

April 12, 2006

**VIA ELECTRONIC FILING**

Oregon Public Utilities Commission  
550 Capitol Street NE, Suite 215  
Salem, OR 97301-2551

Attn: Vikie Bailey-Goggins Administrator  
Regulatory and Technical Support

Re: **Case No. UM-1050**  
**PacifiCorp's Petition to Initiate Investigation of Inter-Jurisdictional Issues**  
**Addendum 1 to PacifiCorp's Load Growth Report – Compliance Filing**

PacifiCorp submits for filing an original and seven (7) copies of Addendum 1 to PacifiCorp's Load Growth Report which was previously filed as a compliance filing with the Commission on October 20, 2005. Addendum 1 provides detailed discussion of two cost shift structural protection mechanisms.

At the request of the MSP Standing Committee, the MSP Load Growth Workgroup continued to meet to further develop two of the structural protection mechanisms overviewed in Section 5.4.1 Page 21 (ECD Alternative 1) and Section 5.4.2 Page 21 (ECD Alternative 2) of PacifiCorp's Load Growth Report. These activities are intended to fulfill Section XIII.B.5 of the Revised Protocol that directs the MSP Standing Committee to develop:

*...one or more mechanisms that could be implemented in a timely manner in the event that load growth studies show a material and sustained harm to particular States from the implementation of the IRP....*

Addendum 1 is filed with the Commission as an informational filing only. For each mechanism, Addendum 1 contains the mechanism description, process, implementation and examples. The filing of this addendum is not intended to portray any definitive agreement among the MSP participants as to a chosen structural protection mechanism, nor suggest that a structural protection is required to be implemented at this time. As concluded in PacifiCorp's Load Growth Report, it is recommended that these structural protection mechanisms (or an alternative ECD-based approach) be re-evaluated if and when future analysis shows there may be inappropriate cost shifts due to load growth.

It is respectfully requested that all formal correspondence and staff requests regarding this matter be addressed to:

By E-mail (preferred): [datarequest@pacificorp.com](mailto:datarequest@pacificorp.com)

By Fax: (503) 813 6060

By Regular Mail: Data Request Response Center  
PacifiCorp  
825 NE Multnomah, Suite 300  
Portland, OR 97232

Informal inquiries may also be directed to Greg Duvall (503 813 7069) or Cathie Allen (503 813 6019).

Very truly yours,



Andrea Kelly  
Vice-President, Regulation

Enclosures

cc: Service List UM-1050

CERTIFICATE OF SERVICE

I hereby certify that on this 12th day of April, 2006 I caused to be served, via U.S. Mail, a true and correct copy of the Addendum 1 to PacifiCorp's Load Growth Report.

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Regulatory Analyst



# **Multi-State Process**

## **Addendum 1 to PacifiCorp's Load Growth Report**

**April 11, 2006**

**MSP Load Growth Workgroup  
ECD Alternative 1 and ECD Alternative 2**

**Embedded Cost Differential Alternatives Matrix**

**April 11, 2006**

<b>Author</b>	<b>ECD Alternative 1</b>	<b>ECD Alternative 2</b>
<b>Proposal</b>	Implementation of an Embedded Cost Differential Structural Protection Mechanism.	Implementation of an Embedded Cost Differential Structural Protection Mechanism.
<b>Study Period</b>	10-Year Forecasted.	Use data up to seven years, with the latest date reflecting the end date of the time period over which rates would be in effect pursuant to a general rate filing, and going back in time up to six years, but in no event earlier than January 1, 2005.
<b>Study</b>	Load Growth Study defined by Revised Protocol (page 7 footnote 2). Requires comparative GRID and RFM runs. Average load growth study defers or removes IRP planned resources to maintain IRP planning margin.	Load Growth Study defined by Revised Protocol (page 7 footnote 2). Requires comparative GRID and RFM runs. Average load growth study defers or removes IRP planned resources to maintain IRP planning margin.
<b>Frequency of Study Updates</b>	Annually through 2008 then biennial (in concert with the IRP) when the MSP Standing Committee requests.	Annually through 2008 then biennial (in concert with the IRP) when the MSP Standing Committee requests.
<b>Trigger(s)</b>	<u>Qualitative Trigger</u> - Fast Growing State Pays 85% - 115% on a NPV basis, no material harm and no action required. Trigger occurs: <ul style="list-style-type: none"> <li>▪ Below 80% in any one study</li> <li>▪ Below 85% for two consecutive ten year studies</li> <li>▪ Below 90% for three consecutive ten year studies</li> <li>▪ Above 115% for two consecutive ten year studies</li> <li>▪ Above 110% for three consecutive ten year studies</li> <li>▪ Above 120% in any one study</li> </ul>	<u>Qualitative Trigger</u> - Fast Growing State Pays 85% - 115% on a NPV basis, no material harm and no action required. Trigger occurs: <ul style="list-style-type: none"> <li>▪ Below 80% in any one study</li> <li>▪ Below 85% for two consecutive studies</li> <li>▪ Below 90% for three consecutive studies</li> <li>▪ Above 115% for two consecutive studies</li> <li>▪ Above 110% for three consecutive studies</li> <li>▪ Above 120% in any one study</li> </ul>

<p><b>Implementation</b></p>	<p><b>Ongoing:</b></p> <ol style="list-style-type: none"> <li>1) Track key factors and provide to MSP Standing Committee for review at annual meeting.</li> <li>2) Conduct load growth study if MSP Standing Committee expects changes in key factors indicate potential for over or under allocation of costs.</li> </ol> <p><b>Upon trigger:</b></p> <ol style="list-style-type: none"> <li>1) Conduct further analysis where Utah load increases by 100 aMW matched by the addition of a 150 MW resource (Coal, Gas, and Market Purchases). If analysis identifies a potentially problematic resource, the resource is "earmarked" for further study when it enters rate base in a rate case.</li> <li>2) When the "earmarked" resource is in a rate case, update the load growth studies based on current load and market forecasts and determine if resource remains a problem.</li> <li>3) Results reported to MSP Standing Committee.</li> </ol> <p>MSP Standing Committee decides one of three actions:</p> <ol style="list-style-type: none"> <li>1) Do nothing.</li> <li>2) Recommend PacifiCorp, in each of its subsequent general rate case filings, include structural protection mechanism.</li> <li>3) Consider recommending changes to the Revised Protocol.</li> </ol>	<p>Implement in the state coincident with effective date of new rates as a result of the state's general rate case. (This is not implemented at the same time in every state, but according to PacifiCorp state-by-state general rate filings and state-by-state determinations).</p>
<p><b>Resource Cost Adjustment</b></p>	<p>New resource ECD - Newly constructed cost of owned resources included in rates.</p>	<p>Newly constructed cost of owned resources included in rates ranked from highest cost (first) to lowest cost (last) per aMW.</p> <p>Transfer payment is determined by starting with highest cost company acquired resource during study period, up through the year that new rates would be in effect. Resources acquired and online no later than January 1, 2005, are exempt.</p> <p>Exclude hydro-electric resources given Revised Protocol ECD treatment.</p>

<p><b>Allocation Factors</b></p>	<p>New resource costs built and in operation in excess of the all other resource cost.</p> <p>Projected loads two years beyond the test period during 1<sup>st</sup> year of new resource addition, and projected loads one year beyond test period during second year.</p> <p>Inverse SG for factor for test period.</p>	<p>Objective to create transfer payments so that 90% or 110% cost recovery, as applicable, of load growth on a NPV basis would be assigned to highest growth state over T study period. Start with assigning highest cost new resources (over last six years historical) and continue, as necessary, until transfer payment threshold is met.</p> <p>Approach similar to QF existing methodology in ECD.</p> <p>Inverse SG factor.</p>
<p><b>Duration</b></p>	<p>Temporary - Two years.</p>	<p>ECD continues until the trigger is triggered again.</p>

**MSP Load Growth Workgroup  
ECD Alternative 1**

**Process, Proposal, and Illustrative Example**

**April 11, 2006**

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# **ATTACHMENT 1**

## **MSP Load Growth Workgroup ECD Alternative 1**

### **Proposed Process and Implementation**

**April 11, 2006**

The following outlines the process to be followed for potential implementation of the structural protection mechanism referred to as ECD Alternative 1. It should be noted that nothing in this proposed process is intended to circumvent the authority and decision-making ability of each State Commission. Any amendment to the Revised Protocol would require the approval of each State Commission that previously ratified the Revised Protocol. It should also be noted that the Utah Commission MSP Order requires the Company to file with the Commission regarding the materiality of possible harm to other states from a fast growing jurisdiction before taking a position before the MSP Standing Committee.

