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1 **Purpose of Testimony**

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

3 A. My testimony presents the Company's request in this proceeding associated with
4 adoption of depreciation lives for the rate base assets of the Klamath
5 Hydroelectric Project (Project) under the KHSA. In support of the Company's
6 request, my testimony explains the Federal Energy Regulatory Commission
7 (FERC) relicensing and settlement process that the Company followed for
8 relicensing the Project, and demonstrates that the Company's decision to enter
9 into the KHSA was a prudent business decision as compared to the costs and risks
10 of relicensing alternatives.

11 **Q. How is your testimony organized?**

12 A. My testimony is organized into the following seven sections:

- 13 • First, I present the cost elements that the Company has included in calculation
14 of the revenue requirement in this proceeding;
- 15 • Second, I describe the Project and the benefits customers have derived and
16 will continue to derive from the operation of the Project;
- 17 • Third, I provide an overview of the process to obtain a new operating license
18 from FERC;
- 19 • Fourth, I describe the relicensing and settlement process undertaken to date to
20 resolve the expiration of the Project license;
- 21 • Fifth, I explain the significant activities related to the relicensing and
22 settlement process costs;
- 23 • Sixth, I provide an overview of the KHSA and present the Company's

1 economic analysis demonstrating that the Company's decision to execute the
2 KHSA is in the best interest of customers; and

- 3 • Seventh, I describe the progress to date of the implementation of the KHSA.

4 **KHSA Cost Elements Included in Revenue Requirement**

5 **Q. What cost elements related to the KHSA are included in revenue**
6 **requirement in this case?**

7 A. First, the Company is including a full year of amortization of the relicensing and
8 settlement process costs that were included in rate base in the Company's last rate
9 case, docket UE-111190 (2011 Rate Case). Second, the Company is seeking the
10 Commission's approval of a depreciation schedule that would depreciate all costs
11 associated with the Klamath facilities on a straight-line basis so the net book
12 value reaches zero by December 31, 2019, to coincide with the target date for
13 decommissioning and facilities removal.

14 **Q. Please describe the ratemaking treatment of the relicensing and settlement**
15 **process costs.**

16 A. As mentioned above, the relicensing and settlement process costs were included
17 in Washington's rate base in the 2011 Rate Case. Due to test year conventions,
18 the asset was included for only a single month (December 2010) when calculating
19 the average of monthly averages balance for the historic test period of the 12
20 months ended December 2010. In this proceeding, the asset is included for the
21 full test period and amortized on a straight-line basis through December 31, 2019.
22 My testimony provides an overview of the significant multi-year activities related
23 to the relicensing and settlement process costs.

1 **Q. Why is it in customers' best interest for the Commission to adopt a new**
2 **depreciation schedule for the Klamath-related rate base in this proceeding?**

3 A. Adoption of a new depreciation schedule will ensure that the Klamath-related rate
4 base will be depreciated consistent with the terms of the KHSA, which targets a
5 January 1, 2020, date for decommissioning and facilities removal. If the
6 Commission waits to adopt a new depreciation schedule and the dams are
7 removed beginning in 2020, the burden on customers could be substantial. In
8 addition, the Company began depreciating the Klamath assets on the new
9 schedule beginning January 1, 2011. Due to the time between rate case test
10 periods, Washington customers will benefit from two full calendar years of
11 accelerated depreciation of the assets without the cost increase included in rates.
12 If the Commission fails to adopt a new schedule in this proceeding, that
13 depreciation would need to be reversed to the detriment of customers. Changing
14 the depreciation schedule is also an action that can be reviewed and revised in the
15 future if circumstances related to the Project change.

16 **Overview of the Project**

17 **Q. Please describe the Project.**

18 A. The Project is a 169 megawatt hydroelectric facility on the Klamath River in
19 southern Oregon and northern California. It consists of eight developments,
20 including seven powerhouses, five mainstem dams on the Klamath River (Iron
21 Gate, Copco No. 1, Copco No. 2, J.C. Boyle, and Keno), as well as two small
22 diversion dams on Spring Creek and Fall Creek, tributaries to the Klamath River.
23 The Project as currently licensed includes the East Side and West Side generating

1 facilities, which use water diverted by the Link River Dam, a facility owned by
2 the Bureau of Reclamation that regulates the elevation and releases of water from
3 Upper Klamath Lake and that is not included in the Project. The Project also
4 includes Keno Dam, which has no hydroelectric generation facilities, but which
5 serves to regulate water levels in Keno Reservoir as required by the Project
6 license. The Company operates all eight developments under one FERC license
7 (FERC Project No. 2082). The Project is partially located on federal lands
8 administered by the Bureau of Land Management and the Bureau of Reclamation.
9 The first hydroelectric development, Fall Creek, was completed in 1903, and Iron
10 Gate, the last hydroelectric development, was completed in 1962. Keno Dam was
11 completed in 1968. A map of the Project is provided as Exhibit No.__(ALK-2).

12 **Q. Generally, what benefits does the Project provide to PacifiCorp's customers?**

13 A. Since its completion, the Project has provided customers with reliable, low-cost
14 power. As currently operated in compliance with the limitations of the existing
15 license, the Project is a source of energy, capacity, and reserves. Unlike most
16 other sources of generation, hydro projects also provide an additional
17 environmental benefit because they are emissions-free. In addition, the
18 generating units of the Project located in California qualify as renewable energy
19 resources for the California Renewables Portfolio Standard.

