

1 **Q. Please state your name, business address, and position with the Company.**

2 A. My name is Darrell T. Gerrard. My business address is, 825 NE Multnomah St.,
3 Suite 1600, Portland, Oregon 97232. I am Vice President of Transmission and
4 Distribution Engineering and Asset Management in the Company's Power
5 Delivery Division (PD).

6 **Qualifications**

7 **Q. Please describe your educational background and work experience.**

8 A. I received a Bachelor of Science Degree in Electrical Engineering from the
9 University of Utah and received a Certificate of Completion in Electricity from
10 Utah's Technical College. In addition to formal education, I have attended
11 various educational, professional and electric industry seminars, and serve on
12 several association boards and hold several memberships and positions in industry
13 associations, as shown on Exhibit UP&L___(DTG-1). I joined the Company in
14 1980 and during those 24 years, I have held various operational and engineering
15 positions of increased responsibility providing extensive experience working
16 across PacifiCorp's service territory prior to assuming my current position.

17 **Q. What are your responsibilities as Vice President of Transmission and**
18 **Distribution Engineering and Asset Management?**

19 A. I am responsible for developing maintenance and construction strategies for
20 PacifiCorp's transmission and distribution (T&D) networks. I am also
21 accountable for future investment planning to ensure safe, economic and reliable
22 energy delivery systems for our customers.

1 **Purpose of Testimony**

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

3 A. The purpose of my testimony is to explain the reason for the increased Fiscal Year
4 (FY) 2006 expenditures related to the operation and maintenance of PacifiCorp's
5 Utah electrical distribution system. I will explain how these increases contribute
6 to the overall revenue requirement supported by the testimony of Mr. Ted
7 Weston. My testimony explains these increases, and the circumstances that are
8 driving them. Many of the increases are necessary to respond to the significant
9 growth in customers and load in Utah, to implement a number of the specific
10 recommendations from the May 28, 2004 Storm Report to the Utah Public
11 Service Commission, and to continue to provide excellent customer service in the
12 face of the increasing demands placed upon our system. Another significant
13 contributor to the increases is the Company's increased focus on the
14 implementation of proven operation and maintenance practices and standards, and
15 a renewed emphasis on overall asset management objectives. PacifiCorp is
16 implementing measures that will minimize long-term costs by striking a balance
17 between operational expenses, preventative maintenance and capital expenditures.
18 Implementation of these measures will maximize the Company's ability to
19 provide reliable and safe service over the long term for its customers at the least
20 cost. I also explain why the use of a future test period best reflects the operational
21 conditions that the Company's Utah electrical distribution system will encounter
22 during the period that rates are in effect.

1 **Description of Expenditures**

2 **Q. Please describe the expenditures you will be discussing in your testimony.**

3 A. These expenditures can be classified into three categories: operations expenses,
4 maintenance expenses, and capital expenses. I will describe each of these briefly
5 as it is important to understand why these expenditures are required.

6 **Q. Please describe what is included in operations expenses.**

7 A. Operations expenses are typically those required to carry out the Company's
8 business of serving customers. These include expenses associated with call center
9 management, bill processing and collections, meter reading, meter installation,
10 locating facilities, responding to customer requests, restoring the system during
11 outages and storms, repairing faults, and switching and configuration of our
12 transmission and distribution systems for optimum season operations.

13 **Q. Please explain the reasons for the increase in FY 2006 operations expenses.**

14 A. Operations expenses can fluctuate due to circumstances beyond PacifiCorp's
15 control, including economic conditions – which directly or indirectly drive load
16 growth, new connections, meter installs, connection and disconnection activity,
17 and collections – and weather, which drives customer bill inquiries, call center
18 volumes and outage restorations. Thus, load growth in Utah is a key driver for
19 the increase in operations expenses. Load growth increases the utilization and
20 requires the expansion of PacifiCorp's distribution and transmission system. As
21 the system increases in size, increased expenditures are required to ensure the safe
22 and effective operation of the system. At the same time, PacifiCorp can exercise
23 some control over these operations expenses by increasing maintenance and by
24 making prudent capital additions for system upgrades and expansions, which help

1 reduce operations expenses related to faults or equipment failures. As discussed
2 later in my testimony, portions of our asset management objectives are directed at
3 helping to manage operations expenses by making them more predictable over
4 time. PacifiCorp continues to look for efficiencies in planning and executing our
5 work.