This document should be reviewed in conjunction with the documents entitled “Embedded Cost Differential Alternatives Matrix” (the “Matrix”) and “Description of ECD Alternative 1” which is included in this packet as Attachment 2. For additional background materials, also refer to the MSP Load Growth Workgroup meeting materials (this workgroup met from March 2005 to February 2006). ECD Alternative 1, and its associated documents attached herewith, is based on what is known at the time of developing the mechanism and compiling the associated documents. It is recommended that this proposal be re-evaluated if and when future analysis shows there may be inappropriate cost shifts due to load growth and a structural protection mechanism is considered for implementation.

#### **PROCESS**

1. The MSP Standing Committee will track the key factors outlined in Section 4 of the MSP Load Growth Report dated October 20, 2005.
2. The MSP Standing Committee will evaluate whether changes in key factors indicate the potential for over or under allocation of costs. Based on their evaluation, the MSP Standing Committee decides whether to direct further study.
3. Based on direction from the MSP Standing Committee, the Company will perform and analyze the “Study” as defined in the Revised Protocol (page 7 footnote 2) and also stated in the Matrix. The study period includes ten years forecasted data that covers the same time period as the Company’s most recent IRP.

4. The Utah Commission MSP Order requires the Company to file with the Commission regarding the materiality of possible harm to other states from a fast growing jurisdiction before taking a position before the MSP Standing Committee. If the Company makes such a filing in Utah, a copy of the filing will be provided to the MSP participants.
5. The results of the study will be provided to the MSP Standing Committee, and they will analyze the results against the triggers as defined in the Matrix and listed below. If the fastest growing State is paying between 85% - 115% (on an NPV basis) in any ten-year study, it has been agreed that there is no material harm and no action is required. A trigger occurs if any of the following conditions apply:-
  - The fastest growing State is paying **below 80%** in any ten year study (on an NPV basis)
  - The fastest growing State is paying **below 85%** for two consecutive ten year studies (on an NPV basis)
  - The fastest growing State is paying **below 90%** for three consecutive ten year studies (on an NPV basis)
  - The fastest growing State is paying **above 110%** for three consecutive ten year studies (on an NPV basis)
  - The fastest growing State is paying **above 115%** for two consecutive ten year studies (on an NPV basis)
  - The fastest growing State is paying **above 120%** in any ten year study (on an NPV basis)
6. If a trigger has not been reached, no further action is necessary.
7. If a trigger is reached, the Company will conduct further analysis, similar to the earlier MSP Load Growth Workgroup studies in which the fastest growing State's load was increased by 100 aMW while retaining its load shape and matched by 150 MW of resource (note: for the MSP studies carried out to-date, Utah has been the fastest growing State). These studies are designed to isolate the effect of the divergence in incremental and embedded cost from the effect of a load and resource imbalance. If, through these additional study processes, a thermal resource (for instance) is identified as potentially problematic (i.e., is causing the under or over allocation of costs based upon an agreed to threshold), that resource will be earmarked for further analysis to be performed as that resource enters a rate case for inclusion into rate base.

8. As the costs of the earmarked resource (or the costs of a resource similar to the earmarked resource) appear in a rate case, the load growth analysis will be updated with current load-growth statistics and market conditions. The results of all the associated studies are provided to the MSP Standing Committee.
9. Based upon the results, the MSP Standing Committee may decide on one of the following three actions (or other actions that are deemed appropriate and within the scope of the MSP Standing Committee, and as established in Section XIII B of the Revised Protocol and the MSP Standing Committee Guidelines):-
  - Do nothing,
  - If the earmarked resource continues to reach the established triggers, recommend that a “New Resource ECD” for the earmarked resource should be applied for two years. The “New Resource ECD” will apply only to those resources that reach the triggers and will be applied symmetrically for over allocation as well as under allocation,
  - Recommend potential changes to the Revised Protocol that are considered to address a material and/or sustained harm on a more permanent basis (see Item 10 below).
10. It should be noted that changes such as a New Resource ECD and/or potential changes to the Revised Protocol can only be implemented upon the approval of each State Commission that previously adopted the Revised Protocol. Refer to Section XIII C of the Revised Protocol for further clarification.

## **IMPLEMENTATION**

The implementation of ECD Alternative 1 using a “New Resource ECD” requires the following steps to be performed:-

1. Create a “New Resource ECD” category.
2. Compare the cost of the new “earmarked” resource (\$/MWh) to the cost of the “Annual Embedded Cost – All Other”. The difference represents the embedded cost differential associated with the new “earmarked” resource.
3. The newly constructed “earmarked” resource is included in the ECD for two years.
4. A separate calculation is applied for each new “earmarked” resource.
5. In the first year, the ECD is allocated using the SG factor with projected loads two years beyond the test year.

6. In the second year, the ECD is allocated using an SG factor calculated with projected loads one year beyond the test year.
7. The inverse amount of the ECD is backed out from the states using the test year SG factor.

## ATTACHMENT 2

### MSP Load Growth Workgroup ECD Alternative 1

#### Description of ECD Alternative 1

April 11, 2006

#### OVERVIEW

ECD Alternative 1 is based on the temporary assignment of new resources to the fastest growing State. This alternative proposes that the MSP Standing Committee track key factors that have been identified as early identifiers of potential inappropriate costs shifts due to a faster growing State. A list of the Key Tracking Factors can be found in PacifiCorp's Load Growth Report dated October 20, 2005, (Section 4). The MSP Standing Committee will review these factors each year and determine whether changes indicate the potential for under or over allocation of costs due to load growth. If changes in key factors do indicate the potential for under or over allocation of the costs of load growth, the MSP Standing Committee will decide whether further study is required. Should the MSP Standing Committee request further study, the Company will perform the two load growth studies as defined in the Revised Protocol (page 7 footnote 2) and restated in PacifiCorp's Load Growth Report dated October 20, 2005 (Section 3).

- Study 1 -includes the current IRP load forecast and preferred resource portfolio.
- Study 2 - modifies the forecasted load growth so that the fastest growing State is growing at the average growth projected for the other States. In addition, the IRP Preferred Portfolio is adjusted by removing planned resources, as needed, in order to maintain a consistent planning margin.

The two studies cover a ten-year forecasted period, consistent with the Company's most recent IRP. The results of the two studies are compared to determine the incremental costs due to load growth and each State's share of the incremental costs. If the fastest growing State is paying between 85% - 115% (on an NPV basis) in any ten-year study, it has been agreed that there is no material harm and no action is required.

A trigger occurs if any of the following conditions apply:-

- The fastest growing State is paying **below 80%** in any ten year study (on an NPV basis)
- The fastest growing State is paying **below 85%** for two consecutive ten year studies (on an NPV basis)
- The fastest growing State is paying **below 90%** for three consecutive ten year studies (on an NPV basis)

- The fastest growing State is paying **above 110%** for three consecutive ten year studies (on an NPV basis)
- The fastest growing State is paying **above 115%** for two consecutive ten year studies (on an NPV basis)
- The fastest growing State is paying **above 120%** in any ten year study (on an NPV basis)

If a trigger is reached, the Company will conduct further analysis, similar to the earlier MSP Load Growth Workgroup studies in which the fastest growing State's load was increased by 100 aMW while retaining its load shape and matched by 150 MW of resource (note: for the MSP studies carried out to-date, Utah has been the fastest growing State). These studies are designed to isolate the effect of the divergence in incremental and embedded cost from the effect of a load and resource imbalance. If, through these additional study processes, a thermal resource is identified as potentially problematic (i.e., is causing the under or over allocation of costs based upon an agreed to threshold), that resource will be earmarked for further analysis to be performed as that resource enters a rate case for inclusion into rate base.

