal balance during the period that rates will be in effect.

Q. PLEASE EXPLAIN WHY YOU MADE THE FIRST ADJUSTMENT.

A. Currently, the average of the five, seven and 10-year Treasury yields is four percent (4.0%).[4] The following table, Table 4, reflects the current Treasury rate and coupon calculations.

Table 4. Current Treasury Rate and Coupon Calculations

PacifiCorp A3/A-

Maturity	Interest Rate	All-in Spread	Coupon Rate
5 Year	3.85%	0.73%	4.58%
7 Year	4.02%	0.81%	4.83%
10 Year	4.21%	0.83%	5.04%
5, 7, 10 Year Average	4.03%	0.79%	4.82%

The coupon rate I used for the refinance rate for the Company's first mortgage bond is rounded to five percent (5.0%) and is based on the current Treasury yield, plus a corresponding average spread of 80[5] basis points[6]. Staff adjusted the rate corresponding to a total aggregated value of $638.8 million of First Mortgage Bonds (FMBs). The Company's proposal of 6.12% assumes a 20-year maturity term. Staff reduced the term to ten years, which corresponds to the interest rate identified above (five percent). This term is consistent with the Commission's historic practice.

Q. PLEASE EXPLAIN WHY YOU MADE THE SECOND ADJUSTMENT.

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[4] Interest Rate: as of April 19, 2005. Daily Treasury Yield Curve Rates, U.S. Treasury.
[5] An average of 80 basis points is based on A-rated credit risk.

A. Staff calculated the percentage of the remaining, unamortized balance of the redemption costs for each security. Because the remaining balance will be lower when rates are in effect (September 12, 2005), the Company's implied assumption that the historic (issuance) balance should be "rolled-over" into rates is not appropriate.

Staff's position on this issue is designed to provide the Company with the ability to capture the remaining balance of the costs that it incurred, going forward. Because these costs will not be re-incurred upon any eventual refunding, the historic figure is erroneously applied in the Company's analysis.

The remaining balance was calculated as a straight-line percentage of the historic balance. Staff's unamortized balance ratios for redemption expenses are based on the date as of September 12, 2005. To obtain the unamortized balance, Staff first subtracted the date of the historic, or original "redemption expense", as of September 12, 2005, from the original maturity date. The differences reflect the remaining period required to capture the Company's remaining amount of its historic, sunk expense related to the initial redemption.

Staff's second adjustment calculated the remaining principal balance of the outstanding bonds and divided it by the security's original life. This calculates the forecast ratio that is needed to apply to the unamortized expense balance. The unamortized balance ratios were applied to the initial,

[6] Basis point is one hundredth of a percent (0.01%). Used to measure changes in or differences between yield or interest rates.

total redemption expenses to obtain the unamortized redemption expenses to be included in rates.

The two adjustments just described reduce the cost of debt from the Company's "all-in" calculation by 24 basis points, from 6.35% to 6.11%. The reduction of 24 basis points of cost of long term debt represents approximately $9.55 million annually.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

CASE: UE 170
WITNESS: Ming Peng

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 301

Witness Qualification Statement

May 9, 2005

WITNESS QUALIFICATION STATEMENT

NAME: MING PENG

EMPLOYER: PUBLIC UTILITY COMMISSION OF OREGON

TITLE: UTILITY ANALYST

ADDRESS: 550 CAPITOL ST. N.E. SUITE 215, SALEM, OR 97301-2551

EDUCATION & TRAINING:

Certified Rate of Return Analyst (CRRA)
Society of Utility and Regulatory Financial Analysts 2002

NARUC Annual Regulatory Studies Program
Michigan State University, East Lansing 1999

Master of Science, Agricultural Economics
University of Idaho, Moscow 1990

Bachelor of Science, Statistics
People's University of China, Beijing 1983

EXPERIENCE:

PUBLIC UTILITY ANALYST 1999 - present
Public Utility Commission of Oregon. Primary responsibilities: Conduct economic and financial analysis on regulatory policies relating to public utility issues. The analyses focus on electric, natural gas, water, and telecommunications industries.

INDUSTRY ANALYST 1996-1998
Weyerhaeuser Company. Primary responsibilities: Forecasted product demand, price trends, and price elasticity. Established the process (specific methods and techniques) for market, investment, and economic analyses. Selected the analytical techniques most appropriate for any given problem.

ECONOMIST (Natural Resources) 1992-1996
Idaho Department of Water Resources. Primary responsibilities: Conducted economic research. Developed analysis in evaluating policy and planning alternatives; determined the financial and economic feasibility of proposed natural resource projects using economic modeling and investment analysis.

CASE: UE 170
WITNESS: Ming Peng

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 302

Exhibit in Support of
Direct Testimony

May 9, 2005

Summary of Senior Secured Financing Alternatives
PACIFICORP

A3(Negative)/A-(Stable)
Treasuries as of 12/10/04

	5 NC/L	7 NC/L	10 NC/L	15 NC/L	20 NC/L	30 NC/L
Benchmark UST	3.500% due 11/ 09	5.000% due 08/11	4.250% due in 11/ 14	4.250% due in 11/ 14	5375% due 02/ 31	5.375% due 02/ 31
Benchmark Yield	3.52%	3.78%	4.15%	4.15%	4.82%	4.82%
flied Rate Spread	**T+60 by area**	**T+70 by** area	**T+70-75 lip.**	T+110 by area,	T+80-85 by	**T+90 by area**
Reoffer Yield/ Coupon	4.12%	4.48%	4.85-4.90%	5.25%	5.62-5.67%	5.72%
Offering Price	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Underwriting Fees	0.600%.	0.63%	0.65%	0.75%	0.88%	0.88%
Proceeds to the Company	99.40%	99.38%	99.35%	99.25%	99.13%	90.13%
All-in Cost of Funds	4.26%	4.59%	4.93-4.98%	5.32%	5.69-5.74%0	5.78%
All-In Spread	+73 by	+81 by	+78-83 by	+117 by .	+87-92 by	+96 by

Staff Adjusted Preferred Stock

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	**referred Stock, $100 Par**	(a)	126,243	$12,624,300	($98,049)	$12,526,251	$631,215	5.04%	636,156	1
2										2
3	**ial Preferred, $100 Par Value**									3
4	4.52% Series	Nov-55	2,065	$206,500	($9,676)	$196,824	$9,334	4.74%	9,793	4
5	7.00% Series	(b)	18,046	$1,804,600	(c)	$1,804,600	$126,322	7.00%	126,322	5
6	6.00% Series	(b)	5,930	$593,000	(c)	$593,000	$35,580	6.00%	35,580	6
7	5.00% Series	(b)	41,908	$4,190,800	(c)	$4,190,800	$209,540	5.00%	209,540	7
8	5.40% Series	(b)	65,959	$6,595,900	(c)	$6,595,900	$356,179	5.40%	356,179	8
9	4.72% Series	Aug-63	69,890	$6,989,000	($30,349)	$6,958,651	$329,881	4.74%	331,320	9
10	4.56% Series	Feb-65	84,592	$8,459,200	($49,071)	$8,410,129	$385,740	4.59%	387,990	10
11										11
12	**Serial Preferred, $25 Stated Value**									12
13	Unamortized expense (e)	May-95								13
14	Unamortized expense (f)	1995								14
15										15
16	**erial Preferred, $100 Stated Value**									16
17	$7.48 Series (d)	Jun-92	430,000	43,000,000	(279,500)	$42,720,500	$3,216,400	7.59%	3,264,440	17
18										18
19	**TOTAL**			$84,463,300	($466,645)	$83,996,655	$5,300,190		5,357,319	19
20										20
21										21
22							**Cost of Preferred Stock =**	**6.343%**		22
23										23
24							PPL	6.635%		24
25								0.292%		25

Daily Treasury Yield Curve Rates

http://www.treas.gov/offices/domestic-finance/debt-management/interest-rate/yield.shtml

Starting April 2005

Date	1 mo	3 mo	6 mo	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	20 yr	30 yr
4/1/2005	2.66	2.8	3.13	3.34	3.75	3.9	4.13	4.29	4.46	4.85	N/A
4/4/2005	2.64	2.8	3.14	3.34	3.74	3.9	4.13	4.3	4.47	4.84	N/A
4/5/2005	2.63	2.79	3.13	3.34	3.75	3.91	4.15	4.31	4.48	4.87	N/A
4/6/2005	2.6	2.76	3.11	3.31	3.7	3.86	4.09	4.26	4.44	4.85	N/A
4/7/2005	2.61	2.77	3.12	3.32	3.72	3.89	4.13	4.3	4.49	4.9	N/A
4/8/2005	2.61	2.79	3.14	3.35	3.77	3.94	4.17	4.32	4.5	4.88	N/A
4/11/2005	2.6	2.76	3.17	3.37	3.75	3.91	4.13	4.28	4.45	4.84	N/A
4/12/2005	2.62	2.76	3.16	3.34	3.71	3.85	4.05	4.2	4.38	4.78	N/A
4/13/2005	2.62	2.77	3.15	3.32	3.66	3.83	4.03	4.2	4.38	4.8	N/A
4/14/2005	2.62	2.78	3.14	3.3	3.6	3.76	3.99	4.17	4.37	4.8	N/A
4/15/2005	2.63	2.79	3.12	3.26	3.54	3.68	3.9	4.09	4.27	4.73	N/A
4/18/2005	2.67	2.9	3.15	3.29	3.55	3.69	3.9	4.08	4.27	4.7	N/A
4/19/2005	2.73	2.91	3.13	3.26	3.5	3.64	3.85	4.02	4.21	4.64	N/A
4/20/2005	2.65	2.87	3.11	3.25	3.52	3.65	3.86	4.03	4.22	4.66	N/A
4/21/2005	2.59	2.88	3.13	3.31	3.65	3.77	3.97	4.13	4.32	4.73	N/A
4/22/2005	2.64	2.93	3.14	3.3	3.62	3.73	3.92	4.08	4.26	4.68	N/A
4/25/2005	2.67	2.93	3.19	3.34	3.64	3.75	3.94	4.08	4.26	4.65	N/A
4/26/2005	2.7	2.91	3.18	3.35	3.67	3.77	3.96	4.1	4.28	4.67	N/A
4/27/2005	2.65	2.89	3.17	3.33	3.64	3.75	3.92	4.06	4.25	4.65	N/A
4/28/2005	2.6	2.88	3.15	3.3	3.59	3.67	3.85	3.99	4.19	4.6	N/A
4/29/2005	2.7	2.9	3.17	3.33	3.66	3.73	3.9	4.03	4.21	4.61	N/A

Pro Forma Cost of Debt Summary (less current maturiti PacifiCorp
As of March 31, 2006

DESCRIPTION	AMOUNT CURRENTLY OUTSTANDING	ISSUANCE EXPENSES	REDEMPTION EXPENSES	NET PROCEEDS TO COMPANY	ANNUAL DEBT SERVICE COST	COST BY SEGMENT
Subtotal - First Mortgage Bonds	$2,344,039,000	-$23,693,088	-$11,935,639	$2,308,410,273	$151,699,447	6.472%
Subtotal - Medium-Term Notes	$969,500,000	-$11,358,608	-$26,756,479	$931,384,912	$74,135,295	7.647%
Total First Mortgage Bonds	$3,313,539,000	-$35,051,697	-$38,692,118	$3,239,795,185	$225,834,742	6.816%
Subtotal - Pollution Control Obligatio	$398,394,119	-$10,560,810	-$9,550,194	$378,283,115	$16,578,219	4.161%
Subtotal - Pollution Control Revenue	$299,775,000	-$3,732,636	-$7,086,097	$288,956,266	$12,390,556	4.133%
Total PCRBs	$698,169,119	-$14,293,446	-$16,636,291	$667,239,382	$28,968,775	4.149%
Total Cost of Long Term Debt	$4,011,708,119	-$49,345,143	-$55,328,409	$3,907,034,567	$254,803,517	**6.351%**

