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IDAHO PUBLIC  
UTILITIES COMMISSION

**BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION**

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In the matter of the Application of )  
Rocky Mountain Power for a Certificate )  
of Convenience and Necessity Authorizing )  
Construction of the Populus to Terminal )  
345 kV Transmission Line Project )

**DIRECT TESTIMONY OF  
JOHN CUPPARO**

Case No. PAC-E-08-03

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**Direct Testimony of John Cupparo**

**APRIL 2008**

1 **Q. Please state your name, business address, and present position.**

2 A. My name is John Cupparo. My business address is 825 NE Multnomah, Portland,  
3 Oregon, 97232. My present position is Vice President of Transmission.

4 **Q. How long have you been in your present position?**

5 A. I have been in my present position since August, 2006. Before being appointed to  
6 this position I was Chief Information Officer for PacifiCorp.

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

8 A. I have a Bachelor Science degree in Computer Information Systems from  
9 Colorado State University. My experience spans 23 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. My job responsibilities have covered many  
14 aspects of utility operations – commercial & trading, outage management,  
15 customer service, transmission scheduling and regulatory issues. My experience  
16 within PacifiCorp includes management of multi-function organizations, large  
17 project delivery and resolving complex scheduling and contract scenarios.

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

19 A. The purpose of my testimony is to establish the purpose and need for the  
20 Populus-to-Terminal 345 kV transmission line (the “Transmission Project” or  
21 “Project”).

22 **Q. Would you please summarize your testimony in this proceeding?**

23 A. In summary, the Transmission Project is needed to support long term load growth

1 and strengthen the overall transmission system. By constructing this Project,  
2 overall reliability of the transmission system will be enhanced by adding  
3 incremental new capacity for northbound and southbound flows between SE  
4 Idaho and Utah. In addition to load service requirements this Project will also  
5 improve our ability to recover from certain system and plant outage conditions.  
6 These conditions typically occur during winter/summer peaks and when  
7 generation or transmission forced outage events occur in various sections of the  
8 Company's eastern control area.

9 **Q. Please describe the Transmission Project.**

10 A. The major components of the project consist of a substation and the transmission  
11 line. A new substation (referred to as the "Populus Substation") will be  
12 constructed near the existing Jim Bridger 345 kV transmission line corridor in  
13 southeast Idaho near the town of Downey. A new double-circuit 345 kV  
14 transmission line will be constructed from the Populus Substation to the existing  
15 345 kV Terminal Substation in Salt Lake City, Utah southwest of the Salt Lake  
16 International Airport. A map showing the route of the Transmission Line is  
17 attached as Exhibit A; minor adjustments to the route may occur during final  
18 design. The transmission line will also tie into the existing Ben Lomond  
19 Substation in Box Elder County, Utah. Initially, only a 345 kV substation yard  
20 will be developed at the Populus Substation and the existing Jim Bridger-Borah,  
21 Jim Bridger-Kinport, and Ben Lomond-Borah 345 kV lines will be looped in and  
22 out of the Populus Substation. However, the Populus Substation will be  
23 configured to facilitate the addition of planned future 345 kV and/or 500 kV

1 transmission lines. The Ben Lomond Substation and Terminal Substation will be  
2 expanded to accommodate the new 345 kV transmission lines and termination  
3 points.

4 **Q. What analysis or process did the Company base its determination that**  
5 **additional transmission capacity was need?**

6 A. The Company utilizes an Integrated Resource Plan (“IRP”). this is a public  
7 process used to develop a framework for the prudent future actions required to  
8 ensure the Company continues to provide reliable and least cost electric service to  
9 its customers, while striking an expected balance between cost and risk over the  
10 planning horizon and taking into consideration environmental issues and the  
11 energy policies of our states. As stated in Chapter 2 of the 2007 IRP,  
12 “PacifiCorp’s IRP mandate is to assure, on a long-term basis, an adequate and  
13 reliable electricity supply at a reasonable cost and in a manner ‘consistent with the  
14 long-run public interest.’”