As the costs of an earmarked resource (or the costs of a resource similar to the earmarked resource) appear in a rate case, the load-growth analysis for the resource will be updated with current load-growth statistics and market conditions. If the updated study results continue to meet the established triggers, a New Resource ECD calculation will be created and applied for two years. The New Resource ECD will apply only to those thermal resources that exceed agreed upon thresholds and will be applied symmetrically for over allocation as well as under allocation.

The hypothetical examples below may help illustrate when the trigger occurs:

**Example #1**  
**No Triggers Reached**  
**No New Resource ECD Required**

	1 <sup>st</sup> 10-Yr Study	2 <sup>nd</sup> 10-Yr Study	3 <sup>rd</sup> 10-Yr Study	4 <sup>th</sup> 10-Yr Study	5 <sup>th</sup> 10-yr Study	6 <sup>th</sup> 10-Yr Study
<b>10-Yr NPV</b>	84%	90%	83%	95%	102%	95%
<b>Trigger Status</b>	Not Triggered	Not Triggered	Not Triggered	Not Triggered	Not Triggered	Not Triggered
<b>New Resource ECD Required?</b>	No	No	No	No	No	No

**Example #2**  
**Triggers Reached in Consecutive Studies and Solitary Study**  
**New Resource ECD Required**

	1 <sup>st</sup> 10-Yr Study	2 <sup>nd</sup> 10-Yr Study	3 <sup>rd</sup> 10-Yr Study	4 <sup>th</sup> 10-Yr Study	5 <sup>th</sup> 10-yr Study	6 <sup>th</sup> 10-Yr Study
<b>Illustrative Years*</b>	2010	2011	2012	2013	2014	2015
<b>10-Yr NPV</b>	84%	83%	91%	95%	77%	95%
<b>Trigger Status</b>	Not Triggered	Triggered	Not Triggered	Not Triggered	Triggered	Not Triggered
<b>Earmark Study Required</b>	No	Yes	No	No	Yes	No
<b>Identify Problem Thermal Resource</b>		Yes – Unit expected to be in rates in 2013			Yes – Unit expected to be in rates in 2015	
<b>Update Earmark Study</b>				Yes – in 2013 when resource in rates		Yes – in 2015 when resource in rates
<b>Problem Resource Confirmed</b>				Yes		No – studies show resource is no longer causing cost shifts
<b>New Resource ECD Required</b>				Yes – first year	Yes – second year	No
<b>Explanation</b>		Two consecutive 10-Yr Studies < 85%			One 10-Yr study < 80%	

\*This is for illustrative purposes only to illustrate the lag from when a resource is earmarked until it enters into rates. This is not meant to imply that studies will be performed annually.

## **NEW RESOURCE ECD**

The New Resource ECD operates very much like the Hydro, Mid-C and Existing QF ECD calculations in the current Revised Protocol. In the New Resource ECD calculation, a New Resource category would be created. This category would contain the costs of each newly constructed owned and “earmarked” resource for a period of two years. As with other ECD adjustments, the amount by which the costs of the “earmarked” resource differs from the costs of the “Annual Embedded Cost – All Other” would be allocated to States using a forward looking SG factor calculated with projected loads from a future period. Projected loads two years beyond the test period would be used during the first year of the ECD assignment and one year beyond the test period during the second year. The inverse amount would then be allocated back to States using the SG factor from the test period. There may be times when there are both first and second year “earmarked” resources in the New Resource category. Because a different allocation factor is applied during the first and second years that a resource is included in the New Resource ECD, a separate calculation would be made for each resource.

The costs of all resources continue to be allocated on system load based allocation factors. As one State grows faster than the other States, that State is allocated a larger portion of the cost of all resources. The faster growing State will already be allocated an increased share, a share that reflects differential load growth, of the average embedded cost of the portfolio. The New Resource ECD only needs to provide a supplemental allocation of the amount by which the “earmarked” resource costs differs from average embedded costs.

The Company’s studies on the impact of differential load growth show that the largest potential for cost shifts occur during the first two years after a new resource comes on line. This is driven by front revenue requirement loading of owned resources. The impact of front end loading is mostly offset by the third year as the allocation of all generation, transmission and common overhead costs to the faster growing State has increased enough to absorb the incremental costs difference.

## **SUMMARY NEW RESOURCE EMBEDDED COST DIFFERENTIAL ADJUSTMENT**

- Create New Resource ECD category.
- Compare costs of new “earmarked” resource (\$/MWh) to cost of “Annual Embedded Cost – All Other” (\$/MWh). The difference represents the embedded cost differential associated with the new “earmarked” resource.
- Newly constructed “earmarked” resources are included in the ECD for two years.
- A separate calculation is applied for each new “earmarked” resource.
- In the first year, the ECD is allocated using the SG factor calculated with projected loads two years beyond the test year.



- In the second year, the ECD is allocated using the SG factor calculated with projected loads one year beyond the test year.
- The inverse amount of the ECD is backed out from the States using the test year SG factor.

**ATTACHMENT 3a**  
**Illustrative Example of ECD Alternative 1**  
**Calculation of Embedded Cost Differential for New Resources Year 1**  
 Note: This is for illustrative purposes only

**Company Owned Hydro - West**

Account	Description	Amount	Mwh	\$/Mwh	Differential
535 - 545	Hydro Operation & Maintenance Expense	24,214,763			
403HP	Hydro Depreciation Expense	10,871,160			
404IP	Hydro Relicensing Amortization	1,407,944			
	<b>Total West Hydro Operating Expense</b>	<b>36,493,867</b>			
330 - 336	Hydro Electric Plant in Service	497,671,662			
302	Hydro Relicensing	68,319,123			
108HP	Hydro Accumulated Depreciation Reserve	(236,617,706)			
1111P	Hydro Relicensing Accumulated Reserve	(12,096,428)			
154	Materials and Supplies	(26,015)			
	<b>West Hydro Net Rate Base</b>	<b>317,247,634</b>			
	Pre-tax Return	11.56%			
	<b>Rate Base Revenue Requirement</b>	<b>36,687,266</b>			
	Forecasted Hydro Relicensing Revenue Requirement	45,676,257			
	<b>Annual Embedded Cost</b>	<b>118,857,410</b>	3,927,412	30.26	(39,438,342)
	<b>West Hydro-Electric Resources</b>				

**Mid C Contracts**

Account	Description	Amount	Mwh	\$/Mwh	Differential
555	Annual Mid-C Contracts Costs	27,301,672	1,505,385	18.14	(33,373,424)
	Grant Reasonable Portion	(9,910,349)			(9,910,349)
	<b>Total Mid-C Applied to MC Factor</b>	<b>17,391,324</b>			<b>(43,283,773)</b>

**Qualified Facilities**

Account	Description	Amount	Mwh	\$/Mwh	Differential
555	Utah Annual Qualified Facilities Costs	26,796,106	386,951	69.25	11,201,914
555	Oregon Annual Qualified Facilities Costs	39,339,692	254,466	154.60	29,083,349
555	Idaho Annual Qualified Facilities Costs	4,648,983	85,750	54.21	1,192,395
555	WY All Annual Qualified Facilities Costs	-	-	-	-
555	WYP Annual Qualified Facilities Costs	585,506	12,048	48.60	99,907
555	California Annual Qualified Facilities Costs	3,945,004	33,794	116.74	2,582,923
555	Washington Annual Qualified Facilities Costs	2,002,849	14,013	142.93	1,438,050
	<b>Total Qualified Facilities Costs</b>	<b>77,320,140</b>	<b>787,032</b>	<b>98.24</b>	<b>45,598,538</b>

