

Docket No. 09-_____
Exhibit No. PPL/400
Witness: John A. Cupparo

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP

Direct Testimony of John A. Cupparo
Populus to Terminal Transmission Line

November 2009

1 **Q. Please state your name, business address and present position with**
2 **PacifiCorp (“Company”).**

3 A. My name is John A. Cupparo. My business address is 825 N.E. Multnomah,
4 Suite 1600, Portland, Oregon. My position is Vice President of Transmission for
5 PacifiCorp.

6 **Qualifications**

7 **Q. Please describe your education and business experience.**

8 A. I have a Bachelor of Science degree in Computer Information Systems from
9 Colorado State University. My experience spans 24 years in the energy industry,
10 including oil, gas and electric utilities. The majority of my experience has been in
11 information technology supporting natural gas pipelines, energy commodity
12 trading and end-to-end electric utility operations. I have been employed at
13 PacifiCorp since September 2000. Prior to assuming my current position in
14 August 2006, I was Chief Information Officer for PacifiCorp. My responsibilities
15 have covered supporting many aspects of utility operations including commercial
16 and trading, outage management, customer service, transmission scheduling and
17 regulatory issues. I am responsible for all aspects of PacifiCorp’s main grid
18 transmission investment strategy, customer service, main grid planning, contract
19 administration and tariff management. I am the co-chair of the Northern Tier
20 Transmission Group (“NTTG”), which coordinates transmission planning,
21 transmission expansion, and project reviews with sub-regional and regional
22 planning organizations within the Western Electricity Coordinating Council
23 (“WECC”). I am also an elected class one voting member (transmission owner

1 class) of the WECC Board of Directors. As a member of the WECC Board of
2 Directors, I participate with other WECC members in overseeing WECC's
3 activities, including defining standards and policies to ensure reliability of the
4 western electric grid. I also hold a position on WECC's Transmission Expansion
5 Planning Policy Committee and the Reliability Coordination Committee.

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

7 A. The purpose of my testimony is to provide information on the Populus to
8 Terminal transmission line. The Populus to Terminal transmission line is the first
9 segment of the Energy Gateway transmission expansion plan to be constructed
10 and for which the Company is seeking cost recovery in this case. The Populus to
11 Terminal transmission line, and subsequent investments within the Company's
12 long term, comprehensive transmission expansion plan known as "Energy
13 Gateway," satisfy multiple objectives for efficiently operating a six-state
14 transmission system. The immediate benefit to PacifiCorp's customers in
15 California and elsewhere is a significant investment to enhance reliability and
16 improve transfer capability within the existing system, followed over time by
17 incremental capacity which is key to unlocking rich renewable resource hubs.

18 Specifically, my testimony will cover the following issues:

- 19 • Provide an overview of the Company's transmission system;
- 20 • Outline the Company's transmission expansion plan and provide details on the
21 Populus to Terminal line segment of this plan;
- 22 • Demonstrate that the Populus to Terminal transmission investment is
23 beneficial to customers as part of the overall long-term transmission plan

1 developed by the Company and comports with California public policy; and
2 • Finally, describe how the Populus to Terminal transmission investment helps
3 satisfy a commitment the Company made as part of the MidAmerican Energy
4 Holdings Company (“MEHC”) transaction.

5 **Q. What investment related to the Populus to Terminal transmission line is**
6 **included in the revenue requirement of this rate case?**

7 A. One of the first components of the Company’s comprehensive plan related to
8 investment in the transmission system is a new double circuit 345 kV
9 transmission line from the Populus substation near Downey, Idaho to the
10 Terminal substation in Salt Lake City, Utah. This line will be placed in service in
11 two phases. The first phase from the Ben Lomond substation (near Ogden, Utah)
12 to the Terminal substation will be in service by June 2010, and the second phase
13 from the Populus substation to the Ben Lomond substation will be in service by
14 December 31, 2010. This case includes approximately \$15.4 million of rate base
15 in the test period on a California-allocated basis for both phases of the
16 transmission line from Populus to Terminal. The testimony of Company witness
17 Mr. R. Bryce Dalley describes the revenue requirement calculations associated
18 with this transmission investment.

