



1 **Q. Please state your name, business address, and present position with**  
2 **PacifiCorp d/b/a Pacific Power & Light Company (PacifiCorp or Company).**

3 A. My name is Mark R. Tallman. My business address is 825 NE Multnomah Street,  
4 Suite 2000, Portland, Oregon 97232. My present position is Vice President of  
5 Renewable Resources. I am responsible for hydro-powered and wind-powered  
6 generation resources owned by the Company.

7 **Qualifications**

8 **Q. Briefly describe your education and professional experience.**

9 A. I have a Bachelor of Science degree in Electrical Engineering from Oregon State  
10 University and a Master of Business Administration from City University of  
11 Seattle. I am also a Registered Professional Engineer in Oregon and Washington.  
12 I have been the Vice President of Renewable Resources since January 2011.  
13 Before that, I was Vice President of Renewable Resource Acquisition from  
14 December 2007 to January 2011 and Managing Director of Renewable Resource  
15 Acquisition from April 2006 to December 2007. I have worked at the Company  
16 for more than 26 years in a variety of positions of increasing responsibility  
17 including the commercial and trading organization, the engineering organization,  
18 and the retail organization (as a District Manager in Washington state).

19 **Purpose of Testimony**

20 **Q. What is the purpose of your testimony?**

21 A. The purpose of my testimony is to describe four additions to the Company's  
22 hydro generation plant. I will demonstrate why these plant additions are

1 reasonable, prudent, and should be included the Company's revenue requirement  
2 in this case.

3 **Q. Please summarize your testimony.**

4 A. My testimony describes four construction projects required by the Federal Energy  
5 Regulatory Commission (FERC) licenses issued to the Company for the Lewis,  
6 North Umpqua, and Prospect hydroelectric projects. These hydro plant additions  
7 consist of fish passage construction for the Lewis River hydroelectric project (the  
8 Swift Fish Collector and the Merwin Fish Collector), fish passage construction for  
9 the North Umpqua River (the Soda Springs Fish Passage), and an in-stream flow  
10 management system for the Rogue River hydroelectric project (the Prospect In-  
11 Stream Flow/Automation).

12 **Q. Please provide a brief description of the Company's hydro facilities.**

13 A. The Company operates seven hydroelectric projects in the Pacific Northwest  
14 and twenty in the Rocky Mountains. Together, they provide approximately  
15 1,074 megawatts (MW) of low-cost, carbon-free electricity to our customers. The  
16 Lewis River and North Umpqua River projects are the Company's two largest  
17 projects with a generating capacity of approximately 510 MW and 188.5 MW  
18 respectively.

19 **Swift Fish Collector**

20 **Q. Please describe the need for the Swift Fish Collector plant addition.**

21 A. The Swift Fish Collector is an investment necessary to implement a fish passage  
22 system designed to collect, trap, and haul juvenile and adult anadromous fish  
23 around the three Lewis River dams. The purpose of the Swift Fish Collector is to

1 implement and comply with the Swift No.1 hydroelectric project license issued by  
2 FERC.<sup>1</sup>

3 **Q. Please describe the Swift Fish Collector facility.**

4 A. The facility is designed to attract and collect juvenile and adult fish so that they  
5 can be hauled downstream past the dams on the Lewis River and released back  
6 into the river to continue their out-migration to the ocean. The moored fish  
7 collection facility floats on the surface of the reservoir. Guide nets lead fish to a  
8 collection entrance designed to simulate the hydraulic conditions of a natural lake  
9 outlet. A series of pumps draw water through a screen, slowly accelerating the  
10 fish to a speed where they are unable to escape. After the fish are captured, they  
11 are sorted by size to minimize injury and predation. The fish are then transferred  
12 into a truck for transport and release downstream of Merwin dam.