**New Resources Year 1**

Account	Description	Amount	Amount Year 1	Mwh	\$/Mwh	\$/Mwh Diff	Differential
	Operating Expenses		75,552,563				
	Pre-Tax Return on Rate Base		43,173,149				
	<b>Total New Resource</b>		<b>118,725,712</b>	<b>1,604,508</b>	<b>74.00</b>	<b>34.55</b>	<b>56,439,142</b>

**New Resources Year 2**

Account	Description	Amount	Amount Year 2	Mwh	\$/Mwh	\$/Mwh Diff	Differential
	Operating Expenses		0				
	Pre-Tax Return on Rate Base		0				
	<b>Total New Resource</b>		<b>0</b>		<b>0</b>		

**All Other Generation Resources**  
 (Excl. West Hydro, Mid C, and QF)

Account	Description	Amount	Mwh	\$/Mwh
500 - 514	Steam Operation & Maintenance Expense	1,151,606,750		
535 - 545	East Hydro Operation & Maintenance Expense	10,822,902		
546 - 554	Other Generation Operation & Maintenance Expense	39,521,072		
555	Other Purchased Power Contracts	666,716,832		
4118	SO2 Emission Allowances	(585,037)		
403SP	Steam Depreciation Expense	205,329,012		
403HP	East Hydro Depreciation Expense	2,886,505		
403OP	Other Generation Depreciation Expense	6,914,946		
403MP	Mining Depreciation Expense	0		
404IP	East Hydro Relicensing Amortization	368,379		
406	Amortization of Plant Acquisition Costs	5,479,353		
	<b>Total All Other Operating Expenses</b>	<b>2,088,062,114</b>		
	Less: New Resource Year 1		2,088,062,114	
	Less: New Resource Year 2		75,552,563	
	<b>Adjusted All Other Operating Expenses</b>		<b>2,012,509,552</b>	
310 - 316	Steam Electric Plant in Service	6,318,821,343		
330 - 336	East Hydro Electric Plant in Service	123,355,829		
302	East Hydro Relicensing	11,003,643		
340 - 346	Other Electric Plant in Service	223,596,304		
399	Mining	416,989,968		
108SP	Steam Accumulated Depreciation Reserve	(3,117,944,271)		
108OP	Other Generation Accumulated Depreciation Reserve	(79,559,910)		
108MP	Other Accumulated Depreciation Reserve	(209,538,607)		
108HP	East Hydro Accumulated Depreciation Reserve	(54,090,474)		
1111P	East Hydro Relicensing Accumulated Reserve	(2,851,607)		
114	Electric Plant Acquisition Adjustment	157,193,780		
115	Accumulated Provision Acquisition Adjustment	(97,850,325)		
151	Fuel Stock	53,528,562		
253.16 - 253.19	Joint Owner WC Deposit	(2,801,000)		
253.99	SO2 Emission Allowances			
154	Materials & Supplies	94,937,189		
154	East Hydro Materials & Supplies			
	<b>Total Net Rate Base</b>	<b>3,834,799,424</b>		
	Pre-tax Return	11.56%		
	<b>Rate Base Revenue Requirement</b>	<b>443,464,225</b>	443,464,225	
	Less: New Resource Yr 1 Rate Base Rev Req		43,173,149	
	Less: New Resource Yr 2 Rate Base Rev Req		0	
	<b>Adjusted Rate Base All Other Rev Req</b>		<b>400,291,076</b>	
	Forecasted VOM Revenue Requirement	(21,233,514)		
	Forecasted CAICQ2 Revenue Requirement	91,804,990		
	<b>Annual Embedded Cost All Other Generation Resources</b>	<b>2,602,087,008</b>	<b>2,485,372,094</b>	<b>64,559,602</b>
	Less: MWh for New Resources Year 1			<b>1,604,508</b>
	Less: MWh for New Resources Year 2			
	<b>Adjusted MWh</b>			<b>62,955,094</b>
				<b>39.45</b>

**Total Annual Embedded Costs**

ATTACHMENT 3b  
 Illustrative Example of ECD Alternative 1  
 Calculation of Embedded Cost Differential for New Resources Year 2  
 Note: This is for illustrative purposes only

Company Owned Hydro - West

Account	Description	Amount	Mwh	\$/Mwh	Differential
535 - 545	Hydro Operation & Maintenance Expense	24,598,955			
403HP	Hydro Depreciation Expense	11,480,279			
404IP	Hydro Relicensing Amortization	1,407,944			
	<b>Total West Hydro Operating Expense</b>	<b>37,487,178</b>			
330 - 336	Hydro Electric Plant in Service	511,810,508			
302	Hydro Relicensing	68,319,123			
108HP	Hydro Accumulated Depreciation Reserve	(248,077,984)			
111IP	Hydro Relicensing Accumulated Reserve	(13,504,372)			
154	Materials and Supplies	(29,016)			
	<b>West Hydro Net Rate Base</b>	<b>318,518,257</b>			
	Pre-tax Return	11.56%			
	<b>Rate Base Revenue Requirement</b>	<b>36,834,204</b>			
	Forecasted Hydro Relicensing Revenue Requirement	56,555,836			
	<b>Annual Embedded Cost</b>	<b>130,857,218</b>			
	<b>West Hydro-Electric Resources</b>		<b>3,903,376</b>	<b>33.52</b>	<b>(31,884,592)</b>

Mid C Contracts

Account	Description	Amount	Mwh	\$/Mwh	Differential
555	Annual Mid-C Contracts Costs	20,978,970	1,162,417	18.05	(27,485,189)
	Grant Reimbursable Portion	(14,317,626)			(14,317,626)
	<b>Total Mid-C Applied to MC Factor</b>	<b>6,661,344</b>			<b>(41,802,824)</b>

Qualified Facilities

Account	Description	Amount	Mwh	\$/Mwh	Differential
555	Utah Annual Qualified Facilities Costs	27,001,344	366,951	69.78	10,868,264
555	Oregon Annual Qualified Facilities Costs	39,225,193	246,486	159.14	28,948,556
555	Idaho Annual Qualified Facilities Costs	4,646,983	85,760	54.21	1,073,427
555	WV All Annual Qualified Facilities Costs	-	-	-	-
555	WYP Annual Qualified Facilities Costs	581,458	12,048	48.26	79,145
555	California Annual Qualified Facilities Costs	4,041,289	33,794	119.59	2,632,327
555	Washington Annual Qualified Facilities Costs	2,054,502	14,013	146.61	1,470,264
	<b>Total Qualified Facilities Costs</b>	<b>77,552,769</b>	<b>779,052</b>	<b>99.55</b>	<b>45,072,083</b>

New Resources Year 1

Account	Description	Amount	Year 1	Mwh	\$/Mwh	\$/MWh Diff	Differential
	Operating Expenses			0			
	Pre-Tax Return on Rate Base			0			
	<b>Total New Resource</b>			<b>0</b>			

New Resources Year 2

Account	Description	Amount	Year 2	Mwh	\$/Mwh	\$/MWh Diff	Differential
	Operating Expenses		80,270,233				
	Pre-Tax Return on Rate Base		41,997,038				
	<b>Total New Resource</b>		<b>122,267,271</b>	<b>1,738,226</b>	<b>70.34</b>	<b>29.43</b>	<b>51,156,512</b>

All Other Generation Resources  
 (Excl. West Hydro, Mid C, and QF)