19 **Overview of PacifiCorp’s Transmission System**

20 **Q. Please briefly describe PacifiCorp’s transmission system.**

21 A. PacifiCorp owns and operates approximately 15,800 miles of transmission lines
22 ranging from 46 kV to 500 kV across multiple western states. As of December
23 31, 2008, PacifiCorp’s current total-Company net transmission plant in service is

1 approximately \$1.8 billion. PacifiCorp is interconnected with more than 80
2 generation plants and 15 adjacent control areas at approximately 124 points of
3 interconnection. To provide electric service to its retail and wholesale customers,
4 PacifiCorp owns or has interest in generation resources directly interconnected to
5 its transmission system with a system peak capacity of approximately 12,131
6 MW. This generation capacity includes a diverse mix of resources including coal,
7 hydro, wind power, natural gas simple cycle and combined cycle combustion
8 turbines, and geothermal.

9 Energy and demand requirements for PacifiCorp's customers in California
10 are delivered across the Oregon border and into the California service area via the
11 Company's transmission system and those assets contained within PacifiCorp's
12 Eastern and Western Balancing Areas. Energy can be delivered from the Western
13 Balancing Area from Oregon through the existing 115 and 69 kV systems into
14 northern California to PacifiCorp's retail customers. Energy can also be delivered
15 from the Eastern Balancing area through existing transmission assets originating
16 in Idaho and terminating in southern Oregon. PacifiCorp's Western Balancing
17 Area and related company transmission assets are not part of the California
18 Independent System Operator ("CAISO"). PacifiCorp's Western Balancing area
19 electrically connects to other transmission providers who are part of the CAISO
20 with interfaces at Malin substation in Oregon and the Cascade substation in
21 California. The interconnections provide electric reliability and the ability to
22 utilize point to point transmission service for energy sales and purchases between
23 the PacifiCorp balancing area and the CAISO for wholesale transactions under

1 PacifiCorp's Open Access Transmission Tariff ("OATT") contracts.

2 **Q. Please describe the availability of existing transmission capacity on the**
3 **system.**

4 A. The Company's 2008 Integrated Resource Plan ("IRP"), which was filed with the
5 California Public Utilities Commission ("CPUC") in May 2009, identifies the
6 need for investment in major new transmission facilities to provide ongoing
7 reliability and to meet the forecast loads of PacifiCorp's customers. The IRP
8 analysis is performed by evaluating loads and resource requirements over a 20-
9 year period.

10 ***“TRANSMISSION RESOURCES***

11 *While the Energy Gateway Transmission project was treated as part of the*
12 *base topology for the IRP models, PacifiCorp included three transmission*
13 *options that the System Optimizer could select. These options were*
14 *recommended by PacifiCorp's Transmission Department as additional*
15 *potential investments to supplement the Gateway project. The first option*
16 *was an incremental addition to the Energy Gateway West project. This*
17 *expansion option consisted of a 750 MW capacity increase from Path C in*
18 *Idaho/northern Utah to the West Main load area, representing Oregon*
19 *and northern California. This option was available beginning in 2015...”*

20 PacifiCorp's existing transmission system, as well as the transmission grid
21 across the western region, is severely constrained, and numerous regional study
22 groups have identified the pressing need for investment in new transmission
23 infrastructure. These studies are described in more detail later in my testimony.

24 Additionally, new federal standards that mandate increased transmission
25 system reliability along with PacifiCorp's recent operational experience show that
26 investing in PacifiCorp's transmission system is required to ensure the Company
27 has the capability to provide reliable transmission service under expected

1 operating conditions, and to maintain the transmission system capacity necessary
2 to deliver network load service and contractual point-to-point commitments.
3 Increasing PacifiCorp's transmission capacity will also provide the opportunity
4 for the Company to make off-peak energy sales, which are used to reduce overall
5 power supply costs. Lastly, additional transmission capacity provides the
6 Company added flexibility in the location and use of generating reserves and
7 flexibility to perform routine maintenance on transmission lines with minimal
8 risk, all of which reduce operating costs to customers.