15 **Q. How does this Transmission Project meet those IRP requirements ?**

16 A. The Project is designed to meet load growth and enhance grid reliability. Based  
17 on the Company’s 2007 Integrated Resource Plan (“IRP”) forecasts, PacifiCorp’s  
18 network load obligation, is expected to grow during the next ten years at an  
19 annual average rate of 3 percent. In addition, planning reserves as required to  
20 maintain reliability obligations will increase. The existing transmission capacity  
21 from southeastern Idaho into Utah is fully utilized and no additional capacity can  
22 be made available without the addition of new transmission lines. The primary  
23 purpose of this Project is to add significant incremental transmission capacity

1 between Southeast Idaho and Northern Utah and further to facilitate a stronger  
2 interconnection to systems feeding Idaho, Wyoming and the Northwest in general.  
3 The Company determined that the best means of making a significant incremental  
4 increase in transmission capacity necessary to continue to reliably and  
5 economically serve these growing electrical loads would be to construct a new  
6 double circuit transmission line connecting the southeast Idaho transmission  
7 system to the Utah load center in the Wasatch Front. The addition of these new  
8 345 kV circuits will not only provide access to existing and future generating  
9 resources, but will enhance the reliability of the existing system. I believe the  
10 recognized need for such improved transmission capability was what led  
11 MidAmerican Energy Holdings Company and other parties to agree upon the  
12 commitment to increase the transmission capacity from Idaho to Utah by June  
13 2010. This commitment was made as part of the acquisition of PacifiCorp in  
14 2006.

15 **Q. Were alternatives to the Project considered?**

16 A. Yes, two other alternatives were considered, but rejected. The first alternative  
17 was to not build the line. This option was rejected since it did not provide any  
18 new incremental transmission capacity and precluded the ability of new resources  
19 to be delivered into Utah from Wyoming, Idaho, or the Northwest in general.  
20 New incremental transmission capacity is needed for both load service and for  
21 contingencies. Another alternative considered was to rebuild some of the existing  
22 138 kV lines interconnecting Utah and Southeast Idaho. This alternative provided  
23 only a small incremental increase of 300 MWs in transmission capacity across the

1 currently constrained path between Southeast Idaho and Utah. In addition to the  
2 marginal increase in transmission capacity this alternative had serious  
3 constructability issues as it required key segments of the path to be removed from  
4 service for extended periods as existing facilities were upgraded. This placed  
5 significant exposure to the overall transmission system serving the area and  
6 exposure to Rocky Mountain Power customers during construction. As this  
7 alternative did not meet the long-range resource plans for the 10 and 20-year  
8 periods, but had only small increases in over all transmission capacity and  
9 unacceptable reliability exposures during construction it was determined that this  
10 option was insufficient to meet long -term customer needs.

11 **Q. Please describe further why the Project was selected?**

12 A. The Project was selected based on several factors:

- 13 • The Project will add significant incremental transmission capacity  
14 (planned rating 1,400 MWs) across the current constrained transmission  
15 path
- 16 • The Project will allow import of up to 1,400 MWs of forecast renewable  
17 resources capacity from Wyoming and Southern Idaho. This new  
18 capacity is required based on long-term planning horizons of 10 years or  
19 more.
- 20 • The Project will use some existing corridors that were acquired just for  
21 this purpose and optimizes use of limited and scarce transmission corridor  
22 lands.
- 23 • The Project can be constructed with existing facilities remaining in

1 service without increased reliability exposure to the current system.

- 2 • Currently line and station maintenance windows are limited. When  
3 completed, this Project will improve our ability to perform required  
4 maintenance without significant derate of the system, and it will reduce  
5 outage risks when portions of transmission facilities are removed from  
6 service for maintenance.

7 As I have indicated, flows across Path C, which is the existing transmission path  
8 that the Populus-to-Terminal line will supplement, is a heavily used path within  
9 Rocky Mountain Power's system and the WECC. The Project satisfies not only  
10 the load growth requirement, but strengthens the system for Rocky Mountain  
11 Power customers generally.

12 **Q. How will the Transmission Project benefit Rocky Mountain Power**  
13 **customers?**

14 A. The Transmission Project will provide an efficient and reliable supply of  
15 transmission capacity to meet existing and future electrical loads by June 2010.  
16 Without the new capacity, PacifiCorp would have to rely on the existing  
17 transmission interconnections to the Desert Southwest, Central Utah, Four  
18 Corners, and Eastern Wyoming. These transmission paths are currently fully  
19 utilized and do not provide any meaningful transmission capacity required for  
20 future projected load. Without the increased transmission capacity provided by  
21 the Project, PacifiCorp would be faced with an increased and unacceptable risk of  
22 not being able to meet its load service obligations during all periods. The Project  
23 will enhance the Company's ability to provide reliable and efficient service to all