20 **Overview of Federal Relicensing**

21 **Q. Please provide an overview of the federal relicensing process.**

22 A. Under the Federal Power Act (FPA), FERC has the exclusive authority to license
23 nonfederal hydropower projects on navigable waterways. Original licenses are

1 issued for a term of 50 years, after which a licensee may seek relicensing. FERC
2 issues subsequent licenses for a term of not less than 30 years or more than 50
3 years, with FERC deciding the length of the license. FERC regulations require
4 that a licensee file a Notice of Intent to apply for a new license five and a half
5 years prior to license expiration. On average, licensing takes eight to 10 years,
6 and some applications have taken as long as 30 years. During the relicensing
7 process, FERC typically allows projects to continue operating on annual license
8 extensions under the same terms and conditions once the old license has expired.
9 This is the case with the Project at this time, as the original project license expired
10 in 2006. The licensing process requires FERC to consider the economic,
11 engineering, environmental, and socioeconomic aspects of the project. In issuing
12 licenses, FERC must give “equal consideration” to environmental values and
13 adequately protect and mitigate the effects of the Project based on environmental
14 and other concerns. In doing so, FERC attaches conditions to the license.

15 **Q. What roles do state and federal resource agencies play in the process?**

16 A. State and federal fish and wildlife agencies review applications and submit
17 comments to FERC regarding the impact the Project may have on the
18 environment. Based on those impacts, state and federal agencies recommend
19 conditions to FERC to place on the license to mitigate the potential impacts. The
20 FPA gives certain federal agencies authority to require FERC to include the
21 agency’s conditions on the license. For example, the Secretaries of Commerce
22 and the Interior have the authority to require applicants to install fishways
23 (ladders and screens) at projects, and to require applicants to provide minimum

1 instream flows and reduce the variability of powerhouse flows, which can impact
2 the operational flexibility of a hydroelectric project.

3 **Q. What options does an applicant have if the mandatory conditions make the**
4 **project uneconomic?**

5 A. The applicant has limited options. The applicant may accept the uneconomic
6 license, decommission the facility, or pursue litigation and challenge the
7 mandatory conditions. The applicant has the option of selling the facility as well.
8 Decommissioning may involve anything from mothballing the generating
9 facilities to full removal and site restoration. Because of the potential risks and
10 uncertainties associated with decommissioning and litigation, those options are
11 seldom favored. Consequently, applicants usually try to manage uncertainty by
12 settling issues among the various stakeholders before licensing is completed or by
13 negotiating acceptable decommissioning outcomes.

14 **Q. Other than the FPA, what other laws must FERC take into consideration**
15 **when granting licenses?**

16 A. Because licensing is a “federal action,” FERC’s action on the application must be
17 evaluated under a host of federal laws: the Clean Water Act (CWA), the Coastal
18 Zone Management Act, the National Environmental Policy Act (NEPA), the
19 Endangered Species Act (ESA), the Fish and Wildlife Coordination Act, and the
20 National Historic Preservation Act, among others. These laws add significant
21 time and expense to the application process.

22 The Company has sought CWA Section 401 certifications for the Project
23 from both Oregon and California. In addition, ESA considerations are present at

1 the Project due to the presence of threatened coho salmon in the Klamath River
2 below Iron Gate dam, and endangered Lost River and shortnose suckers that
3 predominantly reside in Upper Klamath Lake and its tributaries but utilize habitat
4 within the Project boundary.

5 **Q. Does FERC offer more than one relicensing process?**

6 A. Yes. At the time the license application for the Project was developed and filed—
7 the final license application was submitted to FERC in February 2004—applicants
8 could use either traditional or alternative licensing processes. During the process
9 of developing the license application for the Project, FERC developed an
10 additional licensing process called an integrated licensing process, which became
11 the default process for relicensing in 2005. Applicants may also enter into a
12 negotiated settlement at any time. The Company initiated licensing under the
13 traditional approach for the Project, and has pursued settlement to resolve the
14 issues related to the Project relicensing.

15 **Q. Please provide a more detailed description of the traditional FERC**
16 **relicensing process.**

17 A. The traditional process involves three stages of consultation. In the first stage, the
18 applicant distributes an Initial Consultation document, which explains the project
19 and its operation and environmental setting to federal and state agencies, tribes,
20 non-governmental organizations (NGOs), community interest groups, and other
21 stakeholders. Following the consultation document, the stakeholders meet and
22 visit the site. Thirty days after the meeting, comments and additional study
23 recommendations are due to the applicant. Stage one ends when a set of resource-

1 by-resource study plans and stakeholder consultation documentation have been
2 completed and provided to FERC.

3 **Q. What takes place in the second stage of consultation?**

4 A. In the second stage, the applicant conducts the proposed studies and prepares a
5 draft license application, which it distributes to FERC and to interested agencies,
6 tribes, and stakeholders for review and comment. At this stage, agencies
7 routinely request additional studies, which can be costly and time-consuming.
8 The applicant must provide FERC with a written summary of how the Company
9 resolved any disagreements with agencies and others regarding the studies to be
10 conducted and included in the license application. The second stage ends when
11 FERC accepts a final application for filing.