9 **Overview of Energy Gateway Transmission Expansion**

10 **Q. Please generally describe how PacifiCorp's transmission expansion plan**
11 **became a component of integrated resource planning.**

12 A. As part of MEHC's acquisition of PacifiCorp, the Company performed a review
13 of the IRP process. From that review, the Company determined there was a need
14 for a long-term transmission investment strategy to support the long-term resource
15 needs of customers. Historically, IRPs were relatively silent on transmission
16 investments assuming transmission would follow generation investments. Given
17 the long-term needs of customers, existing transmission system constraints, the
18 time required, and the challenges associated with designing, permitting and
19 constructing transmission lines, transmission is now a key element of the
20 Company's IRP, as evidenced by the inclusion of Energy Gateway in
21 PacifiCorp's 2008 IRP.

22 **Q. Please generally describe Energy Gateway.**

23 A. Energy Gateway is a comprehensive transmission plan based on taking immediate

1 actions while keeping long-term needs in focus. Energy Gateway will enhance
2 reliability, reduce transmission system constraints and improve the flow of
3 electricity to PacifiCorp's customers. The Energy Gateway plan is comprised of
4 eight interrelated and interdependent transmission segments as outlined in Exhibit
5 PPL/401. The eight line segments within Energy Gateway have been grouped
6 and labeled as part of Gateway Central, Gateway West, Gateway South and the
7 Westside. Energy Gateway, when fully implemented, will traverse six states,
8 numerous communities and counties, significant areas of federally-administered
9 lands and will add approximately 2,000 miles of new transmission lines to
10 PacifiCorp's transmission system. Due to the interconnected nature of
11 PacifiCorp's transmission network, investments may be required at other facilities
12 in order to maximize the effectiveness and efficiency of the network. For Energy
13 Gateway, the eight identified transmission segments provide specific capabilities,
14 but they also support other transmission segments to enhance the benefits of
15 Energy Gateway.

16 **Q. Please describe Gateway Central relative to the overall Energy Gateway**
17 **plan.**

18 A. Gateway Central is comprised of two transmission segments (Populus to Terminal
19 and Mona to Oquirrh) that will improve reliability and transfer capability to the
20 existing system and also establish the necessary electrical interconnection
21 between Gateway West and Gateway South. The Gateway West and Gateway
22 South line segments, when complete, will be the first 500 kV lines to be installed
23 in Wyoming, southeast Idaho and Utah. Gateway Central will provide an

1 essential reliability backbone allowing Gateway West and Gateway South to
2 operate at a higher reliability and at an overall higher capacity than would
3 otherwise be possible without the Gateway Central interconnection. This
4 investment will not only add incremental transmission capacity, but will also
5 strengthen PacifiCorp's overall system while supporting future generation
6 resource development to benefit all PacifiCorp customers.

7 As described earlier in my testimony, the Populus to Terminal
8 transmission segment is comprised of two smaller sections, which in total extends
9 135 miles from the new Populus substation near Downey, Idaho, south to the
10 existing Terminal substation near the Salt Lake International Airport west of Salt
11 Lake City, Utah. The Populus to Terminal transmission segment is a key element
12 of the Energy Gateway's Gateway Central. Populus to Terminal is designated as
13 "Segment B" within Gateway Central in Exhibit PPL/401.

14 **Populus to Terminal Transmission Investment**

15 **Q. Please describe the transmission investment in more detail.**

16 A. Exhibit PPL/402 is a map of the Populus to Terminal transmission line segment.
17 Ben Lomond to Terminal is the southern section and is highlighted in red on the map.
18 Populus to Ben Lomond is highlighted in yellow, green and blue on the map. Phase I
19 from Ben Lomond to Terminal will be the first section of Populus to Terminal line to
20 be completed, and will be operational by June 30, 2010. Phase II from Populus to
21 Ben Lomond will be complete and in-service by December 31, 2010.