Staff Adjusted

DESCRIPTION		AMOUNT CURRENTLY OUTSTANDING	ISSUANCE EXPENSES	REDEMPTION EXPENSES	NET PROCEEDS TO COMPANY	ANNUAL DEBT SERVICE COST	COST BY SEGMENT
(1)		(2)	(3)		(4)	(5)	
Subtotal - First Mortgage Bonds		2,344,039,000	-23,693,088	-11,935,638	2,311,969,710	144,091,216	**6.147%**
Subtotal - Medium-Term Notes		969,500,000	-11,358,608	-26,756,479	944,194,628	72,743,735	**7.503%**
Subtotal - Pollution Control Obligations se		398,394,119	-10,522,664	-9,550,194	382,732,110	16,271,014	**4.084%**
Subtotal - Pollution Control Revenue Bonc		299,775,000	-3,610,866	-7,086,097	293,235,109	12,123,832	**4.044%**
Total Cost of Long Term Debt		4,011,708,119	-49,185,227	-55,328,408	3,932,131,557	245,229,797	**6.113%**
Total Cost of Long Term Debt		**6.113%**					
	PPL	6.351%					
		0.238%	-$9,553,786				

Staff adjustments:
First Mortgage Bond

PACIFICORP
Electric Operations
Pro-Forma Cost of Long-Term Debt (less current maturities)
March 31, 2006

COST OF

LINE NO.	BOND INTEREST RATE	DESCRIPTION	MATURITY DATE	ORIGINAL LIFE	PRINCIPAL AMOUNT ORIGINAL ISSUE	PRINCIPAL AMOUNT CURRENTLY OUTSTANDING	ISSUANCE EXPENSES	REDEMPTION EXPENSES	UNAMORTIZED BALANCE	NEW REDEMPTION EXPENSES	NET PROCEEDS TO COMPANY TOTAL DOLLAR AMOUNT	NET PROCEEDS TO COMPANY PER $100 PRINCIPAL AMOUNT	MONEY TO COMPANY (BOND TABLE BASIS)	ANNUAL DEBT SERVICE COST
	(1)	(2)		(3)	(4)	(5)	(6)	1	2	3	(7)	(8)	(9)	(10)
									9/12/2005					
1	4.300%	Series due Sep 2008	09/15/08	5	$200,000,000	$200,000,000	($1,610,660)	($5,967,819)	60.22%	($3,593,772)	$194,795,569	97.398%	4.893%	$9,786,000
2	6.900%	Series due Nov 2011	11/15/11	10	$500,000,000	$500,000,000	($5,338,849)	$0			$494,661,151	98.932%	7.051%	$35,255,000
3	5.450%	Series due Sep 2013	09/15/13	10	$200,000,000	$200,000,000	($1,654,660)	($5,967,819)	80.14%	($4,782,430)	$193,562,910	96.781%	5.880%	$11,760,000
4	4.950%	Series due Aug 2014	08/15/14	10	$200,000,000	$200,000,000	($2,278,000)	$0			$197,722,000	98.861%	5.097%	$10,194,000
5	7.700%	Series due Nov 2031	11/15/31	30	$300,000,000	$300,000,000	($3,701,310)	$0			$296,298,690	98.766%	7.807%	$23,421,000
6	5.900%	Series due Aug 2034	08/15/34	30	$200,000,000	$200,000,000	($2,722,000)	$0			$197,278,000	98.639%	5.998%	$11,996,000
7	5.000%	Pro Forma Series 6.12%	03/31/26	10	$638,761,000	$638,761,000	($6,387,610)	$0			$632,373,390	99.000%	5.129%	$32,762,052
8	8.271%	C-U Series due Oct 2010 (a)	10/01/10	18	$48,972,000	$16,945,000	$0	$0			$16,945,000	100.000%	8.271%	$1,401,521
9	7.978%	C-U Series due Oct 2011 (a)	10/01/11	19	$4,422,000	$1,770,000	$0	$0			$1,770,000	100.000%	7.978%	$141,211
10	8.493%	C-U Series due Oct 2012 (a)	10/01/12	20	$19,772,000	$9,230,000	$0	$0			$9,230,000	100.000%	8.493%	$783,904
11	8.797%	C-U Series due Oct 2013 (a)	10/01/13	21	$16,203,000	$8,467,000	$0	$0			$8,467,000	100.000%	8.797%	$744,842
12	8.734%	C-U Series due Oct 2014 (a)	10/01/14	22	$28,218,000	$15,952,000	$0	$0			$15,952,000	100.000%	8.734%	$1,393,248
13	8.294%	C-U Series due Oct 2015 (a)	10/01/15	23	$46,946,000	$27,903,000	$0	$0			$27,903,000	100.000%	8.294%	$2,314,275
14	8.635%	C-U Series due Oct 2016 (a)	10/01/16	24	$18,750,000	$11,959,000	$0	$0			$11,959,000	100.000%	8.635%	$1,032,660
15	8.470%	C-U Series due Oct 2017 (a)	10/01/17	25	$19,609,000	$13,052,000	$0	$0			$13,052,000	100.000%	8.470%	$1,105,504
		Subtotal - First Mortgage Bonds			**$2,441,653,000**	**$2,344,039,000**	**($23,693,088)**	**($11,935,638)**		**($8,376,202)**	**$2,311,969,710**			**$144,091,216**
													6.147%	

Staff Adjustments:
MTNs

PACIFICORP
Electric Operations
Pro-Forma Cost of Long-Term Debt (less current maturities)
March 31, 2006

LINE NO.	BOND INTEREST RATE	DESCRIPTION	MATURITY DATE	ORIGINAL LIFE	PRINCIPAL AMOUNT ORIGINAL ISSUE	PRINCIPAL AMOUNT CURRENTLY OUTSTANDING	ISSUANCE EXPENSES		REDEMPTION EXPENSES	UNAMORTIZED BALANCE	NEW REDEMPTION EXPENSES	NET PROCEEDS TO COMPANY TOTAL DOLLAR AMOUNT	NET PROCEEDS TO COMPANY PER $100 PRINCIPAL AMOUNT	MONEY TO COMPANY (BOND TABI BASIS)	ANNUAL DEBT SERVICE COST
	(1)	(2)		(3)	(4)	(5)	(6)			*9/12/2005*		(7)	(8)	(9)	(10)
1	9.150%	Series C due Aug 2011	08/09/11	20	$8,000,000	$8,000,000	($75,327)	$62,000	$0	29.55%	$0	$7,924,673	99.058%	9.254%	$740,320
2	8.950%	Series C due Sep 2011	09/01/11	20	$20,000,000	$20,000,000	($132,118)	$155,000	$0	29.86%	$0	$19,867,882	99.339%	9.022%	$1,804,400
3	8.920%	Series C due Sep 2011	09/01/11	20	$20,000,000	$20,000,000	($188,318)	$155,000	$0	29.86%	$0	$19,811,682	99.058%	9.023%	$1,804,600
4	8.950%	Series C due Sep 2011	09/01/11	20	$25,000,000	$25,000,000	($175,398)	$193,750	$0	29.86%	$0	$24,824,602	99.298%	9.026%	$2,256,500
5	8.290%	Series C due Dec 2011	12/30/11	20	$3,000,000	$3,000,000	($23,040)	$23,250	($410,784)	31.51%	($129,425)	$2,847,535	94.918%	8.836%	$265,080
6	8.260%	Series C due Jan 2012	01/10/12	20	$1,000,000	$1,000,000	($7,649)	$7,750	($136,928)	31.66%	($43,348)	$949,003	94.900%	8.807%	$88,070
7	8.280%	Series C due Jan 2012	01/10/12	20	$2,000,000	$2,000,000	($13,297)	$15,500	($273,856)	31.66%	($86,696)	$1,900,007	95.000%	8.816%	$176,320
8	8.250%	Series C due Feb 2012	02/01/12	20	$3,000,000	$3,000,000	($22,946)	$23,250	($410,784)	31.96%	($131,282)	$2,845,772	94.859%	8.801%	$264,030
9	8.530%	Series C due Dec 2021	12/16/21	30	$15,000,000	$15,000,000	($115,202)	$116,250	($2,053,922)	54.24%	($1,113,995)	$13,770,804	91.805%	9.349%	$1,402,350
10	8.375%	Series C due Dec 2021	12/31/21	30	$5,000,000	$5,000,000	($38,400)	$38,750	($684,641)	54.37%	($372,269)	$4,589,330	91.787%	9.184%	$459,200
11	8.260%	Series C due Jan 2022	01/07/22	30	$5,000,000	$5,000,000	($33,243)	$38,750	($684,641)	54.44%	($372,707)	$4,594,050	91.881%	9.050%	$452,500
12	8.270%	Series C due Jan 2022	01/10/22	30	$4,000,000	$4,000,000	($30,594)	$31,000	($547,712)	54.47%	($298,316)	$3,671,090	91.777%	9.072%	$362,880
		Sub-Total Series C			**$111,000,000**	**$111,000,000**	**($855,533)**	**$860,250**	**($5,203,268)**			**$107,596,429**			**$10,076,250**
13	7.430%	Series E due Sep 2007	09/11/07	15	$2,000,000	$2,000,000	($15,530)	$15,500	($226,075)	13.32%	($30,102)	$1,954,368	97.718%	7.689%	$153,780
14	7.220%	Series E due Sep 2007	09/18/07	15	$2,500,000	$2,500,000	($19,412)	$19,375	($282,594)	13.44%	($37,989)	$2,442,599	97.704%	7.477%	$186,925
15	7.270%	Series E due Sep 2007	09/24/07	15	$4,000,000	$4,000,000	($31,059)	$31,000	($452,151)	13.55%	($61,278)	$3,907,663	97.692%	7.529%	$301,160
16	8.130%	Series E due Jan 2013	01/22/13	20	$10,000,000	$10,000,000	($75,827)	$77,500	($671,687)	36.84%	($247,420)	$9,676,753	96.768%	8.468%	$846,800
17	8.050%	Series E due Sep 2022	09/01/22	30	$15,000,000	$15,000,000	($131,471)	$116,250	($1,695,566)	56.60%	($959,737)	$13,908,792	92.725%	8.739%	$1,310,850
18	8.070%	Series E due Sep 2022	09/09/22	30	$8,000,000	$8,000,000	($70,118)	$62,000	($904,302)	56.68%	($512,520)	$7,417,362	92.717%	8.761%	$700,880
19	8.110%	Series E due Sep 2022	09/09/22	30	$12,000,000	$12,000,000	($105,177)	$93,000	($1,356,453)	56.68%	($768,780)	$11,126,042	92.717%	8.803%	$1,056,360
20	8.120%	Series E due Sep 2022	09/09/22	30	$50,000,000	$50,000,000	($438,238)	$387,500	($5,651,887)	56.68%	($3,203,252)	$46,358,510	92.717%	8.814%	$4,407,000
21	8.050%	Series E due Sep 2022	09/14/22	30	$10,000,000	$10,000,000	($87,648)	$77,500	($1,130,377)	56.72%	($641,167)	$9,271,186	92.712%	8.740%	$874,000
22	8.080%	Series E due Oct 2022	10/14/22	30	$25,000,000	$25,000,000	($200,190)	$193,750	($2,061,627)	57.00%	($1,175,033)	$23,624,776	94.499%	8.594%	$2,148,500
23	8.080%	Series E due Oct 2022	10/14/22	30	$26,000,000	$26,000,000	($208,198)	$201,500	($2,938,981)	57.00%	($1,675,085)	$24,116,717	92.757%	8.767%	$2,279,420
24	8.230%	Series E due Jan 2023	01/20/23	30	$4,000,000	$4,000,000	$51,229	$31,000	($88,989)	57.89%	($51,516)	$3,999,713	99.993%	8.231%	$329,240
25	8.230%	Series E due Jan 2023	01/20/23	30	$5,000,000	$5,000,000	($37,914)	$38,750	($335,843)	57.89%	($194,421)	$4,767,665	95.353%	8.667%	$433,350
		Sub-Total Series E			**$173,500,000**	**$173,500,000**	**($1,369,553)**	**$1,344,625**	**($17,796,533)**			**$162,572,147**			**$15,028,265**
26	7.260%	Series F due Jul 2023	07/21/23	30	$11,000,000	$11,000,000	($100,622)	$85,250	($589,062)	59.55%	($350,801)	$10,548,577	95.896%	7.609%	$836,990
27	7.260%	Series F due Jul 2023	07/21/23	30	$27,000,000	$27,000,000	($246,981)	$209,250	($1,445,880)	59.55%	($861,058)	$25,891,961	95.896%	7.609%	$2,054,430
28	7.230%	Series F due Aug 2023	08/16/23	30	$15,000,000	$15,000,000	($137,211)	$116,250	($268,624)	59.79%	($160,610)	$14,702,179	98.015%	7.396%	$1,109,400
29	7.240%	Series F due Aug 2023	08/16/23	30	$30,000,000	$30,000,000	($274,423)	$232,500	($537,248)	59.79%	($321,220)	$29,404,357	98.015%	7.406%	$2,221,800
30	6.750%	Series F due Sep 2023	09/14/23	30	$2,000,000	$2,000,000	($15,300)	$15,500	$0	60.05%	$0	$1,984,700	99.235%	6.810%	$136,200
31	6.720%	Series F due Sep 2023	09/14/23	30	$2,000,000	$2,000,000	($15,300)	$15,500	$0	60.05%	$0	$1,984,700	99.235%	6.780%	$135,600
32	6.750%	Series F due Sep 2023	09/14/23	30	$5,000,000	$5,000,000	($38,250)	$38,750	($34,169)	60.05%	($20,520)	$4,941,230	98.825%	6.843%	$342,150
33	6.750%	Series F due Oct 2023	10/26/23	30	$12,000,000	$12,000,000	($91,396)	$93,000	$0	60.44%	$0	$11,908,604	99.238%	6.810%	$817,200
34	6.750%	Series F due Oct 2023	10/26/23	30	$16,000,000	$16,000,000	($121,861)	$124,000	$0	60.44%	$0	$15,878,139	99.238%	6.810%	$1,089,600
35	6.750%	Series F due Oct 2023	10/26/23	30	$20,000,000	$20,000,000	($152,326)	$155,000	$0	60.44%	$0	$19,847,674	99.238%	6.810%	$1,362,000
36	8.625%	Series F due Dec 2024	12/13/24	30	$20,000,000	$20,000,000	($649,625)	$155,000	$0	64.22%	$0	$19,350,375	96.752%	8.938%	$1,787,600
		Sub-Total Series F			**$160,000,000**	**$160,000,000**	**($1,843,295)**	**$1,240,000**	**($2,874,983)**			**$156,442,495**			**$11,892,970**
37	6.625%	Series G due Jun 2007	06/01/07	12	$100,000,000	$100,000,000	($1,897,428)		($881,696)	14.32%	($126,215)	$97,976,356	97.976%	6.875%	$6,875,000
38	6.710%	Series G due Jan 2026	01/15/26	30	$100,000,000	$100,000,000	($904,467)		$0			$99,095,533	99.096%	6.781%	$6,781,000
		Sub-Total Series G			**$200,000,000**	**$200,000,000**	**($2,801,895)**		**($881,696)**			**$197,071,890**			**$13,656,000**
39	6.375%	Series H due May 2008	05/15/08	10	$200,000,000	$200,000,000	($2,060,179)		$0			$197,939,821	98.970%	6.517%	$13,034,000
40	7.000%	Series H due Jul 2009	07/15/09	12	$125,000,000	$125,000,000	($2,428,154)		$0			$122,571,846	98.057%	7.245%	$9,056,250
		Sub-Total Series H			**$325,000,000**	**$325,000,000**	**($4,488,333)**		**$0**			**$320,511,667**			**$22,090,250**
						$969,500,000							**7.503%**		$72,743,735