6 **Q. What is included in maintenance expenses?**

7 A. Maintenance expenses include both preventative maintenance and corrective
8 maintenance. Preventative maintenance expenses are considered those required
9 for preemptive purposes to provide vegetation management, sustain asset life,
10 keep assets in servable condition, maintain safety requirements, prevent
11 premature failures, and achieve expected asset life cycles. Corrective
12 maintenance expenditures are required to correct operational, reliability and safety
13 conditions identified as deficiencies on the system either as a result of inspection
14 programs, or from storms or external damages. Our asset management objectives
15 support corrective maintenance efforts by providing inspection programs that are
16 linked strongly to capital investment planning.

17 **Q. Please explain the reasons for the increase in maintenance expenses in FY**
18 **2006.**

19 An increase in maintenance spending is required for the Company to inspect its
20 growing Utah distribution system on a more frequent basis and to correct
21 deficiencies found during these inspections before they become detrimental to the
22 system and create operational or safety issues.

1 **Q. You mentioned that vegetation management is part of maintenance expense.**
2 **Did the issue of vegetation management receive comment during the recent**
3 **Storm Report?**

4 A. Yes it did. As part of this report the Company outlined the plans to significantly
5 increase operational expenditure in key areas such as Vegetation Management and
6 fault correction. In reviewing these recommendations Williams Consulting Inc
7 recommended the following action:

8 “Accelerate the vegetation management program to reach a 3-year tree
9 trimming cycle as soon as possible.” (page 4).

10 **Q. Did other maintenance expense issues receive any comment in the Williams**
11 **Report?**

12 A. Yes. Williams was very supportive of the plans to increase expenditure in this
13 area. In their report, they commented:

14 “Provide suitable increases in baseline maintenance budgets and resources
15 in order to keep up with corrective maintenance work orders such that system
16 reliability improves.” (page 5).

17 **Q. What is the total increase in T&D Operations and Maintenance expenses in**
18 **FY 2006?**

19 A. Exhibit UP&L___(DGT-2) shows that these expenses will increase by \$22.8
20 million, which is an increase of 26.8 percent.

21 **Q. Please describe the increase in PacifiCorp’s Utah distribution-related capital**
22 **expenditures.**

23 A. As shown in Exhibit UP&L___(DTG-3), PacifiCorp will add \$283.5 million to its

1 Utah distribution, transmission and general plant in service by FY 2006.
2 Distribution-related capital additions are driven by several factors, many of which
3 are outside the Company's direct control. These investments are required for
4 upgrading and expansion of our T&D systems for the purposes of serving new
5 customers, load growth of existing customers, sustaining or improving reliability,
6 and relocation or replacement of assets due to deterioration, age, end of useful
7 life, or as a result of damage from external causes. Primary factors, or drivers,
8 that influence capital requirements are load growth (obligation to serve), system
9 planning and design standards, system performance standards, reliability and
10 operational history and safety.

11 **Q. What is the reason for the increased capital spending in FY 2006?**

12 A. A primary driver is the increase in the number of customers that the Company
13 serves in Utah, as well as load additions from existing customers. This sustained
14 growth is described in the testimony of Mr. Reed Davis. Load additions from
15 existing customers on existing networks require the capacity of these networks to
16 be upgraded. In his testimony and exhibits, Mr. Davis describes the continued
17 growth levels in Utah. PacifiCorp is adding more than 200 Mw of distribution
18 capacity in Utah on an annual basis. This load growth is expected to continue and
19 represents the equivalent of adding around 16,000 customers to the Company's
20 Utah system each year, requiring a corresponding investment in the infrastructure
21 needed to supply it with electricity.