1 **Q. Please describe the regional transmission studies conducted related to**
2 **Energy Gateway and specifically the Populus to Terminal section, and what**
3 **these studies have found.**

4 A. Over the past decade, numerous studies have been issued that document the need
5 for new transmission in the Western United States. As early as 2002, the
6 Department of Energy National Transmission Grid Study identified the
7 Wyoming-Idaho interface as a major constrained interface. The study also found
8 that under optimal conditions, the Wyoming-Northern Utah interface is congested
9 during 50 percent or more of the hours during the year.¹

10 In 2004, the Rocky Mountain Area Transmission Study reached similar
11 conclusions and recommended expansion of the 345 kV transmission lines
12 connecting the Company's Bridger substation to points south and west as
13 critically needed improvements.² In addition, the Department of Energy's 2006
14 National Electric Transmission Congestion Study ("DOE Congestion Study")
15 identified several constrained transmission paths in the West as shown in Exhibit
16 PPL/403, including lines used to deliver electricity from generation plants in
17 Wyoming to loads in the West.³ Specifically, the DOE Congestion Study
18 illustrated that expansion of the Bridger West transmission facility is critical for

¹ National Transmission Grid Study at pp. 15, 18. A full copy of this report is available at <http://www.pi.energy.gov/documents/TransmissionGrid.pdf>.

² Rocky Mountain Area Transmission Study at Chapter 3-2, which shows the Bridger expansion as a critical expansion area from Wyoming to Northern Utah and Wyoming to Idaho. The full report is available at <http://psc.state.wy.us/htdocs/subregional/Reports.htm>.

³ The National Electric Transmission Congestion Study (August 2006) at pp.31-35. The transmission constraints identified in this study were identified by reviewing recent transmission studies such as those conducted by WECC and Seams Steering Group-Western Interconnection. The full report is available at http://nietc.anl.gov/documents/docs/Congestion_Study_2006-9MB.pdf.

1 relieving congestion from Wyoming to Northern Utah, and Wyoming to Idaho.⁴
2 Similarly, the Western Interconnection 2006 Congestion Assessment Study,
3 which was issued by the DOE Western Congestion Analysis Task Force,
4 identified areas of congestion in the Rocky Mountain states, and projected that
5 based on 2005 load and resource forecasts and a production model, many of the
6 paths associated with the various segments of the Energy Gateway Project would
7 be heavily congested.⁵

8 Reports initiated by the Western Governor's Association ("WGA") also
9 show certain paths in PacifiCorp's service territory (including the Populus to
10 Terminal segment) to be constrained.⁶ Lastly, the Department of Energy
11 sponsored a study through Idaho National Laboratories to assess the economic
12 impact of not building transmission. While the report focused on assessing the
13 economic impact on the Pacific Northwest, it also provides discussion and support
14 for the "hub and spoke" design which is similar to the Energy Gateway model for
15 connecting resource areas to load. The report also describes the interconnected
16 nature of transmission as being geographically dispersed, yet interdependent.⁷
17 Existing NTTG sub-regional transmission planning studies, currently in draft and
18 conducted in accordance with the Federal Regulatory Energy Commission's

⁴ Such expansion is addressed by the Segment E portion of the Project.

⁵ A full copy of this study is available at
http://www.oe.energy.gov/DocumentsandMedia/DOE_Congestion_Study_2006_Western_Analysis.pdf.

⁶ The full report is available at
<http://www.westgov.org/wga/initiatives/cdeac/TransmissionReportfinal.pdf>.

⁷ The Cost of Not Building Transmission: Economic Impact of Proposed Transmission Line Projects for the Pacific Northwest Economic Region. Full report is available at
<http://www.pnwer.org/Portals/0/Presentations/2008%20summit/Cost%20of%20not%20building%20transmission.pdf>.

1 (“FERC”) Order 890-A, show overall benefits to the region as a result of
2 PacifiCorp’s proposed Energy Gateway.

