

6. Additional Assumptions.

A. Introduction.

This section provides an overview of eight additional assumptions that underlie the analyses in this Resource Plan:

- Discount rate
- Remaining life of resources
- Operations and Maintenance Expenses
- Administrative and General Costs
- Capital Expenditures
- Hydro Relicensing Costs
- Emission control equipment costs
- Other factors influencing value

B. Discount Rate.

The discount rate reflects the purchaser's weighted average cost of capital and the risk and capital structure associated with that specific resource purchase. The cost of capital associated with a specific resource may not be similar to the purchasing company's risk profile, and consequently, the discount rate may not coincide with the purchaser's weighted average cost of capital.

The Company assumed a nominal after-tax discount rate of 9.7 percent for purposes of the indicative valuations. This rate is used in modeling the market clearing price for electricity and is used in the discounted cash flow valuation for each resource. The assumption is that the same type of companies will be investing in both existing plants for merchant opportunities and new combined cycle plants that establish the market clearing price. This discount rate is commensurate with the weighted-average cost of capital of these companies and representative of the risk involved in merchant power plant projects. The discount rate is applied consistently and does not bias the relative value of the resources assigned to the cost-of-service and direct access customer classes.

For revenue requirement analyses and for accruing interest on transition charge/credit balances, the Company assumed 7.79 percent, the after-tax weighted average cost of capital presented in Docket UE-116 for each of the Company's unbundled elements. This cost of capital estimates the ongoing risks for an electric utility under cost-of-service regulation.

C. Remaining Life of Resources.

The economic life of a resource depends on many factors including market prices, new market entrants, competitive position of resource, operating costs, emerging regulatory requirements and the physical age of the resource. In general, PacifiCorp assumes that plants will close at the end of their stated depreciation life. Three-to-five years before the end of the depreciation life, PacifiCorp will review the plant economics to make a determination as to whether plant life should be extended through additional capital investments.

(1) Thermal Plants.

For valuation purposes, the Company set the economic life of the thermal plants equal to the depreciation life, with one exception. Naughton plant's life was extended from 2012 to 2021 in scenarios where the market economics support installation of the best available environmental control technology. At the end of depreciation life, the Company assumed that the plants are closed and no new generation constructed on the site. Exhibit 6-1 lists plant characteristics including the assumed life of each plant, heat rate and availability.

(2) Hydro-electric Plants.

The Company divided its hydro-electric plants into two categories. One category consists of those plants that, for valuation purposes, are not expected to continue operating beyond their current depreciation life or current license, for one or more reasons including age, economics and required new investment. The resource plan uses the current depreciation life or current license expiration date as the economic life of the asset. The second category of plants consists of those that have no specific end of life. For valuation purposes, the Company's analysis attempted to capture the economics of a continued revenue stream. Exhibit 6-2 indicates the assumed life of each plant.

(3) Contracts.

PacifiCorp assumed that power purchase contracts and power sales contracts would expire at the end of the current contracts. No extensions of specific contracts are modeled. PacifiCorp also assumed that energy and ancillary services required to replace retiring plants and contracts would be acquired at market prices.

D. Operating and Maintenance Expenditures.

Total thermal and hydro-electric plant non-fuel operating and maintenance (O&M) expenditures are based on the 1999 test year used in PacifiCorp's UE-116 November 1 filing. In that filing, year 2001 total O&M expenditures were derived by adjusting

1999 expenditures for known changes and escalating the expenditures to 2001 dollars using appropriate DRI factors. This approach is consistent with past practices.

For this Resource Plan, total 2001 O&M plant expenditures from the UE-116 filing were allocated among all plants based on a four-year historical average of plant O&M distribution. This distribution "levelized" the annual O&M expenditures for each plant. PacifiCorp used a four-year average because most thermal plants undergo overhaul maintenance on four-year cycles. For hydro-electric plants, O&M costs are calculated on a river system basis.

(1) Thermal Plants.

Years 2002 - 2031 are escalated from Year 2001 using a 2.8 percent inflation rate. The longest-lived thermal plant (Hermiston) has an end of life of 2031. The base O&M expenditure rate is flat in real dollars. The escalation rate of 2.8 percent is based on an average DRI rate for future years. Adjustment of future annual expenditures for additional environmental controls is addressed below in the section on Thermal Plant Environmental Costs.