12 **Q. Please describe the third stage.**

13 A. In the third stage, FERC solicits initial comments and preliminary terms and
14 conditions from resource agencies, tribes, and stakeholders, and gives notice that
15 the project is ready for environmental analysis under NEPA. FERC may require
16 additional information from the applicant to address those comments. FERC next
17 initiates its detailed environmental and engineering review and solicits final
18 comments, recommendations, terms and conditions, and mandatory prescriptions.
19 From all of this information, FERC prepares an Environmental Assessment or
20 Environmental Impact Statement taking into account comments, responses and
21 conditions. Ultimately, FERC issues a license order describing both how the
22 project will be operated during the next license term, and what environmental and
23 other enhancement obligations the licensee must fulfill. Those obligations

1 include the mandatory terms and conditions provided by the Secretaries of
2 Commerce, Agriculture and Interior. In addition, if relevant, FERC appends any
3 conditions associated with CWA Section 401 water quality certifications that have
4 been issued for the project by state agencies.

5 **OVERVIEW OF PROJECT RELICENSING AND SETTLEMENT PROCESS**

6 **Relicensing Process**

7 **Q. Please describe the relicensing process to date for the Project.**

8 A. PacifiCorp filed a Notice of Intent to relicense and issued its First Stage
9 Consultation Document on December 15, 2000. In an attempt to arrive at
10 consensus-based approaches to the licensing process with the various stakeholders
11 involved, PacifiCorp pursued a “traditional-plus” licensing approach in which the
12 traditional process was followed with a concerted effort to solicit stakeholder
13 input and agreement on study plans before they were submitted to FERC for
14 review. This “traditional-plus” approach resulted in a significant number of
15 stakeholder meetings to review proposed study plans, gather input, and attempt to
16 achieve consensus.

17 **Q. Please explain stakeholder participation in the relicensing process for the**
18 **Project.**

19 A. Public meetings for the relicensing process began in January 2001 and continued
20 through 2002 and 2003. The final license application was submitted to FERC
21 in February 2004. FERC issued its first scoping document for the environmental
22 review process in April 2004, and scoping was completed in May 2005.
23 FERC issued notice that the project was ready for environmental analysis on

1 December 28, 2005. The original FERC license expired February 28, 2006, and
2 annual licenses have been issued by FERC since that time.

3 Federal agencies—the National Marine Fisheries Service, U.S. Fish and
4 Wildlife Service, Bureau of Reclamation, and Bureau of Land Management—
5 issued draft terms and conditions for a new license in March 2006. The draft
6 terms called for full volitional fish passage at all Project developments as well as
7 other license conditions to benefit environmental resources that would reduce
8 power generation and increase the costs of a new license. That same month, the
9 Company submitted applications to California and Oregon for CWA Section 401
10 water quality certifications of the Project. As a result of the Energy Policy Act of
11 2005, the Company had the opportunity to challenge the underlying facts behind
12 the draft agency terms and conditions and propose alternative licensing
13 conditions. The Company filed alternative license conditions with FERC that the
14 Company believed provided similar environmental benefits as the draft agency
15 terms and conditions but at less cost and loss in power production from the
16 Project. The Company's filing also challenged material facts relied upon by the
17 agencies. A trial-type hearing was conducted on these issues of material fact
18 underlying the agency terms and conditions in August 2006, and an administrative
19 law judge issued a decision in September 2006. Also in September 2006, FERC
20 issued a draft Environmental Impact Statement for Hydropower License.

21 Incorporating the findings of the trial-type hearing, the agencies issued
22 modified terms and conditions for a new license in January 2007. FERC then
23 initiated ESA consultation for a new license in March 2007, and the National

1 Marine Fisheries Service and U.S. Fish and Wildlife Service issued final
2 biological opinions in December 2007. To initiate analysis of the project under
3 the California Environmental Quality Act (CEQA) to obtain CWA Section 401
4 certification, the Company signed a memorandum of understanding with the
5 California State Water Resources Control Board in September 2007. FERC
6 completed its environmental analysis of the project and released its Final
7 Environmental Impact Statement (FEIS) for Hydropower License in November
8 2007.

9 **Q. Please describe the relicensing process after the Company filed its**
10 **applications for CWA Section 401 certification of the Project.**

11 A. Since filing its applications in March 2006 for CWA Section 401 certification
12 with California and Oregon, PacifiCorp has been implementing water quality
13 studies and monitoring in order to improve water quality conditions in the Project
14 reservoirs and in the Klamath River downstream of Project facilities. The result
15 of these study and planning efforts will help the states of California and Oregon
16 assess whether the Project can meet applicable water quality standards. In June
17 2009, the California North Coast Regional Water Quality Control Board issued a
18 draft Total Maximum Daily Load (TMDL) report for the Klamath River, and in
19 February 2010, the Oregon Department of Environmental Quality released its
20 draft TMDL for the Klamath River in Oregon. The TMDLs prescribe nutrient,
21 temperature, and dissolved oxygen requirements in the river that must be attained
22 by Project facilities. PacifiCorp has been actively involved in reviewing the

1 TMDLs since they will ultimately inform the conditions that may be imposed on
2 the Project through the CWA Section 401 certification processes.

