Confidential per WAC 480-07-160
Exhibit No.___(ALK-5C)
Docket UE-13____
Witness: Andrea L. Kelly

BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, vs. PACIFICORP dba Pacific Power & Light Company Respondent.	)	Docket UE-13____

PACIFICORP

REDACTED EXHIBIT OF ANDREA L. KELLY

Present Value Revenue Requirement Analysis

January 2013

Overview of Analytical Approach

As part of its decision to enter into the Klamath Hydroelectric Settlement Agreement (KHSA), the Company undertook a series of present value of revenue requirement (PVRR) analyses to compare the economics of the KHSA to potential alternate outcomes. This type of analysis has been used by the Company in all of its major relicensing proceedings over the past several years.

[redacted]

Description of Alternatives

A description of the assumptions for each alternative and the cost categories considered is as follows:

Relicensing – FERC Alternative:

As shown on page 5 of this Confidential Exhibit, the starting point for this alternative is the "Staff Alternative with Mandatory Terms and Conditions" contained in the FERC Final Environmental Impact Statement (FEIS). The costs of the measures that were included in the FERC FEIS were escalated to current dollars since the costs contained in the FEIS were expressed in 2006 dollars. However, there are also costs in this analysis that were not included in the FERC FEIS related to water quality certification requirements that may be imposed by the states of Oregon and California as part of the 401 water quality certification process, which is ongoing. The categories of costs include:

- Aquatics
- Terrestrial Wildlife
- Recreation
- Land Use
- Cultural
- Water Quality/Quantity

- Decommissioning costs related to the East side and West side Facilities
- Generation Impacts

These costs were an input to the net present value of revenue requirement model on a year-by-year basis, either as capital or operating and maintenance expenses (O&M). Note the column "In Service Date" which shows the start year of the cost and column "End Date" which shows the end year of the cost.

In addition, the value of the lost generation in megawatt-hours (MWh) was calculated based on the forward price curve, including on-peak and off-peak prices. Under the FERC relicensing alternative approximately 40 percent of the generation at JC Boyle is lost due to increased bypass flow requirements to benefit aquatic species.

This analysis assumed that the FERC would issue a license in 2014, based on a judgment as to the length of the remaining processes to obtain 401 water quality certifications from the states of California and Oregon and subsequent process for the FERC to issue a new license.

Final Settlement Alternative

This alternative outlines the financial impacts of the KHSA. The categories of costs are shown on page 6 of this Confidential Exhibit and include:

- Process
- Flow Release/Measurement
- Water Quality
- Habitat Enhancement
- Hatcheries
- Land Use
- Cultural
- Restoration and Study Funding
- Decommissioning costs related to the East Side and West Side Facilities
- Customer Surcharge
- Generation Impacts

The first eight categories of costs are related to the Interim Measures as contained in Exhibits B, C and D to the KHSA, provided as Exhibit No.___(ALK-4). These costs were an input to the net present value revenue requirement model on a year-by-year basis, either as capital or O&M. The customer surcharge and value of lost generation were also included in the calculation.

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[redacted]

In all other aspects, the approach to the analysis is the same as the FERC alternative.

[redacted]

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[redacted]

Alternative 1	Alternative 2	Variance
Relicense FERC Alternative	Final Settlement Alternative	Alternative 1 Minus Alternative 2
Klamath-2009M44R-RF-FA1	Klamath-2009M44R-FS-FA2	

Customer Benefit Analysis:

Revenue Requirement

44-Year Present Value of Revenue Requirement-In Millions of Dollars

Cost of Operations:
Less: Ongoing Operations-
Current Investment Cost with Process Costs
Operations Capital
Operations O&M
Total Cost of Operations
Less: Cost of Settlement
Implementation Capital
Implementation O&M
Decommission Cost
Customer Surcharge
Lost Generation
Total Cost of Relicensing
Total Cost of Operations with Settlement