Account	Description	Amount	Mwh	\$/Mwh
503 - 514	Steam Operation & Maintenance Expense	1,184,730,222		
535 - 545	East Hydro Operation & Maintenance Expense	10,993,345		
546 - 554	Other Generation Operation & Maintenance Expense	37,077,944		
555	Other Purchased Power Contracts	708,888,101		
411B	SO2 Emission Allowances	(585,037)		
403SP	Steam Depreciation Expense	218,064,278		
403HP	East Hydro Depreciation Expense	3,022,913		
403OP	Other Generation Depreciation Expense	6,938,792		
403MP	Mining Depreciation Expense	0		
404IP	East Hydro Relicensing Amortization	368,379		
406	Amortization of Plant Acquisition Costs	5,479,353		
	<b>Total All Other Operating Expenses</b>	<b>2,174,778,291</b>	<b>2,174,778,291</b>	
	Less: New Resource Year 1		0	
	Less: New Resource Year 2		80,270,233	
	<b>Adjusted All Other Operating Expenses</b>	<b>2,094,508,058</b>		
310 - 316	Steam Electric Plant in Service	6,496,746,803		
330 - 336	East Hydro Electric Plant in Service	126,620,019		
302	East Hydro Relicensing	11,003,643		
340 - 346	Other Electric Plant in Service	224,120,922		
399	Mining	425,598,457		
108SP	Steam Accumulated Depreciation Reserve	(3,336,008,549)		
108OP	Other Generation Accumulated Depreciation Reserve	(86,498,702)		
108MP	Other Accumulated Depreciation Reserve	(235,159,977)		
108HP	East Hydro Accumulated Depreciation Reserve	(57,113,387)		
111IP	East Hydro Relicensing Accumulated Reserve	(3,219,986)		
114	Electric Plant Acquisition Adjustment	157,193,780		
115	Accumulated Provision Acquisition Adjustment	(103,355,280)		
151	Fuel Stock	53,528,562		
253.16 - 253.19	Joint Owner WC Deposit	(2,801,000)		
253.99	SO2 Emission Allowances			
154	Materials & Supplies	94,937,189		
154	East Hydro Materials & Supplies			
	<b>Total Net Rate Base</b>	<b>3,765,692,492</b>		
	Pre-tax Return	11.56%		
	<b>Rate Base Revenue Requirement</b>	<b>435,462,012</b>		
	Less: New Resource Yr 1 Rate Base Rev Req		435,462,012	
	Less: New Resource Yr 2 Rate Base Rev Req		41,997,038	
	<b>Adjusted Rate Base All Other Rev Req</b>	<b>393,464,974</b>		
	Forecasted VOM Revenue Requirement	(35,793,494)		
	Forecasted CAI/CO2 Revenue Requirement	150,826,392		
	<b>Annual Embedded Cost All Other Generation Resources</b>	<b>2,726,273,201</b>	<b>2,603,006,330</b>	<b>65,365,901</b>
	Less: MWh for New Resources Year 1		0	
	Less: MWh for New Resources Year 2		1,738,226	
	<b>Adjusted MWh</b>		<b>63,627,676</b>	<b>48.91</b>

Total Annual Embedded Costs

**ATTACHMENT 3c**  
**Illustrative Example of ECD Alternative 1**  
**Allocation of Embedded Cost Differential for New Resources**  
 Note: This is for illustrative purposes only

Year 1 ECD Adjustment									
Allocate Year 1 ECD	SG-Year 3	California	Oregon	Washington	Wyoming	Utah	Idaho		
		950,869	14,321,956	4,425,975	6,491,420	26,308,402	2,934,519		
Back out the inverse of the ECD	SG-Year 1	(966,188)	(14,767,204)	(4,476,756)	(6,744,029)	(25,485,048)	(2,993,917)		
Total Net ECD Adjustment		(15,319)	(445,248)	(50,782)	(252,608)	823,354	(59,398)		
Year 2 ECD Adjustment									
Allocate Year 2 ECD	SG-Year 3	California	Oregon	Washington	Wyoming	Utah	Idaho		
		877,510	13,217,027	4,084,514	5,990,612	24,278,727	2,708,123		
Back out the inverse of the ECD	SG-Year 2	(885,451)	(13,479,581)	(4,118,276)	(6,034,322)	(23,910,775)	(2,728,108)		
Total Net ECD Adjustment		(7,941)	(262,554)	(33,762)	(43,711)	367,952	(19,985)		

SG Factor	Year 1	Year 2	Year 3	Year 4					
Total	California	Oregon	Washington	Wyoming	Utah	Idaho			
100.0000%	1.7430%	26.6397%	8.0760%	12.1661%	45.9744%	5.4010%			
100.0000%	1.7309%	26.3497%	8.0503%	11.7958%	46.7404%	5.3329%			
100.0000%	1.7153%	25.8365%	7.9843%	11.7104%	47.4597%	5.2938%			
100.0000%	1.6926%	25.6280%	7.9145%	11.6832%	47.9111%	5.1706%			

**MSP Load Growth Workgroup  
ECD Alternative 2**

**Process, Proposal, and Illustrative Example**

**April 11, 2006**

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## **ATTACHMENT 1**

### **MSP Load Growth Workgroup ECD Alternative 2**

#### **Proposed Process and Implementation**

**April 11, 2006**

The following outlines the process to be followed for potential implementation of ECD Alternative 2. It should be noted that nothing in this proposed process is intended to circumvent the authority and decision-making ability of each State Commission. Any amendments to the Revised Protocol would require the approval of each State Commission that previously ratified the Revised Protocol. It should also be noted that the Utah Commission MSP Order requires the Company to file with the Commission regarding the materiality of possible harm to other states from a fast growing jurisdiction before taking a position before the MSP Standing Committee.

This document should be reviewed in conjunction with the documents entitled “Embedded Cost Differential Alternatives Matrix” (the “Matrix”) and “Description of ECD Alternative 2” which is included in this packet as Attachment 2. For additional background materials, also refer to the MSP Load Growth Workgroup meeting materials (this workgroup met from March 2005 to February 2006). ECD Alternative 2, and its associated documents attached herewith, is based on what is known at the time of developing the mechanism and compiling the associated documents. It is recommended that this proposal be re-evaluated if and when future analysis shows there may be inappropriate cost shifts due to load growth and a structural protection mechanism is considered for implementation.

#### **PROCESS**

1. The MSP Standing Committee will track the key factors outlined in Section 4 of the MSP Load Growth Report dated October 20, 2005.
2. The MSP Standing Committee will evaluate whether changes in key factors indicate the potential for over or under allocation of power-related costs to any of PacifiCorp’s State jurisdictions. Based on their evaluation, the MSP Standing Committee will decide whether to direct further study.
3. Based on direction from the MSP Standing Committee, the Company will perform and analyze the “Study” as defined in the Revised Protocol (page 7 footnote 2) and also stated in the Matrix. The study period includes up to six years historical data and one year forecasted data, but in no event will the study go back further than January 1, 2005.
4. The Utah Commission MSP Order requires the Company to file with the Commission regarding the materiality of possible harm to other states from a fast growing jurisdiction before taking a position before the MSP Standing Committee. If the Company makes such a filing in Utah, a copy of the filing will be provided to the MSP participants.

5. The results of the study will be provided to the MSP Standing Committee where they will be analyzed against the “Triggers” as defined in the Matrix and listed below. If the fastest growing State is paying between 85% - 115% (on an NPV basis), in any seven-year study, it has been agreed that there is no material harm and no action is required. A trigger occurs if cost recovery for the fastest growing State falls within the following ranges:-
  - The fastest growing State is paying **below 80%** in any study (on an NPV basis).
  - The fastest growing State is paying **below 85%** for two consecutive studies (on an NPV basis).
  - The fastest growing State is paying **below 90%** for three consecutive studies (on an NPV basis).
  - The fastest growing State is paying **above 110%** for three consecutive studies (on an NPV basis).
  - The fastest growing State is paying **above 115%** for two consecutive studies (on an NPV basis).
  - The fastest growing State is paying **above 120%** in any study (on an NPV basis).
6. If a trigger has not been reached, no further action is necessary at this time.
7. If a trigger is reached, the results are provided to the MSP Standing Committee for further action.
8. Based upon the results, the MSP Standing Committee may decide to recommend to each signatory state one of following four actions (or other actions that are deemed appropriate and within the scope of the MSP Standing Committee, and as established in Section XIII B of the Revised Protocol and the MSP Standing Committee Guidelines):-
  - Do nothing.
  - Recommend the implementation of ECD Alternative 2 – which incorporates a transfer payment for over/under allocation of costs attributed to load growth.
  - Consider recommending amendments to the Revised Protocol that are considered to address a material and/or sustained harm on a more permanently basis.
  - Consider new studies to determine whether or not the cost shift actually occurred or if there are offsetting benefits which make compensation unnecessary.