13 **Q. Was the design of the Swift Fish Collector subject to review and approval by**  
14 **resource agencies?**

15 A. Yes. Per the FERC license that incorporates the Lewis River settlement  
16 agreement, the Company engaged in design reviews with parties to the Lewis  
17 River settlement agreement, which included the National Oceanic and  
18 Atmospheric Administration (aka the National Marine Fisheries Service), the U.S.  
19 Fish and Wildlife Service, and the Washington Department of Fish and Wildlife.  
20 The final design was ultimately approved by the National Oceanic and  
21 Atmospheric Administration and the U.S. Fish and Wildlife Service. Although  
22 the Company gives its input, these agencies have final authority over the design of  
23 the facility. Based on the design required by these agencies, the plant addition

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<sup>1</sup> FERC Project No. 2111, License Ordering Paragraphs F and G and Article 401.

1 included during the test period in this filing for the Swift Fish Collector is  
2 approximately \$40.0 million on a total-company basis. Approximately  
3 \$21.7 million was placed in-service before the test period in this case as explained  
4 below.

5 **Q. When was the Swift Fish Collector placed in service?**

6 A. The Swift Fish Collector was placed into service in phases. The first phase  
7 consisted of a trestle that was designed to meet probable maximum flood  
8 standards. The trestle was placed in service in December 2011, with a total cost  
9 of \$21.7 million on a total-company basis. The second phase consisted mostly of  
10 the moored barge and was placed in service in September 2012, with a total cost  
11 of \$17.9 million on a total-company basis. The third phase consisted mostly of  
12 the collection, sorting, and guidance systems and was placed in service in  
13 November 2012, with a total cost of \$20.3 million on a total-company basis. The  
14 remaining final costs consist of miscellaneous project closeout costs. The final  
15 costs are expected to be placed in service before May 2013 at an estimated  
16 amount of \$1.7 million on a total-company basis.

17 **Q. Please describe the incremental non-labor operations and maintenance  
18 (O&M) costs associated with the Swift Fish Collector.**

19 A. The incremental non-labor O&M costs are \$756,000 per year on a total-company  
20 basis. These costs consist of: \$493,000 in energy costs for a local utility to  
21 provide power for the collector; \$210,000 primarily for contractor maintenance of  
22 the fish guidance system, snow plowing, and large woody debris removal;  
23 \$30,000 for fish monitoring supplies; and \$23,000 for general supplies.

1 **Merwin Fish Collector**

2 **Q. Please describe the need for the Merwin Fish Collector plant addition.**

3 A. The Merwin Fish Collector is necessary to implement a fish passage system  
4 designed to collect, trap, and haul juvenile and adult anadromous fish around the  
5 three Lewis River dams. The purpose of the Merwin Fish Collector is also to  
6 implement and comply with the Merwin hydroelectric project license issued by  
7 FERC.<sup>2</sup>

8 **Q. Please describe the Merwin Fish Collector facility.**

9 A. The facility is designed to attract and collect fish so that they can be hauled  
10 upstream past the dams on the Lewis River and released back into the river to  
11 continue their up-stream migration. The fish collection facility is permanently  
12 mounted directly downstream of Merwin dam. Water is pumped through a tube  
13 to attract fish toward a land mounted collection and sorting facility. After the fish  
14 are captured and sorted, they are transferred into a truck for transport and release  
15 upstream of Swift dam.

16 **Q. Was the design of the Merwin Fish Collector subject to review and approval**  
17 **by resource agencies?**

18 A. Yes. Per the FERC license that incorporates the Lewis River settlement  
19 agreement, the Company engaged in design reviews with parties to the Lewis  
20 River settlement agreement, which included the National Oceanic and  
21 Atmospheric Administration, the U.S. Fish and Wildlife Service, and the  
22 Washington Department of Fish and Wildlife. The final design was ultimately  
23 approved by the National Oceanic and Atmospheric Administration and the

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<sup>2</sup> FERC Project No. 935, License Ordering Paragraphs E and F and Article 401.

1 U.S. Fish and Wildlife Service. Although the Company provides input, these  
2 agencies have final authority over the design of the facility. Based on the design  
3 required by these agencies, the plant addition included in this filing for the  
4 Merwin Fish Collector is approximately \$56.8 million on a total-company basis.