3 Additionally, the Company filed for incentive rates with FERC on July 3,
4 2008, which is analogous to a need determination. FERC granted the Company
5 incentive rate treatment, and of equal importance, the commission issued a 4-0
6 decision in which FERC stated:

7 *“...we find that PacifiCorp has adequately demonstrated that the*
8 *Project (with the exception of segment A) will ensure reliability and*
9 *reduce transmission congestion... We find that segments B through H of*
10 *the Project would establish for the first time a backbone of 500 kV*
11 *transmission lines in PacifiCorp’s Wyoming, Idaho and Utah regions.*
12 *This would provide a platform for integrating and coordinating future*
13 *regional and sub-regional electric transmission projects being considered*
14 *in the Pacific Northwest and the Intermountain West, connecting existing*
15 *and potential generation to loads in an efficient manner, thus reducing the*
16 *cost of delivered power. Also, the Petition cites the 2006 DOE National*
17 *Electric Transmission Congestion Study and the 2004 Rocky Mountain*
18 *Area Transmission Study in stating that that proposed Project will reduce*
19 *congestion or maintain reliability in the Western Interconnection.*
20 *Additionally, the project would establish a direct link between*
21 *PacifiCorp’s east and west control areas, providing numerous benefits*
22 *including increasing transfer capability, reducing the need for*
23 *curtailments, and reducing transmission congestion.” [¶39]*

24 Commissioner Kelly echoes the petition stating that:

25 *“...while Segments B and C provide a variety of benefits when*
26 *considered in isolation, they also enable PacifiCorp to achieve the*
27 *planned transfer capability rating of subsequent segments.”*

28 As noted in Exhibit PPL/401, Segment B is Populus to Terminal and Segment C
29 is Mona to Oquirrh. The full FERC order is provided as Exhibit PPL/404.

30 **Q. What factors does the Company consider before building new transmission?**

31 A. The Company considers several factors before building new transmission
32 facilities including the following:

- 1 • Current and future forecasts for demand and energy required from existing
2 and new resources to new and existing loads. These considerations are
3 addressed in the Company's 2008 IRP including demand-side management
4 and energy conservation programs;
- 5 • Alternatives including building local generation near load and/or energy
6 market purchases;
- 7 • The Company's ability to use existing land rights, existing rights-of-way, and
8 corridors;
- 9 • The use of upgrades to increase operability and reliability from existing
10 transmission lines and substations; and
- 11 • The Company's ability to maximize the capacity and capabilities of existing
12 facilities.

13 Because prudent transmission investments are typically large-scale to maximize
14 efficiencies and gain economies of scale, the benefits are realized over the long
15 term.

16 **Q. Once the decision is made to invest in new transmission, what is the process**
17 **for getting it built?**

18 A. Once the decision is made to invest in new transmission, capacity sizing of the
19 transmission line is taken into consideration to balance current and future needs.
20 Constructing long, linear facilities such as transmission lines is an extensive
21 process. Siting, permitting and constructing new transmission can take up to
22 seven years and potentially involves acquiring new rights-of-way and permits
23 from local, state and federal agencies. Maximizing the transmission capacity

1 placed in approved corridors is a critical consideration to ensure the disruption to
2 communities and landowners is minimized. There is also a series of design and
3 routing considerations to minimize the environmental, visual and human impacts.

4 **Q. What land rights and permits were acquired for Populus to Terminal?**

5 A. The Company holds all of the necessary land rights, either in easements or fee
6 ownership, between the Populus substation and the Terminal substation.

7 However, the Company was required to secure numerous permits and approvals
8 from federal and state entities, such as:

- 9 • The U.S. Army Corps of Engineers required permits for construction
10 within jurisdictional wetlands;
- 11 • The Federal Aviation Administration required aviation permits for
12 construction of Populus to Terminal near Salt Lake International Airport;
- 13 • The Utah and Idaho Departments of Transportation required permits from
14 railroad companies for roadway crossings, overhangs and easements;
- 15 • The Ogden-Brigham canal, including the U.S. Bureau of Reclamation,
16 required crossings permits as part of construction activities;
- 17 • The Utah Department of Wildlife Resources required a permit for crossing
18 Wildlife and Waterfowl Management Areas, with a separate agreement
19 required for construction within the Legacy Nature Preserve;
- 20 • The approval of the U.S. Fish & Wildlife Service, U.S. Forest Service and
21 Utah State Historical Preservation Office was also required as an element
22 of various wildlife & environmental habitat permits.