Levelized Annual Cost

Cost of Operations:
Less: Ongoing Operations -
Current Investment Cost with Process Costs
Operations Capital
Operations O&M
Total Cost of Operations
Less: Cost of Settlement
Implementation Capital
Implementation O&M
Decommission Cost
Customer Surcharge
Lost Generation
Total Cost of Settlement
Total Cost of Operations with Settlement

[redacted]

Key Assumptions:

1 Official Base Price Curve Date (Mid-C) with 45 CO2 Cost Adder
2 Analysis Period in Years
3 License Start Date (L1)
4 Discount Rate
5 Inflation Rate
6 Decommission Date-Iron Gate, Copco 1, Copco 2 and Fall Creek
7 Decommission Date-JC Boyle
8 Decommission Date-Eastside and Westside
9 Net Book Value at 12-31-2008 (In Thds of Dollars)
10 Relicensing Costs at 12-31-2008 (In Thds of Dollars)

Scenario FERC FEIS Relicensing
February 1, 2010

Category	Development	#	Proposed Measure / Facility	Source	Loaded Project Capital Cost (20%)	Annual O&M Cost	In Service Date (License Year)	End Date (License Year)	Total O&M Costs
Aquatics	Iron Gate	1	Iron Gate Upstream Fishway	a	[redacted]				
		2	Iron Gate Downstream Fishway	a					
		3	Iron Gate Spillway Improvement	a					
		4	100% Iron Gate Hatchery Funding	b					
		5	25% Iron Gate Hatchery Chinook Marking	b					
	Fall Creek	6	Fall Creek Upstream Fishway	a					
		7	Fall Creek Downstream Fishway	a					
		8	Fall Creek Tailrace Barrier	a					
		9	Rearing Pond Rehabilitation and Operations	b					
	Spring Creek	10	Spring Creek Upstream Fishway	a					
		11	Spring Creek Downstream Fishway	a					
	Copco No. 2	12	Copco 2 Upstream Fishway*	a					
		13	Copco 2 Downstream Fishway	a					
		14	Copco 2 Spillway Improvement	a					
		15	Copco 2 Tailrace Barrier	a					
		16	Copco 2 Bypass Channel Barrier / Impediment Modification	a					
	Copco No. 1	17	Copco 1 Upstream Fishway*	a					
		18	Copco 1 Downstream Fishway	a					
		19	Copco 1 Spillway Improvement	a					
	J.C. Boyle	20	J.C. Boyle Upstream Fishway	a					
		21	J.C. Boyle Downstream Fishway	a					
		22	J.C. Boyle Spillway Improvement	a					
		23	J.C. Boyle Tailrace Barrier	a					
		24	J.C. Boyle Synchronous Bypass Valve	c					
		25	J.C. Boyle Bypass Channel Slope Restoration / Impediment Modification	b					
	Entire Project	26	Eliminate Shovel & Negro Creek Screened Diversions	b					
		27	Fish Passage Resource & Disease Management Plan and Data Collection	d					
		28	Sediment and Gravel Resource Management Plan	b					
Terrestrial Wildlife	Entire Project	29	Terrestrial Resources Measures	b					
		30	Threatenend and Endangered Species - Bald Eagle Management Plan	b					
Recreation	Entire Project	31	Recreation Enhancements and Management	b					
Land Use	Entire Project	32	Land Use - Visual Abatement Painting & Vegetation	b					
Cultural	Entire Project	33	Cultural Resources Mapping and Mitigation Measures	b					
Water Quality / Quantity	J.C. Boyle	34	J.C. Boyle Reservoir Aeration System	d					
	Copco	35	Copco Reservoir - Epilimnetic Aeration / Mixing	d					
		35	Temperature Control Device - Copco Reservoir	e					
	Iron Gate	35	Iron Gate Reservoir - Epilimnetic Aeration / Mixing	d					
		36	Temperature Control Device - Iron Gate Reservoir	e					
		37	Iron Gate Turbine Venting	d					
	Entire Project	38	Water Quality Resource Management Plan	d					
		39	Temperature Control Feasibility Plan	d					
		40	Microcystis Monitoring in Project Reservoirs and Downstream of Iron Gate Dam	b					
		41	Water Quantity and Flow Measurement	b					
Decommissioning	East Side / West Side	42	Decommission East Side and West Side Facilities	d					