(2) Hydro-electric Plants.

Years 2002 to 2032 for hydro-electric plants are escalated from Year 2001 at 2.8 percent. This escalation rate is based on an average DRI rate for future years. A terminal value representative of on-going operation was developed for the plants operating beyond 2031. Such plants are assumed to continue operating indefinitely. O&M expenses are not estimated after 2032. Instead, the terminal value of the river systems is equal to 75 percent of the 2031 free cash flow in perpetuity. Adjustment of future annual expenditures for additional environmental and relicensing requirements is addressed below in the section on Hydro-electric Plant Environmental/Relicensing Costs.

E. Administrative and General Costs.

Administrative and General (A&G) costs for this Resource Plan include corporate A&G, non-specific generation O&M costs (such as dispatching and central staff, accounts 556 & 557), general capital, intangible plant, and all other non-plant specific costs and other overheads applied to the generation function in accordance with SB 1149 rules. These costs are totaled and an after-tax expenditure amount and a revenue requirement amount are calculated for each year through 2032.

The A&G costs are allocated 98 percent to plants and 2 percent to purchase power/sales contracts. This allocation is a best estimate of how costs can be divided between plants and contracts. The costs are allocated among the thermal plants and hydroelectric rivers systems in proportion to non-fuel O&M expenditures. For power purchase/sales contracts, the A&G is allocated based on MWh. The after-tax A&G expenditure amount is used in the discounted cash flow valuation for each plant, and the A&G

revenue requirement amounts are used in projecting revenue requirements for each plant.

F. Capital Expenditures.

(1) Thermal Plants.

The Company developed a year-by-year estimate of thermal plant capital expenditures for 2003 through 2010. The analysis assumes that future capital expenditures, unrelated to the environmental investments discussed below, remain at levels similar to the 2001-2010 period. The estimates of capital expenditures for years beyond 2010 use an average of 2001-2010 capital expenditures in real dollars escalated at 2.8 percent per year. The Company reduced capital expenditures by 20 percent each year in the last five years of plant life so that capital expenditures are at the 20 percent level in the last year of operation. Future annual expenditures for additional environmental controls are addressed in the section below on Thermal Plant Environmental Costs.

(2) Hydro-electric Plants.

Hydro-electric river system capital expenditures, not related to environmental measures and relicensing, are expected to remain at levels similar to the 2001-2010 period. Capital expenditures for years beyond 2010 are estimated by using an average of 2001-2010 capital expenditures in real dollars escalated at 2.8 percent per year. As individual plants within a river system are retired, capital expenditures are decreased. They are not directly estimated after 2032. Instead, the terminal value of the river systems is equal to 75 percent of the 2031 free cash flow in perpetuity. The free cash flow calculation includes capital expenditures. Future annual expenditures for additional environmental controls and relicensing are addressed in the next section on Hydro-electric Plant Environmental/Relicensing Costs.

G. Hydro-electric Plant Environmental/Relicensing Costs.

The value of the hydroelectric plants is affected significantly by hydroelectric relicensing costs, the cost of related mitigation measures and operational restrictions. Each hydroelectric project is unique and will have a range of different issues and interested parties. No one template for relicensing related costs can therefore be applied to all projects. PacifiCorp has attempted to estimate the future cost of licensing by considering its past experiences, as well as high level benchmarking of relicensed projects outside PacifiCorp.

PacifiCorp estimated future capital expenditures, changes in O&M expenditures and changes in plant output for each river system. These estimates are necessarily inexact and cannot, at this stage, represent the actual outcome of future relicensing efforts. Rather, they are indicative of one possible outcome for each project.

In addition to uncertainty in costs, the timing of implementation for relicensing projects is also unclear. Consequently, the estimated relicensing costs have been levelized and spread over the life of the project for purposes of calculating river system value and revenue requirements.

PacifiCorp estimated relicensing costs for the period of 2001 - 2032. PacifiCorp assumed that hydro-electric plants operating beyond 2031 operate indefinitely. In the discounted cash flow valuation method, a terminal value is calculated for 2032. As with O&M and capital expenditures, the terminal value of the river systems is equal to 75% of the 2031 free cash flow in perpetuity. PacifiCorp modeled relicensing costs and impact beyond 2031 by reducing the cash flows in years beyond 2032 by 25%.