1 **Q. What permits were required by local governmental authorities for the**
2 **construction of Populus to Terminal?**

3 A. The Company holds a franchise agreement with each municipality and county
4 within the route that grants the necessary rights for the construction of the
5 Populus to Terminal transmission line. In addition, the Company secured
6 conditional use and/or special use permits from all cities and counties, based on
7 each community's requirements. The Utah Public Service Commission and the
8 Idaho Public Utilities Commission issued Certificates of Public Convenience and
9 Necessity in 2008. The Idaho Order stated:

10 *“Thus, Staff believes that the necessity of the Project should be*
11 *viewed in conjunction with energy resources that are constructed,*
12 *under way or planned. PacifiCorp elected to undergo a*
13 *transmission upgrade as part of its preferred resource portfolio of*
14 *an additional 2,000 MWs of renewable resources by 2013 in the*
15 *Company's 2007 IRP. A significant portion of these renewable*
16 *resources will be located in Wyoming. Staff then listed more than*
17 *500 MWs of renewable resources that are either under*
18 *construction or in the final stage of development. In response to a*
19 *Staff data request, PacifiCorp provided four alternatives that it*
20 *rejected because the Company did not believe that these would*
21 *provide sufficient capacity for the new resources. Staff agreed that*
22 *the Project was necessary in order for the Company to continue to*
23 *provide reliable service from these new resources to growing load*
24 *centers.”*

25 In the Utah Order the Commission noted several parties concurred with the need,
26 including the Division of Public Utilities:

27 *“The Division states it has examined underlying information upon*
28 *which a need for these additional transmission facilities may be*
29 *found and concludes it supports RMP's decision to build the*
30 *Transmission Line and confirms RMP's planned integration and*
31 *operation of the line with future utility operations and activities.*
32 *The Division agrees with RMP's conclusions that there is a need*
33 *for the Transmission Line and the Company's future utility service*

1 *will be more reliable and efficient with the Transmission Line's*
2 *addition."*

3 **Q. Please describe the approach the Company used to secure appropriate**
4 **resources to construct the new transmission.**

5 A. The Company initiated a competitive tendering process to receive blind, sealed
6 bids for the project work scope to be delivered on a turnkey, fixed-price,
7 guaranteed completion-date basis using an engineer, procure and construct form
8 of contracting. The competitive tendering process began in October 2007 and
9 provided two separate blind, sealed bidding opportunities. All bid responses were
10 due for submittal in May 2008 and again in July 2008 after the Company provided
11 additional information to bidders allowing a refinement of previously submitted
12 design solutions, and terms and conditions, including price. The Company
13 received and evaluated three qualified bids resulting from the May 2008 proposal
14 submissions. During the evaluation period one of the bidders withdrew its
15 participation. The Company received two competing proposals in July 2008 with
16 qualified prices of \$609 million and \$528 million respectively. After extensive
17 evaluations of bidder proposals and review of exceptions to work scope and base
18 terms and conditions from each bid proposal, the Company ultimately awarded
19 the contract at a value of approximately \$585 million in October 2008. The scope
20 of the bidding process included the Populus to Terminal segment, which includes
21 the sections outlined in Exhibit PPL/402.

22 **Q. Why did the Company use the engineer, procure and construct approach?**

23 A. The engineer, procure and construct solicitation is a common form of contracting
24 for large construction projects like the Populus to Terminal transmission segment

1 and is regarded as a prudent approach for cost control and managing design,
2 procurement and construction risks. This approach provides certainty relative to
3 schedule and cost outcomes for the benefit of customers, caps potential cost
4 escalations where possible based upon the occurrence of defined risks, and
5 ensures more timely delivery to support system needs and transmission reliability.

6 **Q. Please explain what you mean concerning capping costs based upon the**
7 **occurrence of identified risks.**

8 A. The fixed-price engineer, procure and construct approach has minimal provisions
9 for cost and schedule variances. Where cost and schedule variances were not
10 included in the fixed price for certain contingent aspects of the work scope, these
11 items were identified as risk items and a contingent capped price and schedule
12 allowance was agreed upon prior to contract execution should any of these risk
13 items materialize. Contingent risk items were limited to defined occurrences such
14 as weather delays, environmental impacts and sub-surface ground conditions.