Staff Adjustments:
POLLUTION CONTROL BONDS

Electric Operations
Pro Forma Cost of Long-Term Debt (less current maturities)
March 31, 2006

LINE NO.	BOND INTEREST RATE	DESCRIPTION	ISSUE DATE	MATURITY DATE	ORIGINAL LIFE	PRINCIPAL AMOUNT ORIGINAL ISSUE	PRINCIPAL AMOUNT CURRENTLY OUTSTANDING	ISSUANCE EXPENSES	REDEMPTION EXPENSES	UNAMORTIZED BALANCE	NEW REDEMPTION EXPENSES	NET PROCEEDS TO COMPANY TOTAL DOLLAR AMOUNT	NET PROCEEDS TO COMPANY PER $100 PRINCIPAL AMOUNT	COST OF MONEY TO COMPANY (BOND TABLE BASIS)	ANNUAL DEBT SERVICE COST
	(1)	(2)			(3)	(4)	(5)	(6)		9/12/2005		(7)	(8)	(9)	(10)
1	5.650%	Emery County due Nov 2023	11/15/93	11/01/23	30	$46,500,000	$46,500,000	($1,624,793)	($2,842,053)	60.49%	($1,719,247)	$43,155,960	92.809%	6.306%	$2,932,290
2	5.625%	Emery County due Nov 2023	11/15/93	11/01/23	30	$16,400,000	$16,400,000	($1,015,051)	($819,557)	60.49%	($495,776)	$14,889,173	90.788%	6.442%	$1,056,488
3	5.625%	Lincoln County due Nov 2021	11/15/93	11/01/21	28	$8,300,000	$8,300,000	($426,105)	($414,778)	57.67%	($239,208)	$7,634,687	91.984%	6.361%	$527,963
4	3.900%	Converse 88 due Jan 2014	01/01/88	01/01/14	30	$17,000,000	$17,000,000	($155,970)	($579,849)	27.70%	($160,610)	$16,683,420	98.138%	4.098%	$696,660
5	3.900%	Sweetwater 84C due Dec 2014	12/12/84	12/01/14	30	$15,000,000	$15,000,000	($227,887)	$0	30.75%	$0	$14,772,113	98.481%	4.378%	$656,700
6	3.400%	Lincoln 91 due Jan 2016	01/17/91	01/01/16	25	$45,000,000	$45,000,000	($771,836)	($2,578,602)	41.24%	($1,063,373)	$43,164,791	95.922%	3.786%	$1,703,700
7	4.125%	Forsyth 86A due Dec 2016 (a)	12/29/86	12/01/16	30	$8,500,000	$8,500,000	($304,824)	$0	37.42%	$0	$8,195,176	96.414%	4.407%	$374,595
8	4.125%	Converse 95 due Nov 2025 (a)	11/17/95	11/01/25	30	$5,300,000	$5,300,000	($132,043)	$0	67.17%	$0	$5,167,957	97.509%	4.700%	$249,100
9	4.125%	Lincoln 95 due Nov 2025 (a) (b)	11/17/95	11/01/25	30	$22,000,000	$19,924,119	($366,116)	$0	67.17%	$0	$19,558,002	98.162%	4.332%	$863,113
10	2.700%	Carbon County due Nov 2024	11/17/94	11/01/24	30	$9,365,000	$9,365,000	($206,519)	($58,574)	63.84%	($37,391)	$9,121,090	97.396%	3.210%	$300,617
11	2.700%	Converse County due Nov 2024	11/17/94	11/01/24	30	$8,190,000	$8,190,000	($209,778)	($86,323)	63.84%	($55,105)	$7,925,118	96.766%	3.244%	$265,684
12	2.700%	Emery County due Nov 2024	11/17/94	11/01/24	30	$121,940,000	$121,940,000	($3,274,246)	($1,925,767)	63.84%	($1,229,325)	$117,436,429	96.307%	3.400%	$4,145,960
13	2.700%	Lincoln County due Nov 2024	11/17/94	11/01/24	30	$15,060,000	$15,060,000	($422,858)	($81,427)	63.84%	($51,979)	$14,585,163	96.847%	3.330%	$501,498
14	2.700%	Moffat County due May 2013	11/17/94	05/01/13	18.5	$40,655,000	$40,655,000	($874,159)	($74,912)	41.29%	($30,930)	$39,749,911	97.774%	3.231%	$1,313,563
15	2.700%	Sweetwater County due Nov 2024	11/17/94	11/01/24	30	$21,260,000	$21,260,000	($510,479)	($88,352)	63.84%	($56,400)	$20,693,121	97.334%	3.213%	$683,084
	3.522%	**Total - Secured Pollution Control Revenue Bonds**				**$400,470,000**	**$398,394,119**	**($10,522,664)**	**($9,550,194)**			**$382,732,110**		**4.084%**	**$16,271,814**
16	2.700%	Sweetwater 88B due Jan 2014	01/01/88	01/01/14	30	$11,500,000	$11,500,000	($84,822)	($392,250)	27.70%	($108,648)	$11,306,530	98.318%	3.894%	$447,810
17	2.700%	Sweetwater 90A due Jul 2015	07/24/90	07/01/15	25	$70,000,000	$70,000,000	($660,750)	($795,122)	39.22%	($311,862)	$69,027,388	98.611%	3.882%	$2,717,400
18	2.700%	Emery 91 due Jan 2015	05/22/91	01/01/16	25	$45,000,000	$45,000,000	($872,505)	($2,568,859)	41.24%	($1,059,355)	$43,068,140	95.707%	4.146%	$1,865,700
19	2.700%	Sweetwater 88A due Jan 2017	01/01/88	01/01/17	30	$50,000,000	$50,000,000	($422,443)	($882,101)	37.71%	($332,621)	$49,244,936	98.490%	3.959%	$1,979,500
20	2.700%	Forsyth 88B due Jan 2018	01/01/88	01/01/18	30	$45,000,000	$45,000,000	($380,198)	($1,013,283)	41.04%	($415,862)	$44,203,940	98.231%	3.899%	$1,754,550
21	2.700%	Gillette 88 due Jan 2018	01/01/88	01/01/18	30	$63,000,000	$41,200,000	($230,135)	($1,006,013)	41.04%	($412,879)	$40,556,987	98.439%	3.887%	$1,601,444
22	2.700%	Sweetwater 95 due Nov 2025 (a)	11/17/95	11/01/25	30	$24,400,000	$24,400,000	($225,000)	($428,469)	67.17%	($287,798)	$23,887,202	97.898%	3.785%	$923,540
23	6.150%	Emery 96 due Sep 2030	09/24/96	09/30/30	34	$12,675,000	$12,675,000	($735,013)	$0	73.72%	$0	$11,939,987	94.201%	6.579%	$833,888
	2.846%	**Total - Unsecured Pollution Control Revenue Bonds**				**$321,575,000**	**$299,775,000**	**($3,610,866)**	**($7,086,097)**			**$293,235,109**		**4.044%**	**$12,123,832**

CASE: UE 170
WITNESS: Michael Dougherty

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 400

Direct Testimony

May 9, 2005

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Michael Dougherty. I am employed by the Public Utility Commission of Oregon as a Senior Financial Analyst in the Economic Research and Financial Analysis section of the Utility Program. My business address is 550 Capitol Street NE, Salem, Oregon 97310-1380.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. My Witness Qualification Statement is found in Exhibit Staff/401, Dougherty/1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to recommend adjustments to both PacifiCorp's pension expenses and benefit expenses.

Q. DID YOU PREPARE AN EXHIBIT FOR THIS DOCKET?

A. Yes. I prepared Exhibit Staff/402 and Exhibit Staff/403.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. My testimony is organized as follows:

ISSUE 1, PENSION EXPENSES ADJUSTMENT

Q. PLEASE SUMMARIZE THIS ADJUSTMENT.

A. The pension expense adjustment consists of four adjustments: FAS 87 Pension expense, FAS 106 Postretirement expense, FAS 112 Postemployment expense, and pension administration expenses. Based on my review, I propose the following total adjustments to PacifiCorp's calendar year 2006 test year pension expenses (Oregon Allocated):

Pension Expenses (O&M – 74.63%)	($4,587,268)
Pension Expenses (Capital - 24.19%)	($1,487,051)

This adjustment is shown in Exhibit Staff/402.

Q. PLEASE EXPLAIN YOUR ADJUSTMENTS TO PENSION EXPENSES.

A. My adjustment to pension, postretirement, and postemployment costs are based upon PacifiCorp's actual calendar year 2004 FAS 87 and FAS 106 costs instead of using PacifiCorp's 2006 calendar test year costs. In addition, I used PacifiCorp's actual calendar year 2004 FAS 112 and pension administration costs and escalated these costs to calendar year 2006 levels using PacifiCorp's DRI Indices.