H. Thermal Plant Environmental Costs.

PacifiCorp expects air quality control costs to have a significant impact on the value of thermal plants, particularly coal-fired generation. Air quality regulations are expected to require significant and continuous improvements in the emissions of particulate, NO_x and SO₂. In addition, it is anticipated that regulations will be imposed to limit mercury emission levels.

For purposes of this plan and the associated plant valuations, PacifiCorp has assumed that "best available control technology" (BACT) for SO₂, NO_x and particulates will need to be in place at all coal-fired plants not retired by 2013. PacifiCorp also assumes that some additional O&M expenses will need to be incurred to further reduce mercury emissions. PacifiCorp's air quality compliance costs include capital expenditures, O&M and a limited amount of lost generation costs attributable to auxiliary loads of certain pollution control technologies. Some additional capital and O&M expenditures have been included to further control mercury emissions. No costs are included in response to potential climate change regulations. PacifiCorp's costs projections assume that all control technologies will be installed during regularly scheduled outages. To the extent that assumption is not accurate, additional costs associated with lost generation would be added, because PacifiCorp would be required to purchase replacement power in the market.

PacifiCorp's cost projections are based on a reasonable assessment of current and developing air quality regulations. There is considerable uncertainty as to the scope and applicability of these regulations. Many existing regulations are subject to ongoing litigation, and the shape of new regulations is not yet completely clear. Accordingly, these air quality costs should be considered to be reasonable projections, rather than an actual outcome of future environmental regulations. The estimates have been prepared so that the impact of air quality costs on thermal plant valuations can be taken into consideration. In addition to uncertainty in costs, the timing of implementation for environmental projects is also unclear. Consequently, the estimated environmental control costs have been levelized and spread from 2003, the date of plant valuation in this Resource Plan, over the remaining life of each plant for purposes of calculating

plant value and revenue requirements. No additional environmental controls are planned for Carbon Plant and Gadsby Plant because they will be retired by 2013.

I. Other Factors.

(1) Value of Sites - Terminal Value Calculation.

The discounted cash flow valuation of each plant requires that a terminal value be established for the facility at the end of its economic life. The terminal value must take into consideration the cost of salvaging the existing facility, the cost of any environmental clean-up, the inherent value of the site infrastructure and the value of the property. These factors are site specific and will be highly dependent on market conditions and technology development at the time a plant reaches end of life. The following simplifying assumptions have been used to estimate terminal values for the discounted cash flow analysis of each plant.

Hydroelectric plant terminal values are considered to be zero. PacifiCorp assumed that each site will have costs associated with decommissioning and removal of the plant, and that the plant will have the ability and be permitted to continue to operate for a sufficient length of time to produce revenues that offset the decommissioning costs. This assumption is based on PacifiCorp's current experience with Condit project.

The terminal value of the thermal sites were developed and filed as part of a plant depreciation study in Docket UM 884. The terminal value used for steam plants is a cost of \$40/kW. Terminal costs used for Hermiston, James River facility and Little Mountain plant are \$13/kW.

(2) Jointly Owned Plants.

Certain of the Company's jointly owned plants have encumbrances that prevent or make impractical the sale of a portion of PacifiCorp's ownership. Plants with significant limitations include:

- Jim Bridger Plant - The ownership agreement does not permit the sale of a portion of the PacifiCorp ownership.
- Hunter Plant - Hunter Unit 1 - The other owner apparently has an option to purchase PacifiCorp's interest at the higher of book value or level of debt assigned to PacifiCorp's interest if PacifiCorp initiates a transfer of any partial interest in the plant.
- Craig Units 1&2 have a two-year Right-of-First Refusal clause.
- Hayden Units 1&2 have a two-year Right-of-First Refusal clause.

In order to avoid the problems associated with a potential auction of jointly owned resources with contractual limitations on sale, PacifiCorp proposes to allocate the Oregon share of these four resources to cost-of-service customers and thereby retain them in ratebase.

(3) Transaction Costs.

The Company did not include any estimate of the transaction costs associated with an administrative valuation or an auction. All final valuations of resources will necessarily be reduced by the actual costs that are incurred. Transaction costs, however, are unlikely to have a significant impact on generating resource allocation decisions or on comparisons of relative values of generating resources.

(4) Tax Issues.