15 **Q. How will the Populus to Terminal transmission line benefit PacifiCorp**
16 **customers?**

17 A. The Populus to Terminal transmission line and subsequent investments within
18 Energy Gateway satisfy multiple objectives for efficiently operating a six-state
19 transmission system in the long term. The initial benefit to PacifiCorp customers
20 is a significant investment to enhance reliability and improve transfer capability
21 within the existing system. In the future this investment will also provide benefits
22 of incremental capacity to deliver generation resources within the Company's
23 2008 IRP. Reliability is fundamental to effectively and efficiently managing the

1 Company's six-state transmission system. As a federally-regulated transmission
2 provider, the Company must comply with reliability standards mandated by
3 FERC through the North American Electric Reliability Corporation ("NERC")
4 and WECC. By meeting these standards the Company continues to maintain a
5 stable and reliable system during a variety of operating conditions, which
6 minimizes potential outages to all customers and financial impacts of having to
7 deliver higher-cost resources if required. At a minimum, Populus to Terminal
8 addresses reliability for all PacifiCorp customers. Populus to Terminal also
9 increases transfer capability from north to south and south to north across the
10 Company's transmission system. By doing so, the Company addresses a key
11 constraint (Path C), meets an MEHC transaction commitment and improves the
12 Company's ability to import and export lower-cost resources depending on
13 seasonal needs and operating conditions.

14 The benefit to all PacifiCorp customers is the ability of the Company to
15 use the least-cost dispatch of resources to serve loads and manage power costs by
16 selling excess energy off system or importing lower-cost market energy to serve
17 load. Also, by providing incremental transmission capacity through this
18 transmission segment, the Company has more flexibility in locating reserves on
19 PacifiCorp-owned generation, and making full use of the Northwest Power Pool
20 reserve-sharing program. This program allows the Company to cover reserve
21 requirements without having to build additional generation. Increasing the import
22 capability allows better access to those reserves, thereby reducing costs for all
23 customers. Reliability and transfer capability provide benefits based on the

1 existing system.

2 Populus to Terminal also establishes incremental capacity to provide long-
3 term benefits to PacifiCorp customers. Wyoming has been long identified as a
4 rich resource location for multiple generation resource types, most recently as a
5 high-quality renewable resource hub. The barrier to accessing those resources for
6 customers and producers alike has been transmission constraints in Wyoming and
7 other states. Populus to Terminal is the first step within the Energy Gateway
8 strategy to unlock those rich resources. Once unlocked, benefits will accrue to
9 energy consumers and energy producers by allowing economic resources to be
10 developed and delivered across the Company's service territory. Energy Gateway
11 also satisfies California's public policy objectives as set out in California's
12 Energy Action Plan and the California Renewable Energy Transmission Initiative
13 ("RETI"), which will facilitate additional transmission and generation
14 development to benefit the Company's customers and ultimately the western
15 interconnect.

16 **Q. Has the state of California recognized the importance of investment in**
17 **transmission infrastructure?**

18 A. Yes. The State of California positioned itself as an early leader in recognizing the
19 importance of investment in transmission infrastructure. For example,
20 California's Energy Action Plan II, jointly prepared by the CPUC and the
21 California Energy Commission and published in October 2005 found:

22 *"An expanded, robust electric transmission system is required to*
23 *access cleaner and more competitively priced energy, mitigate grid*
24 *congestion, increase grid reliability, permit the retirement of aging*

1 *plants, and bring new renewable and conventional power plants on*
2 *line.”⁸*

3 To the same end, the RETI Mission Statement, dated April 25, 2008:

4 ***“Mission and Purpose***
5 *Meeting California’s renewable energy policy goals will require*
6 *rapid development of renewable resource areas throughout the*
7 *state and possibly in adjoining states. It will also require the*
8 *construction of new transmission infrastructure to deliver energy*
9 *from those renewable resource areas to the electric grid. This*
10 *effort must be guided by an understanding of the economic and*
11 *environmental impacts of this development so that it progresses in*
12 *a logical and appropriate manner. RETI was formed in*
13 *recognition of the significant amount of work that needs to be done*
14 *in a coordinated manner to meet these goals.”⁹*