1 customers. Further, in order to provide low-cost energy, the Company must have  
2 the ability to acquire power from numerous generation sources in order to  
3 negotiate the most competitive pricing. By adding transmission capacity we  
4 expand our ability and options to obtain additional generation sources at  
5 competitive pricing. Currently there is only one 345 kV line from Idaho to the  
6 Wasatch Front in Utah. The Transmission Project will result in a stronger  
7 interconnection with Idaho Power Company and the existing Wyoming-to-Idaho  
8 transmission system, as well as providing better transmission system access to the  
9 Northwest Power Pool and electrical generation reserves. The Transmission  
10 Project, especially when complemented with the other proposed Energy Gateway  
11 projects, will also facilitate the development of renewable and other generation  
12 sources in Idaho and Wyoming by providing transmission capacity from proven  
13 areas of resource development to load centers. Generally, the addition of the  
14 Transmission Project will be an important piece in strengthening the Western  
15 grid's transmission infrastructure, which I believe is necessary, based upon our  
16 customers long-term load growth projections, and the contingencies and  
17 restrictions we are beginning to see on the network during outage conditions. The  
18 Project is widely regarded as necessary, as indicated in the Rocky Mountain Area  
19 Transmission Study (RMATS) report dated September 2004 Executive Summary  
20 Pages III, IV and V, and Chapter 3 pages 3-1 to 3-5. Also, reports initiated by the  
21 Western Governor's Association showed Path C as a constraint that needs to be  
22 addressed.



1 **Q. Will the Transmission Project provide increased reliability for the**  
2 **Company's wholesale transmission customers?**

3 A. Yes. Besides PacifiCorp, Utah Associated Municipal Power Systems  
4 ("UAMPS"), relies on Utah-based generation to support loads in Idaho. Increased  
5 capacity in the northbound direction provides better reliability for long-term load  
6 service in Idaho. Without increased northbound transmission capacity, both  
7 PacifiCorp and UAMPS would be required to find alternative resource suppliers  
8 for Idaho loads, potentially increasing their purchased power costs. In addition,  
9 the current Path C is utilized by other transmission customers as a means to move  
10 short-term and non-firm energy into and from the northwest. Increasing capacity  
11 across this path will significantly improve a point of constraint on the system that  
12 currently affects numerous transmission customers.

13 **Q. Will the Transmission Project provide other benefits to the Company's**  
14 **transmission system?**

15 A. Yes. As has been seen in the West as well as other parts of the country, the  
16 transmission grid can be affected in its entirety by what happens on an individual  
17 transmission line. For example; the transmission path between Idaho and Utah is  
18 comprised of several individual transmission lines or line segments. A single  
19 outage on any of the individual lines due to storm, fire, or other external human  
20 interference can and does cause significant reductions in transmission capacity.  
21 This reduction occurs on a portion of the system between Idaho and Utah that is  
22 already constrained at times with all elements in service, and can cause adverse  
23 impacts on other portions of the Company's transmission serving Idaho and Utah.

1           Additionally, these lines improve our ability to send energy from the northwest to  
2           the southwest and from the southwest to the northwest depending on economic  
3           conditions. Limitations on our ability to move energy across these lines can  
4           impact costs to serve our customers and can reduce potential revenue credits from  
5           third-party wheeling purchases. Strengthening this path with the new  
6           transmission line will benefit all customers due to these factors.

7   **Q.    Are there other benefits you see from this Project?**

8   A.    Yes. While this Project provides the next necessary increment of transmission  
9           capacity it also supports and complements other future transmission investments  
10          that are currently proposed by PacifiCorp and other utilities in the region. This  
11          Project positions PacifiCorp to be strongly interconnected to other regional  
12          projects currently being planned and provides options for access to additional  
13          resources.

14   **Q.    Is the Company seeking a determination of rate treatment for the cost of the**  
15          **Transmission Project at this time?**