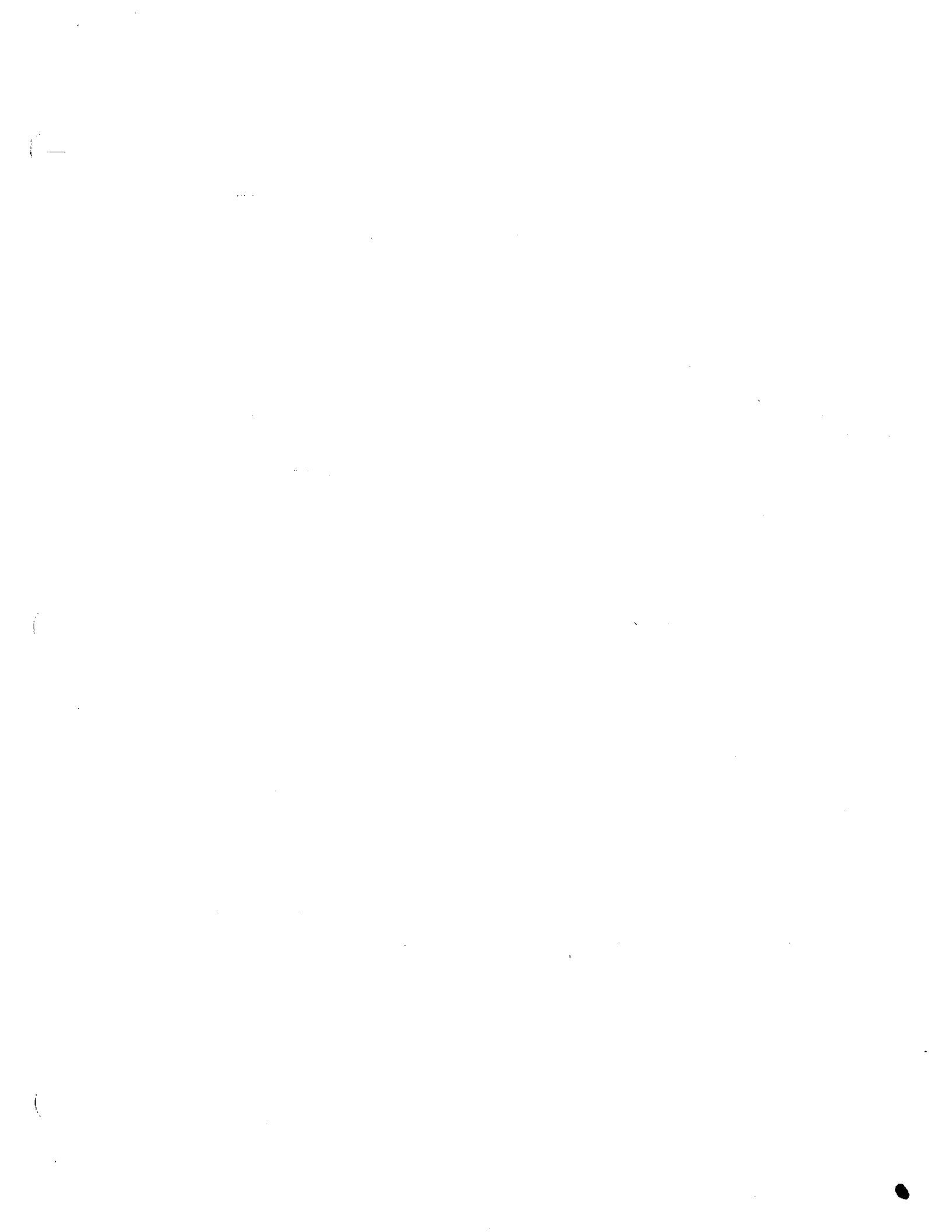
PacifiCorp incurs a tax liability when a plant is sold if the sale price is greater than the tax book value. However, if PacifiCorp retains assets, taxes are deferred until the assets are sold by the Company. There is a potential for savings related to the deferral of this tax liability. There is also the potential for costs if the sale is at a loss. In addition, the actual savings or costs depend on the timing of the Company's subsequent sale of the resource, if any. In the valuation analysis presented in Section 10, the Company presents a comparison of a third-party sale and an administrative valuation to provide a value of the upper bound of the potential tax savings or cost.