3 **Q. Absent the settlement under the KHSA, what steps remain to be completed**
4 **in the relicensing process?**

5 A. In order for FERC to issue a new Project license, CWA Section 401 water quality
6 certification must first be completed by the states of California and Oregon. The
7 conditions of the CWA Section 401 certification would then be incorporated into
8 the new FERC license for the Project. PacifiCorp has CWA Section 401 water
9 quality certification applications pending in both states. However, pursuant to the
10 KHSA, CWA Section 401 certification of the Project is being held in abeyance
11 while the Secretary of the Interior conducts environmental review and analysis to
12 inform a determination as to whether removal of the four mainstem Klamath
13 River dams owned by PacifiCorp will advance restoration of the salmonid
14 fisheries of the Klamath basin and is in the public interest and should proceed.

15 **Settlement Process**

16 **Q. Please describe how settlement is used in the FERC relicensing process.**

17 A. Due to the complex nature of relicensing proceedings and the many issues and
18 stakeholders involved in the process, many relicensing proceedings are resolved
19 by settlement. As mentioned before, a settlement between the parties to a
20 relicensing proceeding can be entered at any time while the relicensing process is
21 ongoing. Settlements are encouraged by FERC and recent changes to the
22 relicensing process alternatives have been made to encourage applicants and
23 stakeholders to reach consensus on the issues related to project relicensing so the

1 parties can reach settlement. In fact, PacifiCorp has pursued settlement for the
2 majority of its recently completed hydro relicensing proceedings, including the
3 North Umpqua, Bear River, and Lewis River projects. In addition, settlements
4 have been entered among PacifiCorp, agencies, and stakeholders to decommission
5 the Condit, American Fork, and Powerdale hydro projects after those projects
6 began the traditional FERC relicensing process.

7 **Q. Please describe the settlement process to date for the Project.**

8 A. For the Project, PacifiCorp initiated settlement discussions in October 2004 with
9 stakeholders, following submittal of the license application. These settlement
10 discussions were entered into by the Company to identify the interests of the
11 stakeholders so those interests could be addressed in a settlement that would
12 preserve the economic value of the Project under a new long-term FERC license
13 to operate the facilities. The first mediated settlement meeting was conducted
14 in January 2005. Settlement meetings proceeded through 2005 and mid-2006.
15 At that point, Project stakeholders decided that they wanted to turn their attention
16 to resolving basin-wide natural resource issues between themselves, without
17 PacifiCorp's involvement. PacifiCorp then discontinued its participation in
18 settlement discussions while those stakeholders continued to meet. PacifiCorp
19 did not participate in these negotiations because resolution of these broader issues
20 was beyond the scope of the relicensing proceeding and did not relate directly to
21 operation of the Project. This group of stakeholders, after months of negotiations,
22 released the draft Klamath Basin Restoration Agreement (KBRA) in January
23 2008. The KBRA is intended to resolve issues of water allocation and resource

1 management in the Klamath Basin, provide for habitat restoration, and called for
2 removal of PacifiCorp's mainstem hydroelectric dams.

3 **Q. Is PacifiCorp a signatory to the KBRA?**

4 A. No. PacifiCorp is not a party to the KBRA. PacifiCorp has no responsibilities
5 under the KBRA and customers will bear no costs associated with the KBRA.

6 **Q. Please describe settlement efforts related to the Project after the release of
7 the KBRA.**

8 A. Following release of the KBRA, active settlement negotiations were resumed
9 among PacifiCorp, the federal government, and the states of California and
10 Oregon. Other key stakeholders joined the settlement negotiations, resulting in an
11 Agreement in Principle (AIP), which was released on November 13, 2008. The
12 AIP laid out a framework for resolution of the issues related to relicensing of the
13 Project including the potential decommissioning and removal of PacifiCorp's four
14 main stem dams on the Klamath River—J.C. Boyle, Copco No. 1, Copco No. 2,
15 and Iron Gate. As a result of discussions with the National Marine Fisheries
16 Service and the U.S. Fish and Wildlife Service, PacifiCorp also developed an
17 Interim Conservation Plan to provide benefits to ESA-listed aquatic species
18 during the period of interim operations before potential dam removal or the
19 re-establishment of fish passage through the Project pursuant to project
20 relicensing.

21 Following the release of the AIP, PacifiCorp pursued further negotiations
22 with the parties to the AIP—the federal government, California, and Oregon—as
23 well as an expanded group of stakeholders, agencies, and other interested parties

1 to complete a final settlement agreement for the Project. On February 18, 2010,
2 the KHSA was executed by over 30 parties, including PacifiCorp, the Secretary of
3 the Interior, governors from the states of Oregon and California, Native American
4 Tribes, and parties representing counties, irrigation districts, fishermen,
5 environmentalists, and other organizations. A detailed chronology of key points
6 in the Klamath relicensing and settlement process is included as Exhibit
7 No.__(ALK-3).