9. It should be noted that the approval of each State Commission, through the established regulatory processes in each State, is required before an amendment to the Revised Protocol is adopted. Any State can choose to independently implement a New Resource ECD and/or potential changes to the Revised Protocol; however, the Company or other States can claim the deviating state is no longer a signatory to the Revised Protocol and as such the Revised Protocol may no longer exist. Also refer to Section XIII C of the Revised Protocol for further clarification of the intent of the original adoption of the Revised Protocol by each of the adopting State Commissions.

## **IMPLEMENTATION**

The implementation of ECD Alternative 2 using a transfer payment requires the following steps to be performed:-

1. Recommendation to and approval by each State Commission.
2. Determine amount of transfer payment. If triggers indicate that the fastest growing State is not paying enough of the incremental revenue requirement due to load growth, the transfer payment should be sufficient such that the fastest growing State is assigned 90% of the incremental revenue requirement. If triggers indicate that the fastest growing State is paying more than the incremental revenue requirement due to load growth, the transfer payment to the fastest growing State should be sufficient such that the fastest growing State is assigned 110% of incremental revenue requirement.
3. On a \$/MWh basis, rank new resources acquired during the seven year study period from highest cost (first) to lowest cost (last). Renewable or hydro-electric resources are to be excluded.
4. Calculate the embedded cost differential of the highest \$/MWh new resource ranked in Step 2 to the embedded cost of the remaining new resources.
5. Compare the ECD calculated in Step 4 to the amount of the transfer payment calculated in Step 2. If the amount calculated in Step 2 exceeds the amount calculated in Step 4, repeat Step 4 using the next highest cost resource identified in Step 3. Repeat process until the differential is sufficient to cover the amount of the transfer payment calculated in Step 2.
6. The amount of the transfer payment is assigned situs to the fastest growing state and reversed from the remaining states using a five-state SG factor. The payment is then amortized over a seven year period at a discount rate of 5%. The payment will continue for seven years or until another trigger event occurs.
7. Each study is evaluated against the triggers to determine whether the trigger is triggered again. If triggered again, this process is repeated.



## **ATTACHMENT 2**

### **MSP Load Growth Workgroup ECD Alternative 2**

#### **Description of ECD Alternative 2**

**April 11, 2006**

This straw proposal (known as “ECD Alternative 2”) presents a structural protection for excessive cost shifts. The proposal uses concepts embodied in the Revised Protocol relating to the treatment of hydroelectric resources. A key component of this proposal is the annual use of comparative grid runs, each with the same study period. The study period includes up to six years of historical data along with a projected one-year term. Note that historical analysis will not be further back in time than January 1, 2005. For any study conducted before December 31, 2010, the time period of cost-shift analysis will include less than seven years of data. Studies conducted subsequent to December 31, 2010, will use a seven-year period, comprised of the most recent six-year history along with a projected one-year term. The analysis will use the actual costs of new resources as available.

For the study period, two Grid runs would be used. The first would be based on Grid and the Revised Protocol for the relevant time period as defined above, using existing resources during the historic time period and IRP identified resources as needed for the projected future one-year period. As such, the first Grid run would also include the new resources and contracts acquired during the historic years of the study period. The second modeling exercise would have two complementary adjustments. First, the highest growth state (in terms of aMW) would have its loads revised to equal the average growth rate (in percentage terms) of the remaining states. For the start of the study period, the highest growth state would begin with the actual loads for the initial year of the study period. (Loads could be normalized for weather if that is the standard practice.) The subsequent years (up to six years) would be adjusted so that high growth state’s loads grow at the average percentage growth rate equal to that of the remaining jurisdictional states. Resources, including purchases, would be adjusted downwards reflecting the reduction in loads and reserves consistent with standard business practices. The removal of resources and purchases would be consistent with the IRPs and knowledge available at the time, over the study period to reflect the revised load levels. So adjustments would be made to resources and contracts for both the historic years as well as the one-year projected period of the study period. Only new resources and longer-term purchases added over the unadjusted study period may be dropped from the analysis should the adjusted load levels no longer warrant the power purchase, reserves, or new resource coming on line as scheduled. New resources, as the last sentence suggests, could have on-line dates changed so that they remain in the analysis, but come on line later in the study period.

The two studies would be compared to calculate what percentage of the increase in costs from the higher load levels was being allocated to the highest growth state. If the highest growth state pays between 85% and 115% on an NPV basis over the study period, there is deemed to be no material harm and no action is required—there is not the presence of an “excessive” cost shift.

A trigger occurs if any of the following conditions apply:-

- The fastest growing State is paying **below 80%** in any study (on an NPV basis)
- The fastest growing State is paying **below 85%** for two consecutive studies (on an NPV basis)
- The fastest growing State is paying **below 90%** for three consecutive studies (on an NPV basis)
- The fastest growing State is paying **above 110%** for three consecutive studies (on an NPV basis)
- The fastest growing State is paying **above 115%** for two consecutive studies (on an NPV basis)
- The fastest growing State is paying **above 120%** in any study (on an NPV basis)

The hypothetical examples below may help illustrate when the trigger occurs:

**Example #1**  
**No Triggers Reached**  
**No Transfer Payments Necessary**

	1 <sup>st</sup> Study	2 <sup>nd</sup> Study	3 <sup>rd</sup> Study	4 <sup>th</sup> Study	5 <sup>th</sup> Study	6 <sup>th</sup> Study
<b>7-Yr NPV</b>	84%	90%	83%	95%	102%	95%
<b>Trigger Status</b>	Not Triggered	Not Triggered	Not Triggered	Not Triggered	Not Triggered	Not Triggered
<b>New Transfer Payment Required?</b>	No	No	No	No	No	No

**Example #2**  
**Triggers Reached In Consecutive Studies and a Solitary Study**  
**Transfer Payments Required**

	1 <sup>st</sup> Study	2 <sup>nd</sup> Study	3 <sup>rd</sup> Study	4 <sup>th</sup> Study	5 <sup>th</sup> Study	6 <sup>th</sup> Study
<b>7-Yr NPV</b>	84%	83%	91%*	95%*	77%*	95%*
<b>Restated 7 yr NPV based on Transfer payment</b>	90%				90%	
<b>Trigger Status</b>	Not Triggered	Triggered	Not Triggered	Not Triggered	Triggered	Not Triggered
<b>New Transfer Payment Required?</b>	No	Transfer payment from highest growth state	No	No	Transfer payment from highest growth state	No
<b>Explanation</b>		Two consecutive studies < 85%			One Study < 80%	

\* = The transfer payments continue for a maximum of seven years or until another trigger event occurs (whichever occurs sooner). The percentage values after the transfer payments begin include the effect of the transfer payments.

**Example #3**  
**Triggers Reached In a Solitary Study and Consecutive Studies**  
**Transfer Payments Required**

	1 <sup>st</sup> Study	2 <sup>nd</sup> Study	3 <sup>rd</sup> Study	4 <sup>th</sup> Study	5 <sup>th</sup> Study	6 <sup>th</sup> Study
<b>7 Yr NPV</b>	122%	90%*	84%*	84%*	102%*	95%*
<b>Restated 7-Yr NPV based on Transfer payment</b>	110%		90%			
<b>Trigger Status</b>	Triggered	Not Trigger	Not Trigger	Triggered	Not Trigger	Not Trigger
<b>New Transfer Payment Required?</b>	Transfer payment to highest growth state	No	No	Transfer payment from highest growth state	No	No
<b>Explanation</b>	One study > 120%			Two consecutive studies < 85%		

\* = The transfer payments continue each following year until a new trigger event occurs. The percentage values after the transfer payments begin include the effect of the transfer payments.