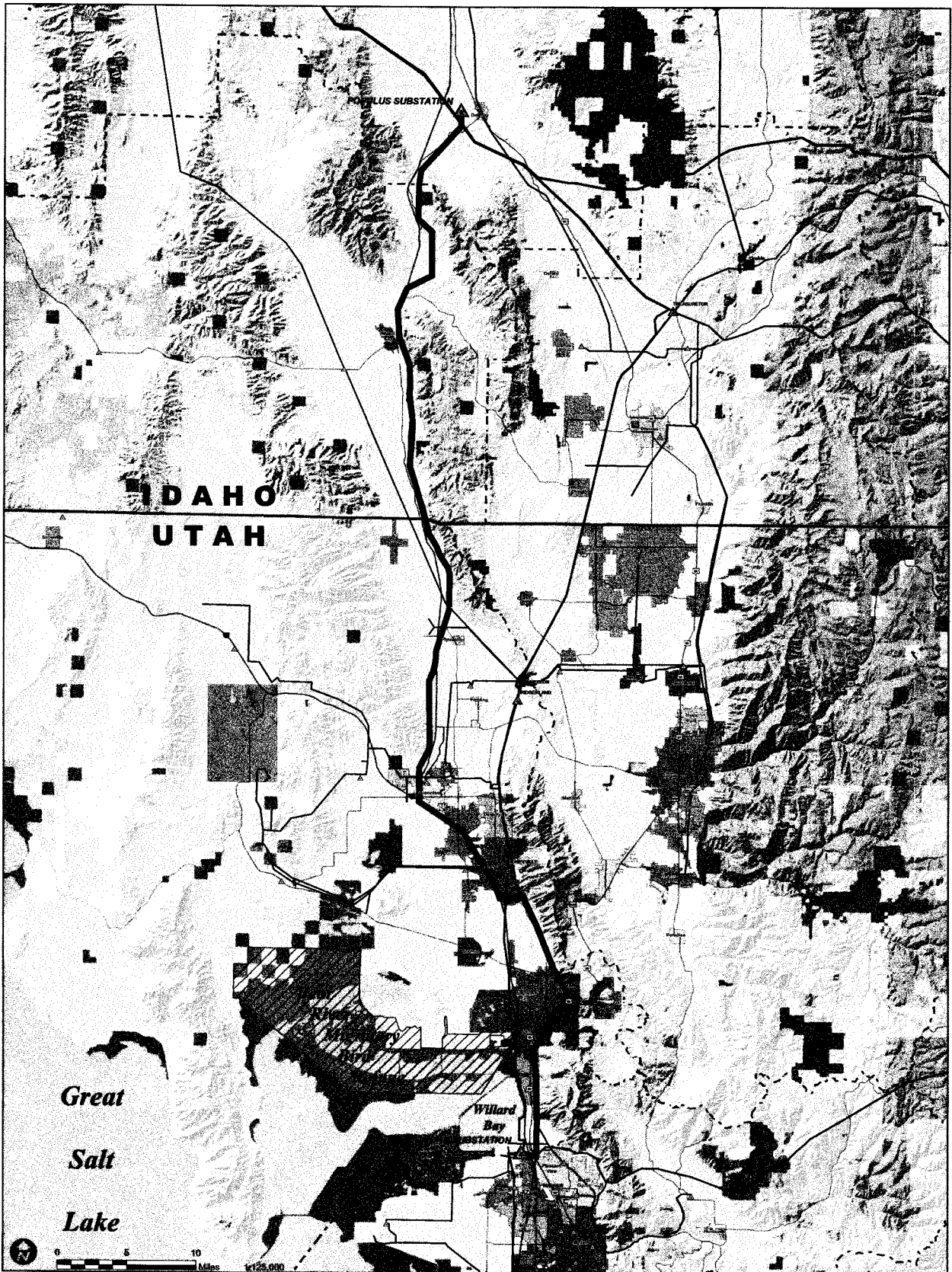
16   A.    No. Cost recovery is not being sought through this filing but will be made  
17          through a future general rate case.

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

19   A.    Yes.

**EXHIBIT A**

**TRANSMSSION LINE CORRIDOR ROUTE MAP**



Legend	General Reference Features	Existing Transmission Features
Selected 345kV Transmission Corridor (approximate location)	U.S. Forest Service	345kV Transmission Line
	Bureau of Land Management	230kV Transmission Line
	Department of Defense	115/138kV Transmission Line
	National Park Service	48kV Subtransmission Line
	U.S. Fish and Wildlife Service	Power Plant
	Utah Department of Wildlife Resources	Substation
	State of Utah / State of Idaho	Substation

DRAFT

SOURCES: Imagery, MAP 2000; Political Boundaries and Transportation, ESRI; Transmission Lines and Substations, PacifiCorp  
 NOTE: Transmission systems and substation locations are from PacifiCorp GIS Department. Information is schematic and does not necessarily represent accurate locations.

March 31, 2007



**345kV Transmission Line Route  
 POPULUS TO BEN LOMOND 345KV TRANSMISSION PROJECT**