22 **Q. Are there other reasons for the increase in capital spending?**

23 A. Yes. There is also considerable capital spending targeted to improve the

1 reliability of the PacifiCorp's service in Utah. The reliability and performance of
2 our assets in the state is not yet at the level we believe our customers want and
3 deserve. Although the Company has seen recent improvements in its reliability
4 metrics, the trend is not improving as fast as we would like. Sustained and
5 consistent capital investment programs are necessary to replace aging and
6 deteriorating assets, correct deficiencies identified during inspection cycles and to
7 minimize our long-term costs, and to improve reliability of service.

8 **Q. Did the issue of reliability spending feature in the Storm Report?**

9 A. Yes. The Company provided detailed recommendations on planned reliability
10 spending as part of its plan to implement a number of specific recommendations
11 from the Storm Report.

12 On the issue of the cost of reliability improvements, Williams Consulting
13 Inc. made the following comments:

14 "We agree with the company's findings and conclusions relative to capital
15 budgets and programs...." (Williams Report page 22). In addition, they further
16 stated:

17 "With regard to the costs of improving reliability, whether through an
18 improved vegetation management program or other targeted maintenance
19 activities, we note the findings of Accenture's February 2004 survey of residential
20 customers who experienced the blackout of August 2003. Two findings from that
21 survey may be of value to consider. First, 55 percent of respondents indicated a
22 willingness to pay more for improvements that would maximize electric system
23 reliability. And second, customers want more information from their utilities

1 during emergencies.” (Williams Report page 19).

2 Our plans are developed to take these issues into account.

3 **Q. Please explain the need for replacement of aging assets and system upgrades**

4 A. Capital investment is necessary to replace aging assets prior to failure and to
5 upgrade the system in specific areas in order to sustain existing reliability levels
6 and in some cases improve it. As with many western utilities, a large portion of
7 the Company’s existing asset base was installed in the 1950’s, 60’s and 70’s, and
8 due to normal aging processes, these assets are nearing the point of replacement,
9 which may be preceded by increased failures and higher maintenance costs. A
10 few examples of assets that are targeted for replacement include: obsolete oil-type
11 circuit breakers, station transformers with high-failure tap changers,
12 electromechanical station meters and relays, sub-transmission lines, distribution
13 lines, poles and cross arms, switchgear, and underground cable. The targeted
14 system upgrades include: storm hardening improvements to lines, lightning
15 performance improvements, expansion of substation SCADA systems improved
16 capability for load transfers in urban areas, infrastructure to support new
17 generation resource additions, and physical security enhancements dictated by the
18 Federal Energy Regulatory Commission and the National Electricity Reliability
19 Council. As the PacifiCorp’s system ages and demand increases place additional
20 requirements on the system, it is imperative that the Company keep pace with
21 these requirements to meet the service standards we believe our customers
22 deserve.

1 **Q. How do reliability issues contribute to the increased Company expenditures**
2 **in Utah?**

3 A. As more assets are added to the system, PacifiCorp's operation and maintenance
4 resources must be augmented. Essentially, with growth comes the need for
5 additional maintenance on the additional plant. Reliability can become an issue if
6 the Company's resources and maintenance activity levels do not keep pace with
7 this growth. If PacifiCorp fails to increase its existing resources to address this
8 growth, the Company will be left with resources that enable it to react only on the
9 most critical operations and maintenance work to maintain minimally acceptable
10 levels of system reliability. Reductions in customer service levels, and increased
11 cost due to overtime and unplanned repairs will result. The Company's goal is to
12 achieve longer term stability and balance in its operation, maintenance and capital
13 spending. Meeting this goal will result in continued public and employee safety
14 and an acceptable level of sustained system reliability.