Category	Development	#	Proposed Measure / Facility	Source	Annual Generation Impact from Baseline (MWh)	In Service Date (License Year)	End Date (License Year)
Generation Impacts	J.C. Boyle	43	470 cfs/40% Bypass Flow, 2500 cfs Water Right, 2"/hr Ramp Rate	d	[redacted]		
	Copco No. 2	44	Release 70 cfs at Copco No. 2 bypass (60 cfs more than current)	d			
	Fall Creek	45	Release 5 cfs into Fall Creek bypass (4 5 cfs more than current)	d			

Scenario Final Klamath Hydroelectric Settlement Agreement
February 1, 2010

Category	Development	#	KHSA IM#	Proposed Measure / Facility	Source	Loaded Project Capital Cost	Annual O&M Cost	In Service Date (License Year)	End Date (License Year)	Total O&M Costs
Process Costs	**Entire Project**	1	1	Implementation and Management Costs	a	[redacted]				
Flow Release / Measurement	**J.C. Boyle**	2	9	J.C. Boyle Powerhouse Gage[1]	a					
		3	12	J.C. Boyle Bypass Reach and Spencer Creek Gaging	a					
	Iron Gate	4	5	Iron Gate Flow Variability	a					
Water Quality	**Iron Gate**	5	3	Iron Gate Turbine Venting	a					
	Entire Project	6	15	Water Quality Monitoring	b					
		7	11	Interim Water Quality Improvements	b					
		8	10	Water Quality Conference	b					
Habitat Enhancement	**J.C. Boyle**	9	7	J.C. Boyle Gravel Placement and/or Habitat Enhancement	b					
		10	8	J.C. Boyle Bypass Barrier Removal	a					
	Copco	11	16	Water Diversions	b					
Hatcheries	**Iron Gate**	12	4	Hatchery and Genetics Management Plan	a					
		13	18	Hatchery Funding[2]	b					
		14	19a	Hatchery Production Continuity - Iron Gate Hatchery Study	a					
		15	19b	Hatchery Production Continuity - Alternative Development	a					
		16	20	Hatchery Funding After Removal of Iron Gate Dam	a / b					
Lands	**J.C. Boyle**	17	21.A	BLM Road Maintenance	b					
		18	21.B	BLM Weed Management	b					
Cultural		19	21.C	BLM Cultural Resource Management	b					
Lands		20	21 D	BLM Road Management Plan	b					
Restoration & Study Funding	**California**	21	2	California Klamath Restoration Fund / Coho Enhancement Fund	b					
	Entire Project	22	6	Fish Disease Relationship and Control Studies	b					
Decommissioning	**East Side / West Side**	23		Decommission East Side and West Side Facilities	a					
Customer Surcharge	**Entire Project**	24		$17.200 million per year customer surcharge (2010 - 2019)						

Category	Development	#	KHSA IM#	Proposed Measure / Facility	Source	Baseline Generation (MWh)	Annual Generation Impact from Baseline (MWh)	In Service Date (License Year)	End Date (License Year)
Generation Impacts	**J.C. Boyle**	25	13	IM 13: Flow Releases and Ramp Rates (existing 100 cfs in bypass)		[redacted]			
	J.C. Boyle	26	14	IM 14: 3,000 cfs Power Generation[3]					
	East Side	27		East Side Decommissioning					
	West Side	28		West Side Decommissioning					
	J.C. Boyle	29		J.C. Boyle Decommissioning					
	Copco No. 1	30		Copco 1 Decommissioning					
	Copco No. 2	31		Copco 2 Decommissioning					
	Fall Creek	32	17	IM 17: Fall Creek Flow Releases - Release 5 cfs into Fall Creek Bypass					
	Iron Gate	33		Iron Gate Decommissioning					