8 **Costs and Benefits of Relicensing**

9 **Q. Please describe how pursuing relicensing and settlement has provided**
10 **customer benefits.**

11 A. The Company has pursued relicensing to preserve economic benefits to its
12 customers from the Project. Had the Company elected not to pursue relicensing
13 of the Project, and assuming no willing buyer, FERC would have required the
14 Company to submit an application for “surrender” of the Project license and
15 decommissioning of the generating facilities. Doing so would have exposed the
16 Company’s customers to the uncertainties related to potential decommissioning
17 and removal of the facilities, while necessitating that the Company’s customers
18 pay for the immediate replacement of the energy provided by the Project.
19 Throughout the relicensing and settlement process, PacifiCorp has taken the
20 position that decommissioning and removal of the Project without sufficient
21 protections against the associated costs, risks, and liability is not in the best
22 interests of the Company, or its customers. To that end, the Company has
23 pursued settlement in a manner that will provide those protections. In addition,

1 the relicensing and settlement process has allowed customers to continue to
2 benefit from the Project during the period between the expiration of the Project
3 license in March 2006 and the potential removal of the facilities.

4 **Q. How much has the Company incurred in the relicensing and settlement**
5 **process?**

6 A. The process was completed at a total cost of approximately \$74.1 million on a
7 system-wide basis as of December 31, 2010.

8 **Q. What are the major cost categories for the process costs?**

9 A. For total costs on a system-wide basis through 2010, approximately 36 percent of
10 the costs (\$26 million) derive from outside expert consulting services. These
11 services included the development of the detailed scientific information necessary
12 to prepare the first stage consultation document and the costs to consult with
13 stakeholders and prepare detailed study plans for the various resource areas
14 investigated as part of the relicensing process. These services included the
15 execution of the vast array of technical studies required and the costs to prepare
16 the license application. Examples of the studies and data collected include:

- 17 • Complete aerial photography and mapping of the Project;
- 18 • Bathymetric and sediment studies of Project reservoirs;
- 19 • Environmental resource investigations;
- 20 • Wildlife and vegetation surveys;
- 21 • Geomorphology studies;
- 22 • Biological and engineering studies of various fish passage alternatives,
23 fisheries modeling and habitat assessment;

- 1 • Studies of potential Project operational enhancements;
- 2 • Historic and cultural resources investigations;
- 3 • Socioeconomic studies;
- 4 • Recreation surveys and planning;
- 5 • Extensive water quality monitoring and development of a Project
- 6 water quality model and associated water quality modeling studies;
- 7 • Development of cost estimates for potential protection, mitigation, and
- 8 enhancement (PM&E) measures likely to be required in a new license.

9 These costs, plus an additional \$9 million of legal costs, also included license
10 application preparation, CWA Section 401 application costs and related studies,
11 ESA consultation and documentation costs, legal review and legal costs
12 associated with the Company’s challenge to agency terms and conditions,
13 responses to comments in relation to the license application, and required analysis
14 of the Project in compliance with the California Environmental Quality Act.
15 Finally, this included costs associated with the settlement process, facilitator and
16 mediator services, communications, and other services.

17 The amount of information necessary to be developed for the preparation
18 and support of hydroelectric license applications is very significant. The Project
19 license application and associated study documentation and filings produced by
20 the Company require in excess of eight feet of shelf space. This is similar to the
21 shelf space devoted to the Company’s license application for the recently
22 relicensed North Umpqua project.

23 Materials, labor and associated expenses accounted for approximately

1 \$11 million—or approximately 14 percent of total costs. These costs included
2 labor and associated costs for the Company’s project management, technical
3 leads, environmental scientists, and administrative staff. The remaining costs are
4 related to property taxes paid against accrued relicensing costs and allowance for
5 funds used during construction (AFUDC).

6 **Q. Has the complexity of the Project impacted the overall level of process costs?**

7 A. Yes. As detailed earlier in my testimony, the relicensing process is time-
8 consuming, complex, and requires the expenditure of significant staff labor,
9 outside technical support, and legal services to prepare an application and defend
10 and prosecute that application through the regulatory process. The Project has
11 been the most complex and contentious relicensing proceeding the Company has
12 undertaken for its many hydroelectric projects. Even so, the Project relicensing
13 costs are comparable with another recent relicensing effort by the Company on
14 the North Umpqua River. At the conclusion of that relicensing process in 2005,
15 the total cost was approximately \$55.1 million. In that case, the relicensing and
16 settlement process spanned ten years, from 1991 to 2001. The settlement parties
17 were fewer in number (in part because the project is only located in one state),
18 and included: U.S. Forest Service, National Marine Fisheries Service, U.S. Fish
19 and Wildlife Service, Bureau of Land Management, Oregon Department of
20 Environmental Quality, Oregon Department of Fish and Wildlife, and Oregon
21 Water Resources Department.

1 **The KHSA and Supporting Economic Analysis**

2 **Q. Please provide a more detailed description of the KHSA.**

3 A. The KHSA provides for the transfer of the Project to a Dam Removal Entity
4 (DRE) no earlier than 2020. The KHSA calls for the Secretary of the Interior to
5 conduct further studies and environmental review and to issue a determination
6 regarding whether dam removal should proceed. Prior to the Secretary's
7 determination, key milestones called for in the KHSA must occur, including the
8 passage of federal legislation to enact key provisions of the KHSA and to provide
9 protection for the Company and its customers from liabilities related to dam
10 removal. Before transfer of the Project facilities to the DRE, PacifiCorp will
11 continue to operate the facilities and its customers will continue to benefit from
12 the low-cost power produced by the facilities. Prior to dam removal, the KHSA
13 requires the Company to implement a number of interim measures to mitigate
14 environmental impacts of the Project in the Klamath Basin. A copy of the KHSA
15 is provided as Exhibit No.____(ALK-4).