15 **Q. What benefits will customers receive from these increased Company**
16 **expenditures?**

17 A. These expenditures will allow PacifiCorp to increase system reliability in Utah in
18 the face of the challenges posed by the combination of dramatic growth in
19 customers and loads and our aging asset base to serve these loads. As part of the
20 merger with Scottish Power, PacifiCorp agreed to implement a number of
21 performance standards and customer service guarantees. We have maintained an
22 excellent track record in fulfilling these commitments. In the most recent annual
23 report card of performance (March 2004), the Company succeeded in meeting

1 99.9 percent of the customer service objectives. In addition, an independent study
2 performed by TQS Research, Inc. found that PacifiCorp ranks number one in
3 overall customer service in a national survey of large commercial and industrial
4 electric customers. The Company would like to continue this level of excellence
5 in providing customers with quality service, while improving reliability.
6 However, given the increased demands PacifiCorp is facing in Utah, these
7 performance levels can only be maintained through increased capital spending
8 and a more systematic implementation of preventative maintenance.

9 **Implementation of Asset Optimization Strategies**

10 **Q. Please describe how the Company optimizes asset life and minimizes long-**
11 **term costs.**

12 A. PacifiCorp must maintain its assets with the objectives of (1) reliable customer
13 service, (2) extending asset lives, and (3) optimizing the cost/risk balance in
14 maintenance costs over the life of the assets. Utility assets are typically long
15 lived, possessing various operating characteristics and requiring appropriate
16 maintenance strategies. PacifiCorp and the utility industry are continually
17 seeking ways to optimize asset maintenance strategies and understand technical
18 performance characteristics as utility assets age. Since the merger with Scottish
19 Power, PacifiCorp has embraced an “Asset Management” strategy in which
20 maintenance strategies and policies are centrally managed through a group
21 specifically dedicated to this function. This Asset Management strategy uses data
22 and various tools to determine which assets receive maintenance and when that
23 maintenance will occur. Managing maintenance through an Asset Management

1 structure has facilitated implementation of proven practices Company-wide, based
2 on experience from operations in the various states in which the Company serves.
3 Best practices are also identified from other utilities and industry associations.
4 PacifiCorp's objective moving forward is to take what it has learned and apply it
5 to Utah assets by enhancing some maintenance policies and programs. The
6 planned spending increases in the FY2006 test period will bring these practices
7 into reality and deliver a number of the specific recommendations outlined in the
8 Storm Report filed with the Commission.

9 **Q. Please describe the key elements and activities associated with inspection and**
10 **maintenance and other drivers or activities that are part of the Company's**
11 **FY 2006 plans.**

12 A. The key activities in PacifiCorp's inspection, maintenance and other programs are
13 the following:

- 14 - Provide for planned maintenance and vegetation management that optimizes
15 system reliability while minimizing long term cost.
- 16 - Increase maintenance spending to achieve optimal cycles beginning in FY
17 2006.
 - 18 o Safety inspections every 2 years
 - 19 o Underground detailed inspections every 4 years
 - 20 o Detailed inspections of overhead systems every 10 years (after initial 5
21 year program is completed)
 - 22 o Test and treat of wood poles every 10 years
 - 23 o Fix correctable conditions within an average 24 month period
 - 24 o Perform preventative maintenance on major substation equipment to
25 extend life and prevent premature equipment failure
 - 26 o 3 year tree trimming and vegetation management cycle

27 **Other Activities**

- 28 - Reduce SAIDI (System Average Interruption Duration Index) minutes to 125
29 Company-wide over the next 10 years.

- 1 - Provide targeted capital investment programs for aging and deteriorated assets
- 2 to minimize long-term cost and improve reliability.
- 3 - Maintain call center response times for customer service
- 4 - Continue in FY 2006 with a number of customer guarantees
- 5 - Continue support of our state of the art technical training centers
- 6 - Continue and improve our safety standards and programs

7 **Q. Can you provide examples of how such programs will work?**

8 A. Yes. As indicated above, PacifiCorp is working towards having the entire
9 Company on a ten-year cycle for detail inspections and testing and treatment of
10 distribution and local transmission poles. One example of our programs is the ten
11 year cycle to optimize the balance between operational expenses and preventative
12 maintenance while extending the life of the assets (wood poles in this case) and
13 providing a reasonable level of system performance. PacifiCorp has prudent
14 operations and maintenance plans and will closely monitor progress on a
15 continuous basis.