Q. WILL YOU PLEASE DESCRIBE PACIFICORP'S PENSION PLAN?

A. PacifiCorp sponsors a traditional defined benefit pension plan (Plan). Participants in the Plan receive a monthly income upon retirement that is based on their years of service and their final average earnings. Assets in the Plan are secured in a trust and are guaranteed by the Pension Benefit Guaranty Corporation. PacifiCorp also sponsors a 401(k) plan that is a

defined contribution plan. Adjustments to the defined contribution plan are discussed under Staff's Benefit Adjustments.

Q. IS THE USE OF FAS 87, NET PERIODIC PENSION BENEFIT COSTS, THE BEST MEASURE OF ANNUAL PENSION COSTS?

A. Yes. FAS 87, *Employers' Accounting for Pensions*, establishes standards of financial reporting and accounting for an employer that offers pension benefits to its employees. The Accounting Standards Board issued FAS 87 in an attempt to alleviate long-standing debate on reporting for pension liability. It is a consistent measure that reflects the terms of the underlying pension plan and more accurately approximates the recognition of the cost of an employee's pension over that employee's service period.[1] The net periodic pension benefit cost of FAS 87 is a single net amount that includes various inputs concerning past, present, and future events and transactions. In addition, the Commission has previously used FAS 87 net periodic pension benefit costs in rate making.

It is important to note that although FAS 87 establishes standards of financial accounting and reporting for employer pension plans, it does not direct how a plan is to be funded. PacifiCorp, according to recent SEC Form 10-K reports, has made various contributions to its pension plan including $66.8 million in 2005, $61 million in 2004, $26.4 million in 2003, $4.2 million in 2002. PacifiCorp was not required to make a contribution in 2001.

[1] *Statement of Financial Accounting Standards No. 87, Employers' Accounting for Pensions,* Paragraph 6a.

Q. IF THE FAS 87 NET PERIODIC PENSION BENEFIT COST MORE ACCURATELY APPROXIMATES THE RECOGNITION OF THE COST OF AN EMPLOYEE'S PENSION OVER THAT EMPLOYEE'S SERVICE PERIOD, WHY DID YOU USE ACTUAL CALENDAR YEAR 2004 COSTS INSTEAD OF THE PROJECTED CALENDAR YEAR 2006 TEST YEAR COSTS?

A. I used actual calendar year 2004 cost of $31.5 million for many reasons. First, the 2004 calendar year FAS 87 cost is the most recent full year computation of costs and pursuant to pension rules can be reported as PacifiCorp's fiscal year 2005 FAS 87 costs. Second, the stock market has shown a strong recovery in 2003 and 2004 and interest rates are beginning to rise, which likely would result in less than projected actual costs in 2006 and subsequent years. Finally, the calendar year 2006 costs are based on calculations and estimates (including lower than actual rates of return) that can significantly effect the cost computation of FAS 87 and result in an increased net periodic pension benefit cost.

PacifiCorp's revised calendar year 2006 cost is estimated at $52.9 million and is based on various inputs including the discount rate, estimated rate of return on assets, and rate of increase in compensation levels. Other actuarial estimates include: employee turnover rates, employee mortality rates, employee compensation levels, and employee retirement ages. Because PacifiCorp used a low estimated rate of return on Plan assets (4 percent in 2004 and 8 percent in 2005) in calculating the projected calendar year 2006

FAS 87 cost, I used PacifiCorp's actual calendar year 2004 cost of $31.5 million.

Q. CAN YOU PLEASE DEMONSTRATE HOW FAS 87 COSTS CAN VARY FROM YEAR TO YEAR?

A. The following table highlights the changes in PacifiCorp's FAS 87 net periodic pension benefit costs (income) over the previous ten years. As the table indicates, costs have varied greatly, sometimes changing dramatically from one year to the next year.

Table 1 – Comparison of PacifiCorp's FAS 87 Pension Expenses[2]

Year	Cost (in millions)	Increase (decrease) from previous year	Percent change from previous year
2006 (Estimated)[3]	$52.9	$11.3	27%
2005 (Estimated)	$41.6	$10.1	32%
2004	$31.5	$19.6	165%
2003	$11.9	$18.2	289%
2002	($6.3)	($1.6)	-34%
2001	($4.7)	($30.7)	-118%
2000	$26	$21.8	519%
1999	$4.2	($23.6)	-85%
1998	$27.8	($13.7)	-33%
1997	$41.5	($25)	-38%
1996	$66.5	($13.5)	-17%

During years of strong equity market performance of the late 1990's, PacifiCorp's pension expenses generally decreased. PacifiCorp's Plan even achieved positive income during 2001 and 2002 when the equity markets performed poorly. Because the equity markets are recovering, it is reasonable

[2] The costs were gathered from PacifiCorp's SEC Form 10-K reports and PacifiCorp.
[3] PacifiCorp's UE 170 calendar year 2006 cost was set at $42.2 million; however, during settlement proceeding, PacifiCorp revised this cost to $52.9 million.

to expect costs to stabilize and not increase at 68 percent as projected by PacifiCorp.

Q. PLEASE EXPLAIN THE COMPONENTS OF NET PERIODIC PENSION BENEFIT COSTS.

A. There are six components of net periodic pension benefit costs. These are: Service Cost, Interest Cost, Expected Return on Plan Assets, Amortization of unrecognized net obligation, Amortization of prior service costs, and Amortization of unrecognized gain.

Service Cost is a calculation of the incremental increase in future benefit obligations due to an added year of service for each participant in the PacifiCorp Plan. It is only a calculation and not an actual cost to PacifiCorp. Interest Cost is a calculation for the additional liability established because each participant is one year closer to the benefit payout. Again, this is only a calculation and not an actual cost to PacifiCorp. The Expected Return on Plan Assets is a calculation that is determined by multiplying the market related value of Plan assets by the estimated rate of return. It is important to note that the Expected Return on Plan Assets is only an estimate and not the actual return on Plan assets.

Amortization of unrecognized net obligation, Amortization of prior service costs, and Amortization of unrecognized gain are costs or gains that result from actual pension plan performance that are different from amounts previously assumed, or from a change in an actuarial assumption. In pension accounting, amortization refers to the systematic recognition in net pension

benefit cost over several periods of previously unrecognized amounts.[4] Companies are allowed to amortize asset related gains or losses over a period not to exceed five years. Therefore, a one-time gain or loss is allowed to "smooth" out over five years for determining the accounting value of plan assets.

Q. WHAT IS THE DISCOUNT RATE?

A. The discount rate is the interest rate used for the time value of money. PacifiCorp, through its actuary, calculates its pension obligations by estimating what it will have to pay current and future retirees. Then it discounts this amount back to today's dollars. A lower discount rate will result in an increase of net periodic pension benefit costs, while a higher discount rate will result in a decrease of net periodic pension benefit costs.

Q. WHAT DISCOUNT RATE IS PACIFICORP USING FOR ITS CALENDAR YEARS 2005 AND 2006 ESTIMATIONS?

A. PacifiCorp is using a 6.00 percent discount rate for its 2005 estimate. This rate is higher than the Towers Perrin December 31, 2004, benchmark rate of 5.83 percent,[5] and Idaho Power's 5.75 percent used in UE 167. PacifiCorp's 2005 discount rate is 75 basis points lower than its 2004 discount rate, 150 basis points lower than its 2003 discount rate, and 175 basis points lower than its 2002 discount rate. In its original application, PacifiCorp used

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[4] *Wiley GAAP 2005, Interpretation and Application of Generally Accepted Accounting Principles,* Barry J. Epstein, Ralph Nach, Ervin L. Black, Patrick R. Delaney, page 747.

[5] Towers Perrin, Global Capital Market Update, *Fourth Quarter 2004 Results for Defined Benefit Pension Plans in Selected Countries,* page 6.

6.75 percent for its calendar year 2006 discount rate; however, PacifiCorp revised its 2006 costs to $52.9 million from the original submission of $42.2 million. Staff believes that this increase in estimated costs is probably partially attributed to a lowering of the calendar year 2006 discount rate. In a response to Staff data request #336, PacifiCorp estimated that a 6.25 percent discount rate for calendar year 2006 would increase pension costs from $42.2 million to $48.9 million.

Q. IS PACIFICORP'S 2005 DISCOUNT RATE SIMILAR TO THE DISCOUNT RATES BEING USED BY OTHER COMPANIES?

A. Yes. As mentioned above the Towers Perrin benchmark rate was 5.83 percent. Based on research, Staff is observing discount rates ranging from 5.75 percent to 6.25 percent, so PacifiCorp's discount rate is in line with current market conditions.

Q. SO EVEN THOUGH PACIFICORP'S DISCOUNT RATE IS IN LINE WITH CURRENT MARKET CONDITIONS, THE DISCOUNT RATE CAN HAVE A CONSIDERABLE AFFECT ON A COMPANY'S NET PERIODIC PENSION COSTS?

A. Yes. As an example, PacifiCorp actually had a $6.3 million net periodic pension income in 2002 when it used a 7.75 percent discount rate and a 9.25 percent rate of return on assets. Additionally according to two PacifiCorp data request responses (#22 and #192), a 25 basis point increase in the discount rate would result in a $3.4 million reduction in pension expense. The

change in this variable highlights the effect of actuarial calculations and assumptions in determining net periodic pension benefit costs.

Q. BUT DOESN'T EXTERNAL FACTORS INFLUENCE A COMPANY'S DISCOUNT RATE?

A. Yes. For pension purposes, a company's discount rate should reflect the interest rate of high-quality corporate bonds that have maturities that match the expected payments to retirees.[6] Towers Perrin used Moody's long-term AA-rated corporate bond yield of 5.66 percent in determining their 5.83 percent benchmark discount rate.[7] Although bond yields will vary throughout the year, the discount rate used in the actuarial assumptions will stay constant during the year. So even if bond yields and interest rates increase during 2005 (which they are expected to do), PacifiCorp's pension costs will still be discounted to today's dollars using the selected discount rate of 6.00 percent. As previously mentioned, a lower discount rate will result in higher FAS 87 net periodic pension costs.

Q. WHAT IS THE EXPECTED LONG-TERM RATE OF RETURN ON ASSETS AND HOW IS THIS USED IN DETERMINING NET PERIODIC PENSION COSTS?

A. The expected long-term rate of return on assets is the rate of return that PacifiCorp uses in determining the Expected Return on Plan Assets. The

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[6] Wall Street Journal, *Heard on the Street: Gloom lifting for pension plans,* Cassell Bryan Low, Friday, August 15, 2003.

[7] Towers Perrin, Global Capital Market Update, *Fourth Quarter 2004 Results for Defined Benefit Pension Plans in Selected Countries,* page 6.

expected long-term rate of return is an assumption and may not be the actual rate of return PacifiCorp earns on its Plan assets. For the 2005 and 2006 estimated costs, PacifiCorp used an expected 8.75 percent long-term rate of return on assets. Although PacifiCorp is using an expected 8.75 percent long-term rate of return on assets, PacifiCorp inputted an estimated 4 percent return on market value of assets during 2004 and an estimated 8 percent rate of return on market value of assets during 2005 in its actuarial calculations in determining the calendar year 2006 FAS 87 costs. As previously discussed, a lower return increases net periodic pension costs, while a higher return decreases net periodic pension costs. Any difference between the 8.75 percent expected long-term rate of return on assets and the lower estimated percentages used in actuarial calculations would result in an increase in pension costs.

Q. HOW DOES PACIFICORP'S CALENDAR YEAR 2005 AND 2006 EXPECTED RATE OF RETURN ON PLAN ASSETS COMPARE TO PREVIOUS YEARS?

A. PacifiCorp used an 8.75 percent long-tem rate of return on assets in 2004 and a 9.25 percent long-tem rate of return on assets in 2003, 2002, and 2001. In order to demonstrate the effect of the long-term rate of return on assets, PacifiCorp responded to Staff data request #22 that a 50 basis point increase in expected returns on assets would result in a $3.9 million reduction in pension expense.