16 **Q. Please provide an overview of the Company's approach to the negotiations**
17 **that led to the execution of the KHSA.**

18 A. Throughout the negotiations, the federal government and the states of Oregon and
19 California have expressed a strong policy preference that the Company's dams on
20 the Klamath River be removed. In response, the Company outlined four core
21 principles that guided its negotiation strategy related to a path that could lead to
22 dam removal:

23 1. Protect utility customers from uncertain costs of dam removal;

- 1 2. Transfer dams to a third party for removal;
- 2 3. Protect utility customers from liabilities of dam removal; and
- 3 4. Ensure that utility customers continue to benefit from the low-cost power
- 4 of the dams until the dams are removed.

5 **Q. Does the KHSA deliver the Company's four core principles?**

6 A. Yes. The terms of the KHSA deliver each of these elements for the benefit of
7 PacifiCorp's customers. As such, the KHSA provides a more certain and less
8 risky path forward for customers.

9 **Q. How does the KHSA protect customers from uncertain costs of dam**
10 **removal?**

11 A. The KHSA contains a \$200 million cap on the customer contribution to the costs
12 of dam removal and also provides, with the passage of necessary federal
13 legislation conforming to the terms of the KHSA, liability protection that will
14 shield customers from additional costs related to dam removal should ultimate
15 costs exceed those laid out within the KHSA.

16 **Q. Will Washington customers bear any costs associated with the customer**
17 **contribution to the costs of dam removal?**

18 A. No. The customer contribution will be shared between Oregon and California
19 customers only. This makes the economics of the KHSA even more favorable to
20 Washington customers as compared to other potential outcomes.

21 **Q. Were there any other key considerations for PacifiCorp as it negotiated the**
22 **terms of the KHSA?**

23 A. Yes. PacifiCorp negotiated the terms of the KHSA in a manner that resulted in a

1 fair and balanced outcome to customers and other stakeholders. As discussed in
2 detail below, under relicensing, the status quo for the Project isn't an option. As
3 such, the costs to customers under the KHSA were compared against a baseline
4 relicensing scenario throughout the negotiations. This analysis ensured that
5 customers would be expected to be no worse off under the KHSA as compared to
6 a conservative estimate of relicensing costs. This analysis, combined with the
7 significant risk-reducing elements of the KHSA, ensures that the KHSA is in the
8 interest of PacifiCorp's customers.

9 **Q. Please describe PacifiCorp's general approach to the economic analysis**
10 **supporting its decision to enter into the KHSA.**

11 A. Prior to entering into the KHSA in February 2010, PacifiCorp compared the cost
12 to customers of the KHSA with the costs to customers under a conservative
13 relicensing scenario. The costs to customers of relicensing are uncertain. As
14 such, the Company developed a relicensing case against which the economics of
15 the KHSA were compared. The relicensing case relies heavily on the costs and
16 data developed during the relicensing process and included within the FERC
17 FEIS.

18 **Q. Please provide an overview of the Company's estimated costs to relicense the**
19 **Project.**

20 A. As detailed on page 5 of Confidential Exhibit No.__(ALK-5C), the Company's
21 estimated costs to relicense the Project include in excess of \$400 million in capital
22 and in excess of \$60 million in operations and maintenance (O&M) costs over a
23 40-year license term. Of these capital costs, the majority is related to

1 implementation of aquatic resource PM&E measures. These costs are related to
2 providing volitional upstream and downstream fish passage at all Project
3 developments, which is required by the mandatory agency terms and conditions.
4 Additional funding would be required for terrestrial resource PM&E measures,
5 recreational resource PM&E measures, land use PM&E measures, and cultural
6 resource PM&E measures. The remaining capital costs are for water quality
7 improvements to address temperature and dissolved oxygen effects of the Project
8 reservoirs and to address water quality concerns related to algae that are present in
9 Project reservoirs. Consistent with PacifiCorp's license application, the East Side
10 and West Side developments would be decommissioned and removed.

11 The PM&E measures contained in the Company's baseline relicensing
12 scenario generally include those measures specified in the "Staff Alternative with
13 Mandatory Conditions" alternative in the FERC FEIS. Because the CWA Section
14 401 water quality certification process for the Project is not yet complete, the
15 water quality measures necessary to obtain a new license remain highly uncertain.
16 Thus, the Company's relicensing scenario includes measures that have been
17 evaluated during the FERC process to address the water quality effects of the
18 Project, as an estimate of what might be required.

19 In addition to the capital and O&M expenditures to implement the
20 required PM&E measures, the relicensing scenario also reflects a 20 percent
21 reduction in the energy that would be produced from the Project. This is due to
22 the requirement to provide more water to bypassed reaches of the Klamath River,
23 which makes less water available for generation. This most significantly impacts

1 generation at the J.C. Boyle development, where compliance with mandatory
2 agency terms and conditions on flows would reduce generation more than
3 40 percent. J.C. Boyle is by far the largest generation facility in the Project.