16 **Q. What are the long-term advantages of increasing maintenance and capital**
17 **spending now?**

18 A. PacifiCorp is working to increase maintenance activity and spending now in order
19 to achieve a smoother and more predictable run-rate of operations and capital
20 spend over the long term. Striking an appropriate balance between operational
21 expenses and maintenance spending will extend the life of the assets, improve the
22 level of system performance, and minimize long-term costs. In short, it will
23 maximize the value of each dollar spent on the system, to the benefit of our
24 customers. The Company's experience demonstrates a correlation between
25 maintenance activities and customer reliability, coupled with the overall health of

1 utility assets. As noted above, a balance is necessary between operations work and
2 maintenance work. PacifiCorp has recently experienced steadily increasing costs
3 for both overhead and underground fault response and repair, and early in its
4 inspection cycles the Company is logging more correctible conditions than
5 anticipated. Targeting maintenance and capital replacement expenditures in areas
6 with increasing fault rates will help improve system performance. This approach
7 was supported by Williams Consulting Inc. who stated that the Company should:

8 “Mount a “catch-up” maintenance program in order to significantly reduce
9 the outstanding corrective maintenance items within a short term period...” (page
10 30).

11 **Q. Why are vegetation management costs forecast to increase in 2006?**

12 A. A review of our vegetation management efforts in Utah has shown that the tree
13 density in the state is nearly twice the density reported to PacifiCorp in a 1998
14 study conducted by a third party on contract with the Company. Although
15 vegetation management funding was doubled to more than 9 million dollars, this
16 level of spending has yielded a trim cycle of nearly 6 years. The focused 3-year
17 vegetation management cycle being undertaken by the Company using proven
18 methods will improve system performance in Utah. Making the expenditures
19 necessary to maintain safe clearances from energized lines is an important
20 investment for assuring a reliable electric system.

21 **Q. How does PacifiCorp go about making sure operations and maintenance is**
22 **performed in a timely, efficient and effective manner, and that funds are**
23 **spent appropriately for the customers’ benefit?**

1 A. Power Delivery verifies the status of achieving its goals through its budgeting,
2 planning and tracking systems and internal business control processes. There are
3 several examples in our work management, system planning, project scheduling
4 and asset tracking tools to monitor and measure performance. For example, our
5 Customer Call Center handling technology provides real time customer data,
6 while our Resource Utilization Tool tracks workforce needs and requirements for
7 our operations, maintenance and capital plans and it helps identify the levels of
8 contracting needed. Our Facilities Point Inspection Program is used to track
9 inspection cycles, results and conditions found on the system that need correction.
10 PacifiCorp also employs its SAP system to establish and manage cyclical
11 Preventative Maintenance Plans and collect maintenance cost data for
12 Transmission and Distribution (T&D) substations and apparatus. Another
13 example is the separation of the operations and maintenance budgets through the
14 use of an Activity Based Costing tool which tracks operation and maintenance
15 activities for both work units and costs per unit. We also use our Prosper Outage
16 reporting tool, developed and installed as one of the Scottish Power merger
17 commitments. This system tracks and monitors system performance and collects
18 our official customer outage data. Additionally, this past year PacifiCorp began
19 implementation of a Capital Investment Planning tool to aid in the decision
20 process. This process is required to prioritize the numerous capital investments
21 PacifiCorp must consider each year. PacifiCorp also uses Premivara software, a
22 well known industry tool, for planning and scheduling our many complex multi-
23 year T&D capital projects. Finally, the Company has financial processes and

1 systems to prioritize, track and monitor spending to our plans. All of these
2 systems and processes, and the staff that support, provide and use this
3 information, allows the Company to perform work in the most efficient and
4 effective manner, as well as at the lowest long-run cost to our customers
5 consistent with meeting the service quality standards we believe our customers
6 want and deserve.