Q. HOW DOES PACIFICORP'S EXPECTED RATE OF RETURN FOR 2005 AND 2006 COMPARE TO ITS ACTUAL 2004 AND 2003 RATE OF RETURN?

A. According to PacifiCorp's response to Staff's data request #135, PacifiCorp's actual return on Plan assets was 21.2 percent in 2003 and 10.5 percent in 2004, which is significantly higher than the percentages used in its 2006 projections. Based on recent market performance, one would expect equal if not better returns during calendar years 2005 and 2006.

In its SEC Form 10-K for the period ending March 31, 2004, PacifiCorp stated that it, "employs an investment approach whereby a mix of equities and fixed-income investments is used to maximize long-term return of plan assets for a prudent level of risk."[8] PacifiCorp's investment targets are 55 percent equity securities, 35 percent debt securities, and 10 percent private equity investments. The rates of return PacifiCorp used in computing the projected calendar year 2006 FAS 87 costs do not coincide with PacifiCorp's recent actual long-term rate of return on plan assets. Additionally, the major equity markets had double-digit percentage gains for the year ending December 31, 2004, the second year in a row of above average returns.[9]

Q. HOW WOULD PACIFICORP'S PROJECTED CALENDAR YEAR 2006 FAS 87 COST CHANGE IF THE ACTUARIAL ASSUMPTIONS USED IN

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[8] PacifiCorp's SEC Form 10-K for the period ending March 31, 2004.
[9] Towers Perrin, Global Capital Market Update, *Fourth Quarter 2004 Results for Defined Benefit Pension Plans in Selected Countries.*

THE PROJECTIONS WERE REVISED TO REFLECT ACTUAL AND EXPECTED LONG-TERM RATE OF RETURNS?

A. In Staff's data request #301, PacifiCorp was asked to substitute the actual 2004 rate of return of 10.5 percent and 2005 expected long-term rate of return of 8.75 percent for the actuarial assumptions of 4 percent return on market value of assets during 2004, and 8 percent rate of return on market value of assets during 2005. The substituted numbers had a significant affect on the *"Impact of estimated favorable asset return during CY 2004 and continued recognition of deferred asset losses"* decreasing the pension benefit cost of this input from $9.2 million to $3 million in calendar year 2005; and decreasing the pension benefit cost of this input from $5.2 million to $1.8 million in calendar year 2006. This results in a combined reduction of $9.6 million dollars. When this combined reduction of $9.6 million is subtracted from PacifiCorp's initial projected calendar year 2006 FAS 87 cost of $42.2 million, the result is $32.6 million. The $32.6 million result is similar to the calendar year 2004 FAS 87 cost of $31.5 million. As you can see from this example, PacifiCorp's estimated rate of return on assets is lower than market trends and contributes significantly to PacifiCorp's higher calendar year 2006 FAS 87 estimated costs.

Q. BUT DOESN'T PACIFICORP NEED TO USE A DISCOUNT RATE AND EXPECTED LONG-TERM RATE OF RETURN ON PLAN ASSETS THAT WILL BE REVIEWED AND APPROVED BY ITS INDEPENDENT AUDITOR?

A. Yes, in fact PacifiCorp's independent auditor, Price Waterhouse Coopers recommended that companies use a discount rate that does not exceed 5.75 percent.[10] Additionally, the Securities and Exchange Commission (SEC) frowns on expected long-term rate of return on assets of over 9 percent.[11] However, one needs to keep in mind, that a conservative approach is desired by these organizations to prevent low reporting of pensions on financial statements, while an actual pension plan under funding is occurring.

Q. YOU PREVIOUSLY MENTIONED THE ABILITY OF A COMPANY TO SMOOTH LOSSES OR GAINS OVER A PERIOD OF FIVE YEARS. WOULDN'T THE POOR MARKET PERFORMANCE IN 2001 THROUGH 2003 RESULT IN HIGHER FAS 87 NET PERIODIC PENSION COSTS FOR CALENDAR YEARS 2005 AND 2006?

A. Yes; however, PacifiCorp did not record an Amortization of unrecognized net loss in 2004 and actually recorded Amortizations of unrecognized net gains in 2003 and 2004. Additionally, PacifiCorp's Amortization of unrecognized net obligation has been recorded as a consistent $8.4 million cost for the past three years. Thus any smoothing performed by PacifiCorp should not have enough of an effect to increase FAS 87 net periodic pension benefit costs by the projected 68 percent.

Q. DID YOU INCLUDE ANY OTHER CONSIDERATIONS WHEN SETTING PENSION COSTS AT THE CALENDAR YEAR 2004 LEVEL?

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[10] Price Waterhouse Coopers R&Q Alert Number 05/09.

A. Yes. PacifiCorp in PPL/1100/Rosborough/7 included a $3 million contribution to the PacifiCorp/IBEW 57 Retirement Trust Fund. This Retirement Trust Fund is separate and distinct from the PacifiCorp Plan. Although PacifiCorp has made previous year contributions, and are required per PacifiCorp, to make contributions of 7 percent of eligible pay to the PacifiCorp/IBEW 57 Retirement Trust Fund; PacifiCorp was not required to make a contribution to the fund in 2005 because of favorable investment returns of the fund. Because no contribution was made, Staff did not add this amount to the calendar year 2004 FAS 87 costs.

Q. YOU PREVIOUSLY MENTIONED PACIFICORP'S CONTRIBUTIONS TO THE PLAN. SINCE RECENT PACIFICORP CONTRIBUTIONS ARE ACTUALLY HIGHER THAN THE PROJECTED CALENDAR YEAR 2004 FAS 87 COSTS, SHOULD THE CONTRIBUTIONS BE USED FOR RATE SETTING?

A. No. As previously mentioned, FAS 87, *Employers' Accounting for Pensions*, establishes standards of financial reporting and accounting for an employer that offers pension benefits to its employees. In addition, the Commission has previously used FAS 87 net periodic pension benefit costs in rate making.

PacifiCorp is legally required to contribute enough money into its Plan to cover pension payments when they become due. Recent laws require pension plans to maintain a 90 percent funding level (although there are certain

[11] BusinessWeek, *Pumped-Up Pension Plays?*, October 25, 2004.

exceptions based on previous contributions and projections of Plan funding). PacifiCorp is also required to notify participants if the Plan drops below 90 percent. As a result of these requirements, PacifiCorp's actuary will determine the proper Plan funding and necessary contributions.

It is interesting to note that although contributions have been high in the previous few years, the five-year average of contributions is $31.68 million, extremely close to the calendar year 2004 FAS 87 cost of $31.5 million. Additionally, when examining Table 1, PacifiCorp' five-year average FAS 87 cost was $26.32 million and ten-year FAS 87 average cost was $29.29 million. Both these average costs are lower, but within a range of the calendar year 2004 FAS 87 net periodic pension benefit cost.

Q. IF PACIFICORP IS LIMITED TO THE CALENDAR YEAR 2004 COSTS, WOULD THE ACCRUED BENEFITS OF PARTICIPANTS BE AFFECTED?

A. No. Any reduction of accrued benefits of Plan assets would be a violation of the Exclusive Benefit Rule and the Anti-Assignment and Alienation Rule of the Employee Retirement Income Securities Act (ERISA). The Exclusive Benefit Rule states that the assets of a qualified pension plan must be for the exclusive benefits of its participants and beneficiaries. The Anti-Assignment and Alienation Rule provides that a person's benefit in a qualified plan cannot be assigned to anyone else, except under a qualified domestic relations order where benefits are transferred to a former spouse. These two rules prohibit PacifiCorp from reducing any accrued benefits.

Q, EVEN THOUGH ACCRUED BENEFITS CAN NOT BE REDUCED, COULD PACIFICORP ACTUALLY MAKE CHANGES TO PLAN INVESTMENTS AND/OR BENEFITS?

A. Yes. Many companies and governmental entities are faced with increasing pension costs resulting in plan reductions and curtailments. A recent article cited a study by SEI Investments of pension changes of midsize U. S. firms. In this study, 54 percent of responding firms plan to adjust their investment strategy, 44 percent plan to raise contributions, 22 percent plan to close their defined benefit plan, 16 percent plan to convert to a defined contribution plan, and 15 percent plan to replace their defined benefit plan.[12] A northwest utility, Cascade Natural Gas, amended its defined pension plan on October 1, 2003, and non-bargaining personnel no longer accrue benefits under the plan.[13]

Q. CAN YOU PLEASE SUMMARIZE WHY YOU USED CALENDAR YEAR 2004 FAS 87 COSTS?

A. Yes. I used actual calendar year 2004 cost of $31.5 million for many reasons. First, the 2004 calendar year FAS 87 cost is the most recent full year computation of costs and pursuant to pension rules can be reported as PacifiCorp's fiscal year 2005 FAS 87 costs. Second, the stock market has shown a strong recovery in 2003 and 2004 and interest rates are beginning to rise, which likely would result in less than projected actual costs in 2006 and subsequent years. Finally, the calendar year 2006 costs are based on

calculations and estimates (including lower than actual rates of return) that can significantly effect the cost computation of FAS 87 and result in an increased net periodic pension benefit cost.

Q. WHAT IS THE OREGON-ALLOCATED ADJUSTMENT THAT RESULTED FROM USING CALENDAR YEAR 2004 FAS 87 EXPENSE?

A. The total FAS 87 Oregon-allocated adjustment was $4,034,129.

Q. PLEASE DESCRIBE FAS 106 POSTRETIREMENT EXPENSES.

A. FAS 106 establishes the standard for employers' accounting for other (than pension) postretirement employee benefits (OPEB). It applies to all forms of postretirement benefits, although the most material benefit is usually postretirement health care insurance coverage.[14] PacifiCorp's calendar year 2006 cost was estimated at $26.8 million.

FAS 106 uses the same fundamental structure as FAS 87. Components of net periodic postretirement benefit costs include the same components as the FAS 87 net periodic pension benefit costs. These components are Service Cost, Interest Cost, Expected Return on Plan Assets, Amortization of unrecognized net obligation, Amortization of prior service costs, and Amortization of unrecognized gain.

Q. EARLIER IN YOUR TESTIMONY, YOU STATED THAT YOU USED ACTUAL CALENDAR YEAR 2004 FAS 106 COSTS INSTEAD OF

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[12] CFO: Magazine for Senior Financial Executives, *Looking for a new benchmark – Pension Accounting – alternatives to 30-year Treasury bonds,* July, 2003.
[13] Cascade Natural Gas, SEC Form 10-K for the period ending September 30, 2004.

PROJECTED CALENDAR YEAR 2006 FAS 106 COSTS. WHY DID YOU CHOOSE THE ACTUAL OVER THE PROJECTED COSTS?

A. I used actual calendar year 2004 cost of $21 million for various reasons. First, the 2004 calendar year FAS 106 cost is the most recent full year computation of costs and per accounting rules can be reported as PacifiCorp's fiscal year 2005 FAS 106 costs. Second, the stock market has shown a strong recovery in 2003 and 2004 and interest rates are beginning to rise, which likely would result in less than projected actual costs in 2006 and subsequent years. Finally, the calendar year 2006 costs are based on calculations and estimates (including lower than actual rates of return) that can significantly effect the cost computation of FAS 106 and result in an increased net periodic postretirement benefit cost.

Q. IN CALCULATING FAS 106 COST, DOES PACIFICORP ALSO USE ASSUMPTIONS SUCH AS DISCOUNT RATE AND EXPECTED RATE OF RETURN ON ASSETS?

A. Yes. PacifiCorp used a 6.25 percent discount rate and an 8.75 percent expected long-term rate of return on assets in calendar year 2004. In addition to the discount rate and expected long-term rate of return on assets, PacifiCorp also uses a health care cost trend rate in its actuarial assumption. In 2004, PacifiCorp used a health care cost trend rate of 8.5 percent for retirees under 65 years of age and a health care cost trend rate of

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[14] *Wiley GAAP 2005, Interpretation and Application of Generally Accepted Accounting*

10.5 percent for retirees over 65 years of age.

Q. PREVIOUSLY YOU POINTED OUT HOW CHANGES IN DISCOUNT RATE AND EXPECTED RATE OF RETURNS CAN EFFECT AN ACTUARIAL CALCULATION. IS THIS ALSO TRUE FOR HEALTH CARE TREND RATES?