4 **Q. What information sources were used to derive these costs?**

5 A. The majority of the costs included in the Company's analysis are in the FERC
6 record and contained or referenced in the FEIS. Some costs were developed from
7 PacifiCorp internal estimates and generation impact models. Given the
8 uncertainty related to the costs to implement measures required to obtain CWA
9 Section 401 water quality certifications from California and Oregon, water quality
10 costs include measures explored during the relicensing proceeding to address
11 Project-related water quality effects.

12 **Q. Please provide an overview of the Company's assumed costs of implementing**
13 **the KHSA.**

14 A. As detailed on page 6 of Confidential Exhibit No.____(ALK-5C), the Company's
15 assessment of the costs of settlement includes approximately \$9 million in capital
16 costs and approximately \$70 million in costs that would be characterized as O&M
17 costs. The majority of the capital costs reflect the costs of interim water quality
18 improvements and hatchery improvements. Increased funding for hatchery
19 programs and ongoing hatchery production following dam removal represents
20 approximately half of the O&M costs. Other funding requirements include
21 restoration and study funding, lands and cultural resources funding, aquatic
22 habitat enhancement, water quality monitoring and improvement costs.
23 Implementation and management costs are also reflected in the O&M costs.

1 Implementation costs also include the decommissioning of the East Side and West
2 Side developments at a cost of approximately \$3 million, and the \$172 million
3 dam removal customer surcharge.

4 **Q. How were these costs derived?**

5 A. The majority of the costs included in the Company's assessment of settlement
6 costs are derived from Appendices B, C, and D of the KHSA. These appendices
7 list the interim measures that the Company must implement prior to dam removal.
8 Many of the interim measures consist of capped funding obligations for specific
9 resource areas such as hatcheries, aquatic habitat enhancement, water quality
10 monitoring, water quality studies and improvements, and land management
11 activities. Other costs for specific interim measures are estimates of what might
12 be necessary to fulfill the obligation spelled out in the interim measure based on
13 the costs to develop certain infrastructure or implement specific projects. As with
14 the relicensing case, some costs are developed from the Company's internal
15 estimates and generation impact models.

16 **Q. How was the analysis structured?**

17 A. The analysis evaluated the Present Value Revenue Requirement (PVRR) of the
18 stream of costs under the KHSA and compared it against the PVRR of the stream
19 of costs under the baseline relicensing scenario. The analysis covered a 44-year
20 period beginning in 2010—this equates to a 40-year license beginning in 2013.
21 A more detailed overview of the primary assumptions and analytic approach is
22 provided on page 1 through 3 of Confidential Exhibit No.____(ALK-5C).

1 **Q. What did the analysis assume with respect to the costs of replacement**
2 **power?**

3 A. In both scenarios, the Company assumed that lost generation would be replaced
4 with renewable, non-carbon emitting resources. This was accomplished through
5 the use of a forward price curve that contained a “carbon adder” as a reasonable
6 proxy for the cost of renewable replacement power. As noted above, there is also
7 lost generation under the baseline relicensing scenario due to operating
8 restrictions that were analyzed in the FERC FEIS and that would be required to be
9 contained in a new Project license.

10 **Q. How did the Company use the analysis to inform its negotiation strategy?**

11 A. As mentioned above, the Company was willing to agree to a set of financial
12 commitments under the KHSA that did not exceed the cost estimates in the
13 relicensing scenario. However, it was also important to the durability of the
14 KHSA that the other settlement parties viewed the overall result as fair and
15 balanced. If the PVRR of the KHSA was significantly below the baseline
16 relicensing case, this durability would have been threatened.

17 **Q. Does the KHSA result in a fair and balanced outcome to the Company’s**
18 **customers?**

19 A. Yes. Based on the results of this conservative analysis, the KHSA results in a
20 PVRR that is below the cost of relicensing. This is shown in a summary of the
21 Company’s economic analysis included on page 4 of Confidential Exhibit
22 No.____(ALK-5C). More importantly, customers are protected from the risks and
23 liabilities that exist absent an agreement among the parties. As described on

1 pages 1 through 3 of Confidential Exhibit No.____(ALK-5C), the Company
2 conducted additional sensitivity analyses related to these risks and customers were
3 better off under a broad range of assumptions. In the end, the Company’s
4 decision to enter into the KHSA was no different than any other business
5 decision—customers are better off in terms of costs and risks under the KHSA
6 when compared against the range of alternate scenarios.

7 **Q. What cost risks does relicensing present for customers?**

8 A. The risk of increasing costs is one risk relicensing presents for customers. The
9 PM&E measures included in the Company’s assessment of relicensing costs are
10 based on the best estimates available as developed during the relicensing
11 proceeding several years ago. As such, there is always a risk that costs for
12 PM&E measures will escalate as measures are fully designed and constructed.
13 This represents a risk to customers since a new license would prescribe the
14 construction of certain facilities to mitigate project effects and establish fish
15 passage regardless of the ultimate cost of those measures.

16 The cost of additional PM&E measures is another risk relicensing presents
17 for customers. While disputed, agencies maintain that they can reserve authority
18 to require additional mandatory PM&E measures to address changed
19 environmental conditions or the potential ineffectiveness of required PM&E
20 measures to attain the desired benefits during the term of a project license. Thus,
21 the potential exists for additional PM&E measures to be required during the term
22 of a new Project license that would result in costs to customers in excess of
23 currently known relicensing costs.