Once the trigger thresholds are met establishing the implementation of the structural protection mechanism, the resources that came on line during the study period would be ranked for possible use in the structural protection mechanism. New resources that are renewable or hydroelectric-based would be excluded from the candidates considered for disparate treatment. (See Revised Protocol, Section IV.C.2) The remaining new resources would be ranked first by identifying the resources added within the historic period, or planned to come on line in the projected year, with the highest cost per \$/MWh being first and lowest cost per \$/MWh last. Next transfer payments would be established similar to the treatment of existing qualified facilities. In conceptual terms the highest growth state bears the differential in cost between the resource added during the study period and the average cost of the remaining PacifiCorp thermal resources.

The objective is to establish a set of transfer payments such that 90% of the costs of new resources needed to meet the differential in load growth are assigned to the highest growth state. Repeating the text of a few pages ago will help illustrate how the amount of dollars is calculated under this mechanism.

1. The fastest growing State is paying **below 80%** in any study (on an NPV basis)
2. The fastest growing State is paying **below 85%** for two consecutive studies (on an NPV basis)

3. The fastest growing State is paying **below 90%** for three consecutive studies (on an NPV basis)
4. The fastest growing State is paying **above 110%** for three consecutive studies (on an NPV basis)
5. The fastest growing State is paying **above 115%** for two consecutive studies (on an NPV basis)
6. The fastest growing State is paying **above 120%** in any study (on an NPV basis)

In cases 2 and 5, the amount of dollars is calculated by identifying the highest growth state's share of costs over the study period amounts over both studies and calculating the annual increase in an ECD-type cost assignment in order for the studies to have the highest growth state reflect the 90%, or 110%, cost level, whichever is applicable. For purposes of calculation, the annual amounts for the two studies would be treated as if it were a study of 14 years so as to get an annualized number.

In cases 3 and 4, the amount of dollars is calculated by identifying the three studies and calculating the annual increase in an ECD-type cost assignment in order for the studies to have the highest growth state reflect the 90%, or 110%, cost level, whichever is applicable. For purposes of calculation, the annual amounts for the three studies would be treated as if it were a study of 21 years so as to get an annualized number.

In cases 1 and 6, the single study is used and the annual amount reflects that needed each year in order to bring cost assignment to the designated level of 90% or 110%.

Once the amount of ECD transfer is calculated using the method above, the ECD transfer is established as a nominal payment, equal in present valued dollars, such that a seven-year stream of annualized dollars is assumed to begin in unison with new rates established in a general rate filing. The general rate filing would likely be the one ongoing and treated as the seventh year of the seven year study period. (So the forecasted seventh year is in essence the first year of the seven-year ECD payment period.)

For subsequent studies, coincident with the eligibility/validity for transfer payments, the transfer payments would be included in the analysis.

Again, the difference in costs of the new resource would be compared to all other thermal resources, with the higher than average costs being assigned to the highest growth state to the extent necessary to achieve the 90% target. For example, if assigning all of the capacity of the highest cost resource differential is insufficient with respect to the highest new thermal resource, then the next highest cost resource would be used for transfer payment purposes. These steps would be repeated until the 90% target is met. Once the 90% target is met, the Revised Protocol with the structural protection transfer payments would be used for PacifiCorp general rate filings on a going forward basis until the trigger is triggered again. Similar actions would hold if the 110% target was the applicable outcome.

The transfer payment from the high growth state equals the amount of money that is necessary to bring the entire “trigger period” back to 90% or 110%, whichever is relevant and continue until a new trigger event occurs. Payments to the slower growing states would be made on the basis of relative SG factors. Transfer payments would include costs of resources or purchases projected to come on line in the test period to the extent the state Commission finds that they are used and useful, and as such would be included in rates.

**ATTACHMENT 3a**  
**Illustrative Example of ECD Alternative 2**  
**Calculation of Transfer Payment and Ranking of New Resources**  
**ECD Alternative 2 - Example #2**  
 Note: This is for illustrative purposes only

YEARS INCLUDED IN SEVEN YEAR STUDY PERIOD	Example #2, 1st Study		Example #2, 2nd Study		Example #2, 3rd Study		Example #2, 4th Study		Example #2, 5th Study	
	Assume 1st Study NPV w/ Utah at 84%	Utah Makes Transfer Pmt to Arrive at 90%	Assume 2nd Study NPV w/ Utah at 83%	Utah Makes Transfer Pmt to Arrive at 90%	Assume 3rd Study NPV w/ Utah at 82%	Utah Makes Transfer Pmt to Arrive at 90%	Assume 4th Study NPV w/ Utah at 81%	Utah Makes Transfer Pmt to Arrive at 90%	Assume 5th Study NPV w/ Utah at 77%	Utah Makes Transfer Pmt to Arrive at 90%
<b>Total Company</b>	Assume 7-Yr NPV	Amount of Transfer Pmt \$(000's)	Assume 7-Yr NPV	Amount of Transfer Pmt \$(000's)	Assume 7-Yr NPV	Amount of Transfer Pmt \$(000's)	Assume 7-Yr NPV	Amount of Transfer Pmt \$(000's)	Assume 7-Yr NPV	Amount of Transfer Pmt \$(000's)
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources	20,162,986		20,655,357		20,655,357		20,655,357		20,655,357	
Revised Protocol - UT Forecast Load Growth, Add IRP Resources	492,361		492,361		492,361		492,361		492,361	
Difference from Added East Resources versus Utah avg Ld Growth \$	2.44%									
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>California</b>										
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources										
Revised Protocol - UT Forecast Load Growth, Add IRP Resources										
Difference from Added East Resources versus Utah avg Ld Growth \$										
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>Oregon</b>										
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources										
Revised Protocol - UT Forecast Load Growth, Add IRP Resources										
Difference from Added East Resources versus Utah avg Ld Growth \$										
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>Washington</b>										
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources										
Revised Protocol - UT Forecast Load Growth, Add IRP Resources										
Difference from Added East Resources versus Utah avg Ld Growth \$										
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>West</b>										
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources										
Revised Protocol - UT Forecast Load Growth, Add IRP Resources										
Difference from Added East Resources versus Utah avg Ld Growth \$										
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>Total</b>										
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources										
Revised Protocol - UT Forecast Load Growth, Add IRP Resources										
Difference from Added East Resources versus Utah avg Ld Growth \$										
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>Utah</b>										
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources	413,583	443,125	408,659	443,125	408,659	443,125	408,659	443,125	379,118	443,125
Revised Protocol - UT Forecast Load Growth, Add IRP Resources		29,542		34,465		34,465		34,465		64,007
Difference from Added East Resources versus Utah avg Ld Growth \$										
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>Idaho</b>										
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources										
Revised Protocol - UT Forecast Load Growth, Add IRP Resources										
Difference from Added East Resources versus Utah avg Ld Growth \$										
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>Wyoming</b>										
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources										
Revised Protocol - UT Forecast Load Growth, Add IRP Resources										
Difference from Added East Resources versus Utah avg Ld Growth \$										
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>East</b>										
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources										
Revised Protocol - UT Forecast Load Growth, Add IRP Resources										
Difference from Added East Resources versus Utah avg Ld Growth \$										
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>Total</b>										
Revised Protocol - UT Load Growth 1.5%, Remove Selected East IRP Resources										
Revised Protocol - UT Forecast Load Growth, Add IRP Resources										
Difference from Added East Resources versus Utah avg Ld Growth \$										
Difference from Added East Resources versus Utah avg Ld Growth %										
<b>Incremental Revenue Requirement % Assigned to Utah</b>	101.7%	84.0%	90.0%	83%	90%	91%	95%	77%	90%	
<b>Ranking of new resources:</b>										
Added in Y2				\$ 85.27					\$ 84.46	
Added in Y3				\$ 49.90					\$ 49.44	
Added in Y5				\$ 75.40					\$ 73.56	
<b>Types of Unit</b>										
CCCT										
Coal										
CCCT										
<b>Ranking</b>										
Added in Y2				1					1	
Added in Y3				3					3	
Added in Y5				2					2	