A. Yes. The health care cost trend rate assumption can have a significant effect on the amounts reported by PacifiCorp. In its 2004 SEC Form 10-K, PacifiCorp demonstrates that a 1 percent increase in this rate will increase FAS 106 service and interest cost components by $2.7 million. A 1 percent decrease would reduce FAS 106 service and interest cost components by $2.3 million.[15] Changes in this variable along with the discount rate and expected rate of return can have profound effects on reported costs for FAS 106.

Q. WHAT RATE OF RETURN DID PACIFICORP USED IN ITS ACTUARIAL CALCULATIONS FOR CALENDAR YEAR 2006 FAS 106 COSTS?

A. In calculating its FAS 106 costs, PacifiCorp used a 4 percent rate of return on market value of assets during 2004, and an 8 percent rate of return on market value assets during 2005.

Q. HOW DO THESE RATES COMPARE TO ACTUAL RATES EARNED BY PACIFICORP IN RECENT YEARS?

Principles, Barry J. Epstein, Ralph Nach, Ervin L. Black, Patrick R. Delaney, page 767.

[15] PacifiCorp's 2004 SEC Form 10-K for the period ending March 31, 2004.

A. These returns are low compared to the expected rate of return of 8.75 percent and recent gains achieved by PacifiCorp. According to PacifiCorp's response to Staff data requests #135 and #236, PacifiCorp's actual asset returns were 22.6 percent in 2003 and 9.7 percent in 2004, which are significantly higher than the percentages used in the 2006 projections. Based on recent market performance, one could expect equal if not better returns during calendar years 2005 and 2006. PacifiCorp's investment targets are 63 percent equity securities, 35 percent debt securities, and 2 percent private equity investments. The rates of return on assets PacifiCorp used in computing the projected calendar year 2006 FAS 106 costs do not coincide with PacifiCorp's recent actual long-term rate of return on plan assets. Additionally, the major equity markets had double-digit percentage gains for the year ending December 31, 2004, the second year in a row of above average returns.[16]

Q. WHAT OTHER ISSUES DID YOU NOTE THAT WOULD AFFECT PROJECTED CALENDAR YEAR 2006 FAS 106 COSTS.

A. The Financial Accounting Standards Board (FASB) issued FASB Position SFAS No. 106-2, *Accounting and Disclosure Requirements Related to the Medicare Prescription Drug, Improvement and Modernization Act of 2003.* According to that issuance, PacifiCorp is required to treat the effects of the Act as an actuarial experience gain. According to PacifiCorp's response to Staff

[16] Towers Perrin, Global Capital Market Update, *Fourth Quarter 2004 Results for Defined Benefit Pension Plans in Selected Countries.*

data request #25, this experience gain would reduce PacifiCorp's calendar year 2006 FAS 106 cost by $4.0 million.

Q. DID PACIFICORP TAKE INTO CONSIDERATION THE AFFECT OF FASB POSITION SFAS NO. 102 IN DEVELOPING ITS PROJECTED CALENDAR YEAR 2006 FAS 106 COSTS?

A. No. PacifiCorp did not initially take in consideration FASB Position SFAS No. 106-2 in its initial projected calendar year FAS 106 cost of $26.8 million. However, in response to Staff data request #25, PacifiCorp presented a revised cost of $27.3 million that would be reduced to $23.3 million as a result of the FASB Position SFAS No. 106-2.

Q. WHEN DISCUSSING PENSIONS, YOU MENTIONED THAT PACIFICORP MADE NUMEROUS CONTRIBUTIONS TO ITS PENSION PLAN OVER THE PAST FEW YEARS. IS THIS ALSO TRUE FOR FAS 106?

A. Yes. According to PacifiCorp's SEC Form 10-K, PacifiCorp contributed $25.3 million and $22.6 million for the years ending March 31, 2004, and March 31, 2003, respectively.[17] PacifiCorp did not make a contribution for the years ending March 31, 2002, and March 31, 2001, and made a $6 million contribution in the year ending March 31, 2000.[18] The past five-year average of FAS 106 contributions ($11 million) is considerably lower than the actual calendar year 2004 FAS 106 cost of $21 million that Staff is recommending as the basis for rate setting.

[17] PacifiCorp's 2004 SEC Form 10-K for the period ending March 31, 2004.

Q. CAN YOU PLEASE SUMMARIZE WHY YOU USED CALENDAR YEAR 2004 FAS 106 COSTS?

Yes. I used actual calendar year 2004 cost of $21 million for many reasons. First, the 2004 calendar year FAS 106 cost is the most recent full year computation of costs and per accounting rules can be reported as PacifiCorp's fiscal year 2005 FAS 106 costs. Second, the stock market has shown a strong recovery in 2003 and 2004 and interest rates are beginning to rise, which likely would result in less than projected actual costs in 2006 and subsequent years. Finally, the calendar year 2006 costs are based on calculations and estimates (including lower than actual rates of return) that can significantly effect the cost computation of FAS 106 and result in an increased net periodic postretirement benefit cost.

Q. WHAT IS THE OREGON-ALLOCATED ADJUSTMENT THAT RESULTED FROM USING CALENDAR YEAR 2004 FAS 106 EXPENSE?

A. The total Oregon-allocated FAS 106 adjustment was $1,707,880.

Q. PLEASE DESCRIBE FAS 112, POSTEMPLOYMENT EXPENSES.

A. FAS 112 is an accounting standard for employers who provide benefits to former or inactive employees after employment but before retirement. These benefits include, but are not limited to, salary continuation, supplemental unemployment benefits, severance benefits, disability-related benefits (including workers compensation), job training and counseling, and

[18] PacifiCorp's 2002 SEC Form 10-K for the period ending March 31, 2002.

continuation of benefits such as health care benefits and life insurance coverage.[19] Postemployment benefits are part of the compensation provided to an employee in exchange of service.

Q. IS THE ACCOUNTING FOR FAS 112 POSTEMPLOYMENT BENEFITS SIMILAR TO THAT OF FAS 87 AND FAS 1O6?

A. No. FAS 112 does not use the same type of actuarial assumptions and calculations that is used in FAS 87 and FAS 106.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO PACIFICORP'S PROJECTED CALENDAR YEAR 2006 FAS 112 COSTS.

A. I used PacifiCorp's actual calendar year 2004 FAS 112 costs and escalated this cost to 2006 levels using the PacifiCorp DRI Indices of 3.5 percent for calendar year 2005 and 2.39 percent for calendar year 2006. This resulted in an adjustment of $325,954 Oregon-allocated. It is reasonable to expect that costs in this category will have general inflationary increases.

Q. PLEASE EXPLAIN YOUR ADJUSTMENT TO PACIFICORP'S PROJECTED CALENDAR YEAR 2006 PENSION ADMINISTRATION COSTS.

A. I used PacifiCorp's restated calendar year 2004 pension administration costs of $958,770 and escalated this cost to 2006 levels using the PacifiCorp DRI Indices of 3.5 percent for calendar year 2005 and 2.39 percent for calendar year 2006. This resulted in an adjustment of $77,460 Oregon-allocated. It is

[19] *Statement of Financial Accounting Standards No. 112, Employers' Accounting for*

reasonable to expect that costs in this category will have general inflationary increases.

Q. BASED ON USING ACTUAL 2004 EXPENSES, WHAT ADJUSTMENT DID YOU MAKE TO PACIFICORP'S TOTAL TEST YEAR PENSION EXPENSES?

A. I adjusted an Oregon-allocated $6,145,422 in total pension-related costs from the test year expenses. The O&M portion of this adjustment is $4,587,268 and the capital portion is $1,487,051.

Postemployment Benefits, Summary paragraph.

ISSUE 2, BENEFIT EXPENSES ADJUSTMENT

Q. PLEASE SUMMARIZE THIS ADJUSTMENT.

A. This adjustment focuses on PacifiCorp's Benefit Expenses. I propose the following rate base adjustment (Oregon Allocated):

Benefit Expenses (O&M – 74.63 percent)	($3,415,846)
Benefit Expenses (Capital – 24.19 percent)	($1,110,848)

This adjustment is shown in Exhibit Staff/403.

Q. PLEASE EXPLAIN YOUR ADJUSTMENTS TO BENEFIT EXPENSES.

A. I started with PacifiCorp's actual calendar year 2004 expenses and escalated the costs to 2006 using the percent increases presented in PacifiCorp testimony, PPL/1100, Rosborough/8. The only exception I made to the PacifiCorp projected increases was that I used an 8 percent annual increase instead of the 12 percent annual increase for medical benefit expenses.

Q. WAS YOUR STARTING POINT OF USING CALENDAR YEAR 2004 ACTUAL COSTS HIGHER THAN PACIFICORP'S STARTING POINT OF USING FISCAL YEAR 2004 COSTS?

A. Yes. I believe it was important to use the most accurate, up-to-date, actual amounts when projecting forward to calendar year 2006. Because I had access to the actual calendar year 2004 amounts, I used these amounts for projecting forward. The actual calendar year 2004 amounts equaled $66 million, which was approximately $7.3 million greater than PacifiCorp's fiscal year 2004 total benefit amount of $58.6 million.

Q. IF YOUR STARTING POINT WAS HIGHER, HOW DID YOU END UP WITH A LOWER PROJECTED CALENDAR YEAR 2006 TOTAL AMOUNT?

A. Basically for two reasons: first, I did not use PacifiCorp's 12 percent annual increase in medical benefits and further adjusted PacifiCorp's medical benefits for employer contributions; and second, many of PacifiCorp's calendar year 2006 benefit expenses resulted from increases, which were greater than the percentage increases specified in the PacifiCorp testimony.

Q. DO YOU KNOW WHY THE PACIFICORP'S ACTUAL INCREASES WERE GREATER THAN WHAT WAS PRESENTED IN TESTIMONY?

A. PacifiCorp in its response to Staff data request #26, stated that the annual 12 percent medical and 5 percent dental and vision increases were intended to reflect the cost trend increases per employee and that they were not intended to reflect the overall cost increase for these benefit expenses. According to PacifiCorp, the overall expense increases also included additional costs for new employees hired by the Company. PacifiCorp also states that if there is an increase in the number of employees, the overall cost increase for benefits would be greater than the stated increase.

Q. DO YOU AGREE WITH PACIFICORP'S ANALYSIS CONCERNING THE OVERALL EXPENSE INCREASE?

A. No. I asked PacifiCorp to provide calendar year 2002 and 2003 benefit costs in addition to the 2004 benefit costs. Although costs for each specific benefit expense varied from year to year, the three largest categories of benefit

expenses (medical, dental, Stock/401(k)/ESOP)[20] actually increased at a lower rate than PacifiCorp's stated increases in PPL/1100, Rosborough/8. As a result, I used the actual PacifiCorp annual percent increases, except for medical, when escalating costs to calendar year 2006.

Q. PLEASE EXPLAIN WHY YOU DID NOT USE PACIFICORP'S PROJECTED ANNUAL INCREASE OF 12 PERCENT FOR MEDICAL BENEFITS.

A. I did not use PacifiCorp's projection for two reasons. First, PacifiCorp's actual medical benefit increases were 9.5 percent from calendar year 2002 to calendar year 2003, and 8.1 percent from calendar year 2003 to calendar year 2004. Second, a recent survey taken by Towers Perrin indicates that health care costs are expected to increase at a rate of 8 percent for calendar year 2005.[21] A different survey conducted by Mercer Human Resource Counseling substantiated the Towers Perrin Survey. The Mercer survey indicated that health benefit costs rose 7.5 percent in 2004.[22] Because of these two surveys and PacifiCorp's actual calendar year 2003 to calendar year 2004 increase of 8.1 percent, I used an 8 percent increase per year to escalate the actual calendar year 2004 medical benefit expense to calendar year 2006.

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[20] These three categories of expenses actually accounted for 92 percent of PacifiCorp's actual calendar year 2004 benefit expenses.

[21] Towers Perrin Monitor, *Employer Health Care Costs Expected to Rise 8% in 2005,* November/December 2004.