(5) Ancillary Services.

Ancillary services can be divided into the following categories:

- Scheduling, System Control and Dispatch Service
- Energy Imbalance Service
- Reactive Supply and Voltage Control from Generation Sources Service
- Regulation and Frequency Response Service
- Operating Reserve - Spinning Reserve Service
- Operating Reserve - Supplemental Reserve Service

PacifiCorp's market clearing prices contain an estimate of the cost of ancillary services. For purposes of the indicative valuation analysis, PacifiCorp assumed that the expense and revenues associated with ancillary services are embedded in the revenues calculated with the market clearing price. Methods for more precise estimation of ancillary services will evolve as the ancillary service market develops and may be presented in future valuation proceedings.



Thermal Plant Availability, Heat Rate and Life Assumptions					
Plant	Equivalent Availability	1996-99 Heat Rate	Thermal Plant Retirement Dates		
			\$2/mmBTU case	\$3/mmBTU case	NWPPC case
	%	BTU/KWh			
Blundell	87.50%				
Carbon	91.49%	11,262	2010	2010	2010
Cholla 4	93.31%	10,697	2008	2025	2025
Colstrip	90.69%	10,703	2029	2029	2029
Craig	97.12%	10,107	2024	2024	2024
Dave Johnston	89.04%	11,222	2008	2020	2020
Footo Creek			2024	2024	2024
Gadsby	98.67%	12,276	2007	2007	2007
Hayden	91.39%	10,494	2024	2024	2024
Hermiston	93.00%	7,190	2031	2031	2031
Hunter	90.87%	10,648	2025	2025	2025
Huntington	89.88%	10,133	2019	2019	2019
Little Mountain			2020	2020	2020
James River			2015	2015	2015
Jim Bridger	91.63%	10,586	2020	2020	2020
Naughton	93.02%	10,517	2007	2021	2021
Wyodak	96.96%	11,925	2022	2022	2022

PacifiCorp Hydro Plant Life Assumptions		
River System	Plant	Recommended Year for End of Useful Life
Bear	Cove	Ongoing
Bear	Cutler	Ongoing
Bear	Grace	Ongoing
Bear	Last Chance	2025
Bear	Lifton	Ongoing
Bear	Oneida	Ongoing
Bear	Soda	Ongoing
Small East	Ashton	Ongoing
Small East	Fountain Green	2010
Small East	Granite	2030
Small East	Gunlock	2020
Small East	Olmsted	2016
Small East	Paris	2015
Small East	Pioneer	2030
Small East	Sand Cove	2020
Small East	Snake Creek	2020
Small East	St. Anthony	2016
Small East	Stairs	2025
Small East	Upper American Fork	2001
Small East	Upper Beaver	2030
Small East	Viva Naughton	Ongoing
Small East	Veyo	2020
Small East	Weber	2020
Klamath	Copco 1	Ongoing
Klamath	Copco 2	Ongoing
Klamath	East Side	2006
Klamath	Fall Creek	2006
Klamath	Iron Gate	Ongoing
Klamath	JC Boyle	Ongoing
Klamath	Keno Regulating Dam	Ongoing
Klamath	Klamath Lake Reservoir	Ongoing
Klamath	West Side	2006
Lewis	Merwin	Ongoing
Lewis	Swift No. 1	Ongoing
Lewis	Yale	Ongoing
North Umpqua	Clearwater #1	Ongoing
North Umpqua	Clearwater #2	Ongoing
North Umpqua	Fish Creek	Ongoing
North Umpqua	Lemolo #1	Ongoing
North Umpqua	Lemolo #2	Ongoing
North Umpqua	Slide Creek	Ongoing
North Umpqua	Soda Springs	Ongoing
North Umpqua	Toketee	Ongoing
Rogue	Prospect #1,2,&4	Ongoing
Rogue	Prospect #3	Ongoing

PacifiCorp Hydro Plant Life Assumptions		
River System	Plant	Recommended Year for End of Useful Life
Small North	Bend	2005
Small North	Big Fork	Ongoing
Small North	Cline Falls	2005
Small North	Condit	2006
Small North	Eagle Point	2010
Small North	Naches	2006
Small North	Naches Drop	2006
Small North	Powerdale	2018
Small North	Wallowa Falls	2016
Small North	Skookumchuck	Ongoing