1 **Q. Do you believe that the costs assumed in the baseline relicensing scenario**
2 **are conservative?**

3 A. Yes. Absent a settlement among parties, it is clear that the Company would
4 continue to face significant opposition to relicensing. My observation is that, on
5 balance, the stakeholders would attempt to drive the costs of relicensing as high
6 as possible in an effort to make relicensing uneconomic.

7 **Q. How do these risks compare to the risks under the Company's settlement**
8 **scenario?**

9 A. Continuation down a path of relicensing presents far greater risks to customers
10 than settlement under the KHSAs. Under the KHSAs, cost obligations are well
11 defined and largely capped. For the interim measures that do not have a cost cap,
12 the relative cost risk is much less than under relicensing given the extensive scope
13 and costs associated with measures required under relicensing. Additionally,
14 transferring the dams prior to removal, along with other key protection measures
15 outlined in the KHSAs, further minimize cost risk.

16 **Q. Has the Company undertaken a comprehensive analysis of the costs of**
17 **Project removal?**

18 A. No. PacifiCorp has not attempted to complete a comprehensive analysis of the
19 costs of Project removal given the many risks and uncertainties. Large
20 uncertainties include the costs of sediment management, minimizing and
21 mitigating environmental impacts related to removal, water quality and
22 endangered species impacts, infrastructure impacts, and site re-vegetation and
23 restoration costs. Many of these uncertainties can only be better defined through

1 the removal design and permitting process. The KHSA is designed to shield
2 customers from the risks and liabilities of dam removal while ensuring that a
3 comprehensive science-based review is undertaken prior to the Secretarial
4 Determination of whether removal of the dams is in the public interest.

5 **Q. Have any credit rating entities commented on the benefits of the KHSA?**

6 A. Yes. In an October 7, 2010 credit report for PacifiCorp, Standard & Poor's cited
7 the KHSA as a "Major Rating Factor" providing strength to PacifiCorp's credit
8 rating. The Standard & Poor's assessment stated that "A settlement reached in
9 February 2010 regarding the contentious Klamath hydro relicensing case has the
10 potential to adequately address the company's financial exposure if the project is
11 decommissioned, which will not occur before 2020."

12 **Q. What does this rating agency comment mean with respect to customer
13 benefits?**

14 A. This means that PacifiCorp's execution of the KHSA pursuant to the relicensing
15 and settlement process has favorably impacted customers already by
16 strengthening PacifiCorp's credit rating. This ultimately translates to a lower cost
17 of debt which benefits customers.

18 **Progress on KHSA Implementation**

19 **Q. Since the KHSA was signed in February 2010, what progress has been made
20 in implementing the KHSA?**

21 A. Significant progress has been made by the Company in implementing its
22 obligations under the KHSA, and progress in implementing the regulatory and
23 legislative actions necessary for the agreement to proceed has occurred as well.

1 As required by the KHSA, the Company has petitioned both the California State
2 Water Quality Control Board and the Oregon Department of Environmental
3 Quality to hold in abeyance its applications before those agencies to certify the
4 Project under Section 401 of the Clean Water Act. Both agencies, acting in an
5 independent capacity, have granted this abeyance in the recognition that
6 successful implementation of the KHSA will resolve the relicensing proceeding
7 for the Project.

8 **Q. What implementation actions has the Company taken directly as a result of**
9 **the KHSA?**

10 A. Since the execution of the KHSA, the Company has made adjustments to Project
11 operations consistent with its obligations under the KHSA and has taken actions
12 to fulfill its requirement to implement interim measures to protect and enhance
13 environmental resources in the Klamath basin. These interim measures include
14 providing increased funding to support and enhance hatchery operations at the
15 Company's fish hatchery located at the Project, actions to fund and implement
16 habitat enhancement and conservation actions for salmon and fish species
17 protected under the ESA, and actions to fund and implement water quality
18 monitoring and enhancement measures.

19 **Q. Have other parties to the Settlement made progress in implementing their**
20 **obligations?**

21 A. Yes. Since the Settlement was signed, the U.S. Department of the Interior
22 (Interior) and the California Department of Fish and Game (CDFG) have
23 undertaken the necessary environmental review and analysis consistent with

1 the requirements of NEPA and CEQA, which must be completed prior to the
2 Secretarial Determination. Scoping for the NEPA/CEQA process began in
3 June 2010 and a Draft EIS/Environmental Impact Report for Klamath facilities
4 removal was released by Interior and CDFG for public comment on
5 September 21, 2011. Interior has completed numerous studies and technical
6 reports over the past two years in fulfillment of its commitment in the KHSA to
7 conduct relevant environmental studies and analysis to ascertain the impacts of
8 potential dam removal.

9 **Q. Is there progress with federal legislation that would advance the KHSA?**

10 A. Yes. Legislation that would endorse and authorize the KHSA and the KBRA was
11 introduced in the U.S. Congress on November 10, 2011. Senator Merkley from
12 Oregon introduced the measure (S. 1851) in the Senate along with Senator
13 Barbara Boxer from California. In the Senate, the bill has been referred to the
14 Committee on Energy and Natural Resources. Representative Mike Thompson of
15 California introduced the measure (H.R. 3398) in the House of Representatives,
16 along with 15 Representatives as co-sponsors.

17 **Q. Does this conclude your direct testimony?**

18 A. Yes.