[22] Mercer Human Resource Consulting, *US health benefit cost rises 7.5% in 2004, lowest increase in five years*, November 22, 2004.

Q, DID YOU COME ACROSS ANY STUDIES THAT INDICATE INCREASES IN MEDICAL BENEFIT COSTS THAT WERE CLOSE TO PACIFICORP'S 12 PERCENT PROJECTED INCREASE?

A. Yes. A survey conducted by the Kaiser Family Foundation indicated that average health-insurance premiums increased by 11.2 percent in 2004.[23] However, since PacifiCorp's actual costs increased 8.1 percent, I used an 8 percent annual increase for escalating PacifiCorp's medical benefit costs.

Q. DID YOU PERFORM ANY OTHER ADJUSTMENTS TO THE MEDICAL BENEFIT COST IN ADDITION TO THE LOWER PERCENT INCREASE IN HEALTH CARE COSTS?

A. Yes. In addition to using a lower percent increase (8 percent instead of 12 percent), I further reduced PacifiCorp's calendar year 2006 projected medical benefit costs to reflect the current standard of employer contributions for medical plans. The Towers Perrin survey indicates that a greater percent of heath care costs are shifting from the employer to employee, with the employee paying 21 percent of costs and the employer paying 79 percent of health costs.[24] According to a Kaiser Family Foundation Survey, the average employee contribution for health benefits for single and family coverage was 16 percent and 28 percent respectively.[25] PacifiCorp claims in PPL/1100,

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[23] Kaiser Family Foundation, *Employer Health Benefits 2004 Annual Survey*, September 9, 2004.

[24] Towers Perrin Monitor, *Employer Health Care Costs Expected to Rise 8% in 2005,* November/December 2004.

[25] Kaiser Family Foundation, *Employer Health Benefits 2004 Annual Survey*, September 9, 2004.

Rosborough/8, that PacifiCorp will contribute 90 percent of costs for the Company's medical plan in 2005. The two surveys indicate that PacifiCorp is currently contributing 10 percent more towards health care coverage than the recent standard for employer contributions. As a result, I adjusted the escalated calendar year 2006 medical benefit expense ($47,652,421, System) to reflect an 80 percent sharing by employer instead of the current 90 percent sharing. This adjusted amount equals $42,357,708 ($12,472,735, Oregon-allocated).[26] Ratepayers should not have to pay the higher cost of PacifiCorp's medical benefit expense that is above and beyond the current employer standard for medical plan sharing.

Q. DID YOU PERFORM ANY OTHER ADJUSTMENTS OR INCLUDE ANY ADDITIONAL EXPENSES THAT WERE NOT REFLECTED IN PACIFICORP'S CALENDAR YEAR 2004 BENEFIT EXPENSES?

A. Yes. I made two additional adjustments. First, PacifiCorp added $750,000 in the calendar year 2006 Other Salary Overhead Costs for costs associated with outsourcing retirement administration costs, which included a feasibility study. I adjusted this additional amount out because these costs, if they actually occur, would be extraordinary one-time costs. Additionally, any costs associated with outsourcing should require at least a corresponding savings in PacifiCorp's administrative costs. As a result, I used PacifiCorp's actual calendar year 2004 cost (which was considerably lower than PacifiCorp's

[26] $42,237,708 equals ($47,652,421/0.9)*0.8

calendar year 2006 costs) and escalated this cost using the PacifiCorp DRI Indices of 3.5 percent and 2.39 percent. This resulted in an Oregon-allocated adjustment of $626,142.

Second, the calendar year 2004 expenses for Workers' Compensation Levy was low due to accruals that occurred during previous years. As a result, I used PacifiCorp's fiscal year 2005 cost of $1,850,000 and escalated this cost to calendar year 2006 using the PacifiCorp DRI Indices of 3.5 percent and 2.39 percent. This resulted in an Oregon-allocated adjustment of $87,251.

Q. WHAT ADJUSTMENT DID YOU MAKE TO THE PACIFICORP'S TEST YEAR BENEFIT EXPENSES?

A. I adjusted an Oregon-allocated $4,577,041 in benefit costs from the test year expenses. The O&M portion of this adjustment is $3,415,846 and the capital portion is $1,110,848.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

CASE: UE 170
WITNESS: Michael Dougherty

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 401

Witness Qualification Statement

May 9, 2005

WITNESS QUALIFICATION STATEMENT

NAME: MICHAEL DOUGHERTY

EMPLOYER: PUBLIC UTILITY COMMISSION OF OREGON

TITLE: SENIOR FINANCIAL ANALYST, ECONOMIC RESEARCH AND FINANCIAL ANALYSIS

ADDRESS: 550 CAPITOL ST. NE, SALEM, OR 97310-1380

EDUCATION: Master of Science, Transportation Management, Naval Postgraduate School, Monterey CA (1987)

Bachelor of Science, Biology and Physical Anthropology, City College of New York (1980)

EXPERIENCE: Employed with the Oregon Public Utility Commission as Senior Financial Analyst since June 2002. Also serve as Lead Auditor for the Commission's Audit Program. During this time, I performed a five-month job rotation as Deputy Director, Oregon Department of Geology and Mineral Industries.

Employed by the Oregon Employment Department as Manager - Budget, Communications, and Public Affairs from September 2000 to June 2002.

Employed by Sony Disc Manufacturing, Springfield, Oregon, as Manager - Manufacturing, Manager - Quality Assurance, and Supervisor - Mastering and Manufacturing from April 1995 to September 2000.

Retired as a Lieutenant Commander, United States Navy.

CASE: UE 170
WITNESS: Michael Dougherty

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 402

Exhibit in Support of Testimony
Adjustments to Pension Expenses

May 9, 2005

PacifiCorp Pension Adjustments

	PacifiCorp System	Staff System	System Adjustment	PacifiCorp Oregon	Staff Oregon	Oregon Adjustment
Pension Expense (Per PPL Response to DR# 299)	$45,200,000	$31,500,000	$13,700,000	$13,309,682	$9,275,553	$4,034,129
Other Pension Expenses						
Pension Administration (CY 2004 expense escalated to CY 2006)	$1,279,098	$1,016,044	$263,054	$376,646	$299,186	$77,460
Retirement Allowance (CY 2006 expense, PPL Exhibit 801, 4.18, Page 27)	$291,611	$291,611	$0	$85,868	$85,868	$0
FAS 106 Benefit (Per PPL Response to DR #299)	$26,800,000	$21,000,000	$5,800,000	$7,891,582	$6,183,702	$1,707,880
FAS 112 Benefit (Per PPL Response to DR #339)	$6,806,250	$5,699,303	$1,106,947	$2,004,182	$1,678,228	$325,954
Total Pension Expense	**$80,376,959**	**$59,506,958**	**$20,870,001**	**$23,667,960**	**$17,522,538**	**$6,145,422**
OMAG - 74.63%	$59,988,516	$44,410,043	$15,578,473	$17,664,338	$13,077,070	$4,587,268
Capital - 24.19%	$19,444,793	$14,394,733	$5,050,060	$5,725,753	$4,238,702	$1,487,051

CASE: UE 170
WITNESS: Michael Dougherty

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 403

Exhibit in Support of Testimony
Adjustment to Benefit Expenses

May 9, 2005

PacifiCorp Benefit Adjustments

Benefit Type	PacifiCorp CY 2004 System	PacifiCorp CY 2006 System	Staff CY 2006 System	Staff System Adjustment	PacifiCorp CY 2006 Oregon	Staff CY 2006 Oregon	Staff Oregon Adjustment
Medical	$40,854,270	$52,107,000	$42,357,708	$9,749,292	$15,343,531	$12,472,735	$2,870,796
Dental	$2,655,000	$4,026,400	$2,927,138	$1,099,263	$1,185,622	$861,931	$323,691
Vision	$495,466	$665,290	$546,251	$119,039	$195,903	$160,850	$35,052
Life	$293,475	$1,390,000	$314,378	$1,075,622	$409,302	$92,572	$316,730
401K	$17,221,858	$19,219,700	$18,448,485	$771,215	$5,659,471	$5,432,378	$227,094
401K Admin	$1,201,184	$1,274,116	$1,272,938	$1,178	$375,179	$374,832	$347
AD&D	$17,982	$67,604	$19,262	$48,342	$19,907	$5,672	$14,235
LT disability	$1,964,129	$2,361,116	$2,104,025	$257,091	$695,259	$619,555	$75,704
Physical Exam	$925	$0	$0	$0	$0	$0	$0
Workers' Comp Levy	$428,318	$2,256,818	$1,960,513	$296,305	$664,547	$577,296	$87,251
Black Lung	$11,965	$0	$0	$0	$0	$0	$0
Education Assistance	$396,413	$0	$0	$0	$0	$0	$0
Other Salary Overhead	$413,882	$2,565,000	$438,606	$2,126,394	$755,295	$129,153	$626,142
Total	**$65,954,867**	**$85,933,044**	**$70,389,302**	**$15,543,742**	**$25,304,016**	**$20,726,975**	**$4,577,041**
OMAG - 74.63%	$49,222,117	$64,131,831	$52,531,536	$11,600,294	$18,884,387	$15,468,541	$3,415,846
Capital - 24.27%	$16,007,246	$20,855,950	$17,083,484	$3,772,466	$6,141,285	$5,030,437	$1,110,848

CASE: UE 170
WITNESS: Jack P. Breen III

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 500

Direct Testimony

May 9, 2005

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Jack P. Breen III. I am employed by the Public Utility Commission of Oregon (Commission) as Program Manager of Electric Rates and Planning. My business address is 550 Capitol Street NE, Suite 215, Salem, Oregon 97310-1380.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. My Witness Qualification Statement is found in Exhibit Staff/501.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I provide testimony regarding PacifiCorp's treatment of its agreement with Georgia Pacific (GP), staff issue S-13 in this proceeding (UE 170).

Q. DID YOU PREPARE AN EXHIBIT FOR THIS DOCKET?

A. Yes. I prepared Exhibit Staff/501, consisting of 1 page.

ISSUE S-13, GP POWER COST ADJUSTMENT

Q. PLEASE DESCRIBE THE AGREEMENT.

A. PacifiCorp and James River Paper Company, Inc. (Georgia Pacific later acquired the Camas mill) executed a Camas Development, Construction, Operation, and Steam Supply Agreement (agreement) dated January 13, 1993. Under the twenty-year agreement, PacifiCorp built a high efficiency steam turbine generation unit at the Camas mill (generator), and PacifiCorp is recovering its capital investment in the facility over the twenty-year operational term. The agreement contemplates the payment of royalties from PacifiCorp to GP based on provisions in the agreement.

Q. HOW ARE THE ROYALTIES CALCULATED?

A. The agreement, for each year from 1996 to 2015, lists the amount that PacifiCorp will pay GP ($/MWh) for the energy produced by the generator (energy payment). For 2006, the agreement specifies the amount as $56.82 per MWh. According to PacifiCorp's filing, the generator is expected to produce 219,851 MWhs in the 2006 test period, for a total estimated energy payment of approximately $12.5 million. However, the agreement specifies that the energy payment is offset by capital cost recovery, maintenance cost recovery, and a retail rate provision.

The agreement specifies a capital recovery allowance that is determined each year by multiplying the capital recovery factor for that year by the actual capital cost to construct the generator. The agreement also specifies a major maintenance allowance for each year of the contract that is unaffected by

actual maintenance expense. The total 2006 amount for the capital recovery and maintenance allowance is $7,324,891. These amounts reduce (offset) the energy payment amount from PacifiCorp to GP.

In addition, there is a retail rate provision that affects the royalty calculation. The retail rate provision was intended to protect Georgia Pacific from unexpected fluctuations in the retail rates it pays under Schedule 48[1]. If actual rates under Schedule 48 are higher or lower than specified bounds, then the royalty payments are increased or decreased to compensate. Currently, the Schedule 48 retail rate is less than the price floor set in the contract and GP owes PacifiCorp the difference. This further reduces PacifiCorp's payment to GP.

The net royalty payment[2] cannot be negative in any year, but PacifiCorp's unrecovered costs can be carried over to subsequent years with interest. Because the generator is being operated at relatively low levels, PacifiCorp is not making royalty payments to GP and the unrecovered balance is increasing.