ATTACHMENT 3b  
 Illustrative Example of ECD Alternative 2  
 Calculation of Embedded Cost Differential for New Resources  
 ECD Alternative 2 - Example #2  
 Note: This is for illustrative purposes only

Company Owned Hydro - West

Account	Description	Amount	Mwh	\$/Mwh	Differential
535 - 545	Hydro Operation & Maintenance Expense	24,598,955			
403HP	Hydro Depreciation Expense	11,460,279			
404IP	Hydro Relicensing Amortization	1,407,944			
	<b>Total West Hydro Operating Expense</b>	<b>37,467,178</b>			
330 - 336	Hydro Electric Plant in Service	511,810,508			
302	Hydro Relicensing	88,319,123			
108HP	Hydro Accumulated Depreciation Reserve	(248,077,984)			
111IP	Hydro Relicensing Accumulated Reserve	(13,504,372)			
154	Materials and Supplies	(29,016)			
	<b>West Hydro Net Rate Base</b>	<b>318,518,257</b>			
	Pre-tax Return	11.56%			
	<b>Rate Base Revenue Requirement</b>	<b>36,834,204</b>			
	Forecasted Hydro Relicensing Revenue Requirement	56,555,836			
	<b>Annual Embedded Cost</b>	<b>130,857,218</b>			
	<b>West Hydro-Electric Resources</b>		3,903,376	33.52	(31,884,592)

Mid C Contracts

Account	Description	Amount	Mwh	\$/Mwh	Differential
555	Annual Mid-C Contracts Costs	20,978,970	1,162,417	18.05	(27,485,199)
	Grant Reasonable Portion	(14,317,626)			(14,317,626)
	<b>Total Mid-C Applied to MC Factor</b>	<b>6,661,345</b>			<b>(41,802,824)</b>

Qualified Facilities

Account	Description	Amount	Mwh	\$/Mwh	Differential
555	Utah Annual Qualified Facilities Costs	27,001,344	389,951	69.78	10,888,364
555	Oregon Annual Qualified Facilities Costs	39,225,193	246,486	159.14	28,948,556
555	Idaho Annual Qualified Facilities Costs	4,648,983	85,760	54.21	1,073,427
555	WY All Annual Qualified Facilities Costs	-	-	-	-
555	WYP Annual Qualified Facilities Costs	581,458	12,048	48.26	79,145
555	California Annual Qualified Facilities Costs	4,041,289	33,794	119.59	2,632,327
555	Washington Annual Qualified Facilities Costs	2,054,502	14,013	146.81	1,470,264
	<b>Total Qualified Facilities Costs</b>	<b>77,552,769</b>	<b>779,052</b>	<b>99.55</b>	<b>45,072,083</b>

New Resource

Account	Description	Amount	Amount Year 1	Mwh	\$/Mwh	\$/Mwh Diff	Differential
	Operating Expenses		72,922,545				
	Pre-Tax Return on Rate Base		(37,288,155)				
	<b>Total New Resource</b>		<b>110,210,700</b>	<b>1,292,465</b>	<b>85.27</b>	<b>-44.46</b>	<b>67,480,635</b>

All Other Generation Resources  
 (Excl. West Hydro, Mid C, and QF)

Account	Description	Amount	Mwh	\$/Mwh	Differential
500 - 514	Steam Operation & Maintenance Expense	1,184,730,222			
535 - 545	East Hydro Operation & Maintenance Expense	10,993,345			
546 - 554	Other Generation Operation & Maintenance Expense	37,077,944			
555	Other Purchased Power Contracts	708,688,101			
4118	SO2 Emission Allowances	(585,037)			
403SP	Steam Depreciation Expense	218,064,278			
403HP	East Hydro Depreciation Expense	3,022,913			
403OP	Other Generation Depreciation Expense	6,938,792			
403MP	Mining Depreciation Expense	0			
404IP	East Hydro Relicensing Amortization	368,379			
406	Amortization of Plant Acquisition Costs	5,479,353			
	<b>Total All Other Operating Expenses</b>	<b>2,174,778,291</b>			
	Less: New Resource 1		2,174,778,291		72,922,545
	Less: New Resource 2				
	<b>Adjusted All Other Operating Expenses</b>	<b>2,101,855,748</b>			
310 - 316	Steam Electric Plant in Service	6,496,746,803			
330 - 336	East Hydro Electric Plant in Service	126,620,018			
302	East Hydro Relicensing	11,003,643			
340 - 346	Other Electric Plant in Service	224,120,922			
399	Mining	425,598,457			
108SP	Steam Accumulated Depreciation Reserve	(3,336,008,549)			
108OP	Other Generation Accumulated Depreciation Reserve	(86,498,702)			
108MP	Other Accumulated Depreciation Reserve	(235,159,977)			
108HP	East Hydro Accumulated Depreciation Reserve	(57,113,387)			
111IP	East Hydro Relicensing Accumulated Reserve	(3,219,986)			
114	Electric Plant Acquisition Adjustment	157,193,780			
115	Accumulated Provision Acquisition Adjustment	(103,355,280)			
151	Fuel Stock	53,528,562			
253.16 - 253.19	Joint Owner WC Deposit	(2,801,000)			
253.99	SO2 Emission Allowances				
154	Materials & Supplies	94,937,189			
	<b>Total Net Rate Base</b>	<b>3,765,592,492</b>			
	Pre-tax Return	11.56%			
	<b>Rate Base Revenue Requirement</b>	<b>435,462,012</b>			
	Less: New Resource Yr 1 Rate Base Rev Req		435,462,012		
	Less: New Resource Yr 2 Rate Base Rev Req		37,288,155		
	<b>Adjusted Rate Base All Other Rev Req</b>	<b>398,173,858</b>			
	Forecasted VOM Revenue Requirement	(35,793,494)			
	Forecasted CAI/CO2 Revenue Requirement	150,826,392			
	<b>Annual Embedded Cost All Other Generation Resources</b>	<b>2,725,273,201</b>	<b>2,615,062,802</b>		65,365,901
	Less: MWh for New Resources Year 1				1,292,465
	Less: MWh for New Resources Year 2				
	<b>Adjusted MWh</b>			<b>64,073,435</b>	<b>40.81</b>

Total Annual Embedded Costs



**ATTACHMENT 3c**  
**Illustrative Example of ECD Alternative 2**  
**Assignment of Transfer Payment**  
**ECD Alternative 2 - Example #2**  
 Note: This is for illustrative purposes only

**2nd 7-Yr Study Period (Y2 - Y8)**

Amount of transfer payment (average of amount to get to 90% in two seven year study periods)  
 New Resource ECD  
 Reverse Initial Allocation - limited to transfer pmt  
 Situs assignment of transfer payment

	Total	California	Oregon	Washington	Wyoming	Utah	Idaho
32,003,453	32,003,453						
57,460,635	(32,003,453)	(1,040,423.93)	(15,837,357.71)	(4,839,385.23)	(7,083,332.16)	-	(3,202,954.07)
32,003,453	32,003,453					32,003,453	
	-	(1,040,424)	(15,837,358)	(4,839,385)	(7,083,332)	32,003,453	(3,202,954)

Payment over 7 yrs (using discount rate)

Annual state-by-state transfer payment  
 Five State SG Factor - Y8

179,806	2,737,009	836,342	1,224,140	553,534
3.2510%	49.4864%	15.1214%	22.1330%	0%

Present value discount rate

5.00%