15 **Q. Is the Company’s investment in Energy Gateway and specifically the**
16 **Populus to Terminal line compatible with the goals of the Energy Action Plan**
17 **and the RETI?**

18 A. Yes. Populus to Terminal is the first step to increase transmission capacity from
19 within the Company’s six-state system. It will add significant incremental
20 transmission capacity to currently-constrained existing transmission between
21 southeast Idaho and northern Utah and further facilitate a stronger interconnection
22 between systems in the Pacific Northwest, including California, and the rest of
23 PacifiCorp’s system. Energy Gateway will also facilitate the development of
24 generation resources by providing transmission capacity from proven areas of
25 resource development to load centers across the Company’s service territory. The

⁸ *State of California Energy Action Plan II*, page 10. The full Plan is available at <http://docs.cpuc.ca.gov/published/REPORT/51604.htm>.

⁹ *California Renewable Energy Transmission Initiative Mission Statement* (April 25, 2008), Page 3. The full Mission Statement is available at http://www.energy.ca.gov/reti/Mission_Statement.pdf.

1 Populus to Terminal transmission is the first step in the Energy Gateway strategy
2 and aligns with the mission and purpose of the Energy Action Plan and the RETI.

3 **MEHC Transaction Commitments**

4 **Q. Did MEHC and PacifiCorp make specific commitments related to investment**
5 **in PacifiCorp's transmission system as part of the acquisition approval**
6 **process?**

7 A. Yes. At the time of the acquisition of the Company by MEHC, many parties
8 wanted to see the Company make transmission infrastructure investments to
9 support the future demands and growth of its customers. As a result, MEHC
10 made specific commitments and developed plans for a significant capital
11 expansion program across the system. As part of the process of approval by the
12 CPUC of the acquisition of PacifiCorp in 2006, MEHC committed to improve
13 capacity on a constrained path in Utah known as Path C. Specifically, MEHC
14 agreed to increase transfer capacity on Path C by 300 MW.¹⁰ Populus to
15 Terminal improves the capacity on Path C and has a planned increase in transfer
16 capacity of 1,400 MW when combined with other segments of Energy Gateway.
17 As such, the Populus to Terminal transmission segment will significantly improve
18 a point of constraint on the system that currently affects numerous transmission
19 customers, strengthen reliability and enable the Company to achieve the planned
20 transfer capability rating of subsequent Energy Gateway segments.

¹⁰ California MEHC Acquisition Commitment 34a, A.05-07-010, D.06-02-033.

1 **Conclusion**

2 **Q. Please summarize your conclusions.**

3 A. New transmission is essential to meet load growth, enhance transmission system
4 reliability and provide capacity to integrate renewable resources for the long-term
5 benefit of customers. Populus to Terminal is the first step to increase
6 transmission capacity within PacifiCorp's six-state transmission system and to
7 further facilitate a stronger interconnection to systems in the Pacific Northwest,
8 including California. This investment and subsequent investments in Energy
9 Gateway support California infrastructure policy and are prudent, cost effective
10 and beneficial to customers.

11 **Q. Is the inclusion of Populus to Terminal in California rates in the public
12 interest and if so, why?**

13 A. Yes, this investment is in the public interest. The Populus to Terminal and
14 subsequent investments within Energy Gateway satisfy multiple objectives for
15 efficiently operating a six-state transmission system. The initial benefit to
16 PacifiCorp's customers is a significant investment to enhance reliability and
17 improve transfer capability within the existing system. In the future it will also
18 provide benefits by establishing incremental capacity to deliver the resources
19 within the Company's 2008 IRP, which is a key to unlocking rich renewable
20 resource hubs for the benefit of all PacifiCorp customers and ultimately the
21 western interconnect.

22 **Q. Does this conclude your testimony?**

23 A. Yes.