7 **Q. Can PacifiCorp deliver its aggressive FY2006 plans and will customers see**
8 **benefits from this increase in spending?**

9 A. The answer to both questions is yes. We have stepped up our activity over the
10 past several years and have met our operations, maintenance and capital plans,
11 which were necessary to meet our customers' growth, safety and reliability needs.
12 An example of our performance can be seen in Exhibit UP&L__(DTG-4) and
13 Exhibit UP&L__(DTG-5). These exhibits graph several recent years of the
14 Company's actual spending against budget for Power Delivery OMAG and
15 Vegetation Management. They reflect that even during periods of increasing
16 activity and budgets, we have come within small margins of our overall targets.
17 This is evidence that with the resources we can move to the higher levels of
18 performance and reliability which we believe are necessary. The requested
19 increase in spending in this filing will allow us to maintain performance where
20 standards are being met and further, the additional spending will move us to the
21 higher levels of performance and service necessary for the long term benefit of
22 our system and our customers.

1 **Q. Is there any additional evidence that supports the plans to increase spending**
2 **in this area?**

3 A. Yes. In addition to my testimony that these expenses are necessary to enhance the
4 performance of this rapidly growing system, Williams Consulting Inc noted that
5 the current maintenance expenditures in Utah are fairly low on an industry basis.
6 Williams noted that the average maintenance expenditures in Utah in 2002 and
7 2003 were \$27 per customer compared to an industry average of \$45 per
8 customer. While we have been continuing to increase our spending during 2004
9 and 2005, which makes this comparison a little dated, I do believe that this further
10 validates the requirement to increase spending in this key area.

11 **Future Test Period**

12 **Q. Is it your belief that a future test period “best reflects” the conditions that**
13 **you will encounter during the time that rates are in effect?**

14 A. Yes it is. My planning and analysis shows that the Company requires additional
15 dollars not currently reflected in rates in order to effectively and prudently
16 manage the capacity and reliability of its transmission and distribution system to
17 the standards we believe our customers deserve. My testimony outlines the
18 various reasons for the required increase in expenditure, which in my judgment
19 are critical. These reasons include, the rapid growth in the numbers of customers
20 and the increase in average energy usage by new and existing customers, the
21 development and introduction of new programs aimed at increasing the
22 operational effectiveness of the resources and the funding required to implement a
23 number of the specific recommendations contained in the Storm Report that was

1 presented to the Commission on May 18, 2004. The Storm Report recognizes a
2 requirement and contains a clear PacifiCorp commitment to meet increased
3 standards in a number of key areas. The objective of all of these initiatives is to
4 ensure that our Utah customers enjoy quality, highly reliable electric service at a
5 time that the system serving them is growing and developing. With the rapid
6 growth of the system, the implementation of new approaches to asset management
7 and the implementation of a number of specific recommendations from the Storm
8 Report, it is clear to me that a future test period is required to adequately reflect
9 this needed expenditure.

10 **Q. If you receive these increases, how can the Commission be assured that this**
11 **additional funding will be used for the benefit of customers?**

12 A. As part of a fast growing business, I recognize that in this period of rapid system
13 growth there will be an ongoing need to continue a high level of investment in the
14 system in order to deliver high and increasing levels of reliability. Many of the
15 activities that I describe are ongoing assessment and enhancement programs, and
16 initiatives, such as vegetation management, that require a stable level of funding
17 going forwards in order to ensure that appropriate cycles are attained and then
18 maintained.

19 I believe that PacifiCorp has a very strong record of delivering Power
20 Delivery OMAG and Vegetation Management expenditures at or close to budget
21 as shown in Exhibit UP&L__(DTG-4) and Exhibit UP&L__(DTG-5), and that
22 the detailed programs and plans that are being developed ensure that the
23 projections are not only realistic but will be delivered during this period. It is

1 therefore my strong assertion that the level of expenditure I have addressed in my
2 testimony will indeed be made in an efficient and effective manner if the needed
3 revenue is made available in the rates set by the Commission at the conclusion of
4 this case.

5 **Q. So it is your testimony that the future projected spend is a fair reflection of**
6 **the expenditure that is necessary to maintain and develop a reliable system in**
7 **Utah?**

8 A. Yes, and it is also my testimony that revenues to cover these expenditure levels
9 are critical to meeting the service quality and reliability standards we believe our
10 customers want and deserve.

11 **Q. Does this complete your direct testimony?**

12 A. Yes, it does.