Q. DOES A TRUE-UP OCCUR FOR THESE UNRECOVERED COSTS AT THE END OF THE CONTRACT?

A. No.

Q. HOW DID PACIFICORP TREAT THE CONTRACT IN THE RATE CASE?

[1] Designated Schedule 48T in the agreement.
[2] The energy payment offset by the capital recovery and maintenance allowances and then modified by the retail rate provision.

A. The generation facility is in rate base. The gross plant in service amount is approximately $50 million. PacifiCorp's actual maintenance expenses are included in operation and maintenance accounts. PacifiCorp included a purchased power expense of $12,491,881 in the net variable power cost study of the filing. This amount is based on the energy payment portion of the agreement. PacifiCorp did not include the effect of the capital recovery offset, the maintenance offset, or the retail rate provision, in the rate case results of operations.

Q. ARE YOU PROPOSING AN ADJUSTMENT IN THIS CASE?

A. Yes. PacifiCorp did not include the capital recovery or maintenance offsets in setting the test year results of operations. This means that customers are responsible for the full energy payment of $12.5 million and paying for the ratebased generator with no offsets. In essence, customers are paying twice for the same energy.

Q. DID YOU CALCULATE YOUR ADJUSTMENT BASED ON THE 2006 CAPITAL RECOVERY AND MAINTENANCE OFFSETS?

A. Yes. The company should reduce net variable power costs by $7,324,891 on a system basis to reflect the 2006 offsets.

Q. ARE THE CAPITAL RECOVERY AND MAINTENANCE OFFSETS SUBJECT TO FLUCTUATION IN 2006?

A. No. The parameters are clearly defined by the actual cost of the generator and the agreement provisions.

Q. ARE YOU RECOMMENDING THAT THE COMMISSION CONSIDER THE EFFECT OF THE RETAIL RATE PROVISION IN YOUR ADJUSTMENT?

A. No. In the public meeting memo considered by the Commission at the August 31, 1993, meeting, the Staff Report indicated that PacifiCorp would bear the cost (or benefit) of the retail rate provision. In this case, PacifiCorp is benefiting from the retail rate provision. Since staff initially assigned that benefit to PacifiCorp, not ratepayers, I believe it is not appropriate to use that benefit to offset the royalty amounts for purposes of determining the test year results of operations.

Q. PLEASE REITERATE YOUR RECOMMENDATION.

A. I recommend that the Commission reduce net variable power costs in the amount of $7,324,891 on a system basis to reflect the treatment of the capital recovery and maintenance amounts as offsets to the revenue requirement.

Q. DOES PACIFICORP ACKNOWLEDGE IN RESPONSE TO DATA REQUEST 433 THAT IT IS APPROPRIATE TO MAKE AN ADJUSTMENT FOR THE GP CONTRACT?

A. Yes.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

CASE: UE 170
WITNESS: Jack P. Breen III

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 501

Witness Qualifications Statement

May 9, 2005

WITNESS QUALIFICATIONS STATEMENT

NAME: JACK P. BREEN III

EMPLOYER: PUBLIC UTILITY COMMISSION OF OREGON

TITLE: PROGRAM MANAGER, ELECTRIC RATES AND PLANNING

ADDRESS: 550 CAPITOL ST. NE, SUITE 215, SALEM, OR 97310-1380

EDUCATION: Master of Business Administration from California State University, Sacramento (1984).

Bachelor of Arts degree, major in Communication Studies, from California State University, Sacramento (1981).

EXPERIENCE: Employed with the Oregon Public Utility Commission as Program Manager, Electric Rates and Planning since March 1999, as a Senior Telecommunications Analyst from July 1992 to February 1999, and as an Affiliated Interest Analyst from April 1990 to June 1992.

Held increasingly responsible accounting, financial analysis and budgeting positions at Pacific Bell, a California telecommunications provider, between 1984 and 1990.

Employed by ADM Associates, Inc. (an engineering and economics research consultant) and the California Energy Commission in energy-related research and analysis between 1981 and 1984.

CASE: UE 170
WITNESS: Maury Galbraith

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 600

Direct Testimony

May 9, 2005

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is Maury Galbraith. The Public Utility Commission of Oregon (OPUC) employs me as a Senior Economist. My business address is 550 Capitol Street NE Suite 215, Salem, Oregon 97301-2551.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. My Witness Qualification Statement is found in Exhibit Staff/601.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to present staff's policy position on PacifiCorp's proposed Transition Adjustment mechanism.

Q. WHAT IS A TRANSITION ADJUSTMENT MECHANISM?

A. The Commission must ensure that the provision of direct access does not cause unwarranted shifting of costs to other retail electricity consumers and may determine that full or partial recovery of the costs, or full or partial pass-through of the benefits, is in the public interest (ORS 757.607). The purpose of the Transition Adjustment is two-fold: (1) to accurately measure the direction and magnitude of any cost shift (i.e., the impact of direct access); and (2) to indicate the level of transition charges or transition credits that might reasonably balance the interests of retail electricity consumers and utility investors. In Docket UM 1081, staff recommended that alternative Transition Adjustment mechanisms be evaluated on how accurately they measure the

impacts of direct access on PacifiCorp's operations. *See* Docket UM 1081, Staff/100 Galbraith/3.

Q. PLEASE SUMMARIZE PACIFICORP'S PROPOSED TRANSITION ADJUSTMENT MECHANISM.

A. PacifiCorp's proposed Transition Adjustment mechanism has the following attributes:

1. PacifiCorp would calculate monthly on-peak and off-peak transition adjustments for each eligible customer schedule. *See* PacifiCorp Response to Staff Data Request No. 185 at Staff/602 Galbraith/1-2.

2. PacifiCorp would use its GRID Net Power Cost model to determine the monthly transition adjustments. PacifiCorp would compare a base GRID run with full expected loads to: (1) an on-peak direct access GRID run with reduced on-peak load; and (2) an off-peak direct access GRID run with reduced off-peak load, for each eligible customer schedule. A comparison of the differences between the base GRID run and the two direct access GRID runs would allow PacifiCorp to estimate the dollar value of the impact of direct access participation on total system operations.

3. PacifiCorp would calculate the on-peak and off-peak load reductions for the direct access GRID runs using an hourly load shape for each eligible customer schedule for the test period. *See* PacifiCorp Response to Staff Data Request No. 185 at Staff/602 Galbraith/1-2. For the 2006 Transition Adjustment, PacifiCorp proposes to model a 25 MW load reduction for

each eligible customer schedule. *See* PPL/700 Omohundro/3-4. PacifiCorp would not use a short-term resource opt-out similar to Portland General Electric's.

4. PacifiCorp would calculate the monthly on-peak and off-peak transition adjustments for each eligible customer schedule as the weighted value of direct access participation minus the cost of service energy rate, plus a credit for avoided distribution system losses. *See* PPL/700 Omohundro/5-6.

5. PacifiCorp proposes a true-up of its transition adjustments based on a post-enrollment window GRID run. The true-up would capture variations in the transition adjustments due to deviations in forward market prices during the enrollment window, deviations from the assumed level of direct access participation, and variation due to any executed energy transactions resulting from a significant load departure. PacifiCorp proposes to limit the true-up deferral to positive or negative amounts in excess of $250,000. *See* PPL/700 Omohundro/13.

6. PacifiCorp would calculate the daily Standard Offer rate using actual daily market prices at the Mid-Columbia, California-Oregon Border, and Desert Southwest market hubs and the same market price weightings derived from the direct access GRID runs. *See* PacifiCorp Response to Staff Data Request No. 4 at Staff/602 Galbraith/3-4.

7. PacifiCorp proposes to update the net variable power cost component of cost-of-service rates, and the state allocation factors, each year to

maintain consistency with the Transition Adjustment. This is similar to Portland General Electric's approach in the annual Resource Valuation Mechanism. *See* PPL/700 Omohundro/10-11.

8. PacifiCorp proposes to include the variable power cost impacts of new capital additions in the Transition Adjustment, as long as: (1) the plant is providing utility service (*See* ORS 757.355), and (2) the matching fixed costs of the plant have been or will be included in the Company's rate base prior to the effective date of the rates derived from the annual Transition Adjustment. *See* PPL/700 Omohundro/12.

9. PacifiCorp would make its annual Transition Adjustment filing in April of each year. In November of each year, following a Commission Order, the company would make the final GRID runs to establish the final transition credits or charges for the open enrollment window, and to set the net variable power cost component of revenue requirements for the following calendar year.

Q. DOES THE PARTIAL STIPULATION BETWEEN PACIFICORP, STAFF, THE CITIZENS' UTILITY BOARD, THE INDUSTRIAL CUSTOMERS OF NORTHWEST UTILITIES, AND FRED MEYER STORES IMPACT THE PROPOSED TRANSITION ADJUSTMENT?

A. Yes. Paragraph 5(n) of the Partial Stipulation would increase the GRID model wholesale market liquidity caps for the Mid-Columbia and California-Oregon Border market hubs during graveyard hours for the purpose of calculating the transition adjustments.

Q. HAS STAFF CONDUCTED DISCOVERY ON PACIFICORP'S PROPOSED TRANSITION ADJUSTMENT MECHANISM?

A. Yes.

Q. DOES STAFF SUPPORT THE USE OF PACIFICORP'S PROPOSED TRANSITION ADJUSTMENT MECHANISM?

A. Yes. PacifiCorp's proposed Transition Adjustment provides an accurate accounting of the likely impacts of direct access on PacifiCorp's system operations and can be expected to result in transition adjustment rates that reasonably balance the interests of retail electricity consumers and utility investors.

Q. WILL STAFF RESPOND IF OTHER PARTIES OPPOSE PACIFICORP'S PROPOSED TRANSITION ADJUSTMENT, OR RECOMMEND MODIFICATIONS TO PACIFICORP'S PROPOSED TRANSITION ADJUSTMENT, IN THIS PROCEEDING?

A. Yes. Staff will comment on any opposition or proposed modification to PacifiCorp's Transition Adjustment in its surrebuttal testimony.

Q. WILL STAFF FILE TESTIMONY ADDRESSING PACIFICORP'S 2006 TRANSITION ADJUSTMENT LATER IN THIS DOCKET?

A. Yes. On February 7, 2005, PacifiCorp filed supplemental direct testimony and exhibits related to the company's 2006 Transition Adjustment. On March 15, 2005, PacifiCorp filed additional supplemental testimony related to the 2006 Transition Adjustment. These filings proposed specific updates to the company's base GRID run for the 2006 Transition Adjustment, but did not

propose any modification to the company's Transition Adjustment methodology. Staff will address the company's proposed GRID updates in subsequent testimony.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

CASE: UE 170
WITNESS: Maury Galbraith

PUBLIC UTILITY COMMISSION
OF
OREGON

STAFF EXHIBIT 601

Witness Qualifications Statement

May 9, 2005

WITNESS QUALIFICATION STATEMENT

NAME: Maury Galbraith

EMPLOYER: Public Utility Commission of Oregon

TITLE: Senior Economist, Energy Division

ADDRESS: 550 Capitol Street NE Suite 215
Salem, Oregon 97301-2551

EDUCATION: Graduate Student in Environmental Studies Program (1995 – 1997)
University of Montana
Missoula, Montana

Master of Arts in Economics (1992)
Washington State University
Pullman, Washington

Bachelor of Science in Economics (1989)
University of Oregon
Eugene, Oregon

EXPERIENCE: The Public Utility Commission of Oregon has employed me since April 2000. My primary responsibility is to provide expert analysis of issues related to power supply in the regulation of electric utility rates.

From April 1998 through March 2000 I was a Research Specialist with the State of Washington Office of the Administrator for the Courts in Olympia, Washington.

From April 1993 through August 1995 I was a Safety Economist with the Pacific Institute for Research and Evaluation in Bethesda, Maryland.

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CERTIFICATE OF SERVICE

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I certify that I have this day served the foregoing document upon all parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid, or by electronic mail pursuant to OAR 860-13-0070, to all parties or attorneys of parties.

Dated at Salem, Oregon, this 9th day of May, 2005.

/s/ Judy Ogilvie

_____

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