5 **Q. When will the Merwin Fish Collector be placed into service?**

6 A. The Merwin Fish Collector will be placed into service in phases. The first phase  
7 consists of a fish sorting facility. It is estimated that the sorting facility will be  
8 placed into service on or about May 2013, with a total cost of \$14.6 million on a  
9 total-company basis. The second phase consists of the water attraction system  
10 that will be placed in service on or about July 2013, with a total cost of  
11 \$27.2 million on a total-company basis. The third and final phase consists of a  
12 fish trap, lift and conveyance system that will be placed in service on or about  
13 February 2014, with a total cost of \$15.0 million on a total-company basis.

14 **Q. Please describe the incremental non-labor O&M costs associated with the**  
15 **Merwin Fish Collector.**

16 A. The incremental non-labor O&M costs are \$282,000 per year on a total-company  
17 basis. These costs are for: contract maintenance; periodic assistance from the  
18 Washington Department of Fish & Wildlife; fish monitoring supplies; and general  
19 supplies.

20 **Soda Springs Fish Passage**

21 **Q. Please describe the need for the Soda Springs Fish Passage plant addition.**

22 A. The Company is investing in fish passage facilities at the Soda Springs dam to

1 comply with the FERC license issued for the North Umpqua hydroelectric project.  
2 These fish passage facilities are a requirement of the FERC license.<sup>3</sup>

3 **Q. Please describe the Soda Springs Fish Passage facilities.**

4 A. The facilities consist of a fish ladder, spillway improvement, fish screen, and  
5 evaluation facility to provide upstream and downstream fish passage for  
6 anadromous fish at the Soda Springs dam.

7 **Q. Does the Soda Springs Fish Passage addition meet more than one  
8 requirement of the FERC license?**

9 A. Yes. The Soda Springs Fish Passage plant addition complies with three separate  
10 FERC license requirements: (1) an upstream fish ladder; (2) a downstream fish  
11 screen; and (3) modification of the spillway to protect juvenile fish. Because the  
12 footprints for these three requirements overlap, they were included in one overall  
13 construction project.

14 **Q. Was the design of the Soda Springs Fish Passage facilities subject to review  
15 and approval by resource agencies?**

16 A. Yes. The Company worked with the National Oceanic and Atmospheric  
17 Administration, the U.S. Forest Service, the U.S. Fish and Wildlife Service, and  
18 the Oregon Department of Fish and Wildlife to design the fish passage facilities.  
19 Although the Company gives its input, these agencies have final authority over  
20 the design. Based on the design required by these agencies, the plant addition  
21 included in this filing for the Soda Springs Fish Passage is \$74.9 million on a  
22 total-company basis.

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<sup>3</sup> FERC Project No. 1927, License Ordering Paragraphs G and H and Article 401.



1 **Q. When were the Soda Springs Fish Passage facilities placed in service?**

2 A. The facility was placed in service in October 2012 at an amount of \$73.3 million  
3 on a total-company basis. Final costs consist of miscellaneous project closeout  
4 costs. The final costs are expected to be placed in service before May 2013 at an  
5 estimated amount of \$1.6 million on a total-company basis.

6 **Prospect In-Stream Flow/Automation**

7 **Q. Please describe the need for Prospect In-Stream Flow/Automation addition.**

8 A. The Company is investing in an in-stream flow management system to comply  
9 with the FERC license issued for the Prospect 1, 2, and 4 hydroelectric projects on  
10 the Rogue River.<sup>4</sup> Controlling in-stream flow and meeting ramp rate  
11 requirements established by the Oregon Department of Environmental Quality as  
12 part of the 401 certification process under the Clean Water Act is a condition of  
13 the FERC license.

14 **Q. Please describe the Prospect In-Stream Flow/Automation facilities.**

15 A. The facilities consist of water flow measuring devices, flow release structures,  
16 and an automation system. The facilities will enable the Company to meet  
17 minimum in-stream flow requirements and maximum ramp rate requirements.

18 **Q. When were the Prospect In-Stream Flow/Automation facilities placed in  
19 service?**

20 A. The Company placed the facilities into service in December 2012. The plant  
21 addition included in this filing for the Prospect In-Stream Flow/Automation  
22 facilities is \$10.9 million on a total-company basis.

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<sup>4</sup> FERC Project No. 2630, License Ordering Paragraph D, Articles 401 and 403, and Appendix A.

1 Q. Does this conclude your direct testimony?

2 A. Yes.