Q. Please state your name, business address and present position with Rocky Mountain Power (the Company), a division of PacifiCorp.

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

Qualifications

Q. Please describe your education and business experience.

A. I have a Bachelor of Science degree in Computer Information Systems from Colorado State University. My experience spans 24 years in the energy industry, including oil and, gas and electric utilities. The majority of my experience has been in information technology supporting natural gas pipelines, energy commodity trading and end-to-end electric utility operations. I have been employed at PacifiCorp since September 2000. Prior to assuming my current position in August 2006, I was Chief Information Officer for PacifiCorp. My responsibilities have covered supporting many aspects of utility operations including; commercial and trading, outage management, customer service, transmission scheduling and regulatory issues. I am responsible for all aspects of PacifiCorp's main grid transmission investment strategy, customer service, main grid planning, contract administration and tariff management. I am the co-chair of the Northern Tier Transmission Group ("NTTG"), which coordinates transmission planning, transmission expansion, and project reviews with sub-regional and regional planning organizations within the Western Electricity Coordinating Council ("WECC"). I am also an elected class one voting member (transmission owner class) of the WECC Board of Directors. As a member of the Board of Directors, I participate with other WECC members in overseeing WECC's activities, including defining standards and policies to ensure reliability of the western electric grid. I also hold a position on WECC's Transmission Expansion Planning Policy Committee, the Scenario Planning Steering Group, and the Reliability Coordination Committee.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide the Commission with information on the Populus to Ben Lomond transmission line. The Populus to Ben Lomond transmission line for which the Company is seeking cost recovery in this case, is the remaining section of the Populus to Terminal transmission line segment. The Populus to Terminal transmission line, and subsequent investments within the Company's long-term, comprehensive transmission expansion plan known as "Energy Gateway," satisfy multiple objectives of efficiently operating a six-state transmission system. The benefit to Utah and all Rocky Mountain Power customers is initially to enhance reliability and improve transfer capability within the existing system, followed by establishing incremental capacity, which is key to unlocking rich generation resource areas. Specifically, my testimony includes the following:

- An overview of the Company's transmission system;
- An outline of the Company's Energy Gateway transmission expansion plan and the details on the Populus to Terminal segment as part of this plan;

- An analysis demonstrating that the Populus to Ben Lomond transmission line, the remaining section of the Populus to Terminal transmission segment, is beneficial to customers as part of the overall long-term transmission expansion plan developed by the Company; and
- Finally, a description of how the Populus to Ben Lomond transmission investment helps satisfy a commitment the Company made as part of the Mid-American Energy Holdings Company ("MEHC") transaction.

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

A. This case includes approximately $548 million of capital investment on a total Company basis for the remaining section of the line, the Populus to Ben Lomond section that will be in-service by November 16, 2010.

Overview of PacifiCorp's Transmission System

Q. Please briefly describe PacifiCorp's transmission system.

A. PacifiCorp owns and operates approximately 15,800 miles of transmission lines ranging from 46 kV to 500 kV across multiple western states. As of December 31, 2009, PacifiCorp's current total Company net transmission plant in service is equal to approximately $2.1 billion. PacifiCorp is interconnected with more than 80 generation plants and 15 adjacent control areas at approximately 124 points of interconnection. To provide electric service to its retail customers PacifiCorp owns or has interest in generation resources directly interconnected to its transmission system with a system peak capacity of approximately 12,131 MW. This generation capacity includes a diverse mix of resources including coal, hydro, wind power, natural gas simple cycle and combined cycle combustion turbines, and geothermal.

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

A. PacifiCorp's existing transmission system, as well as the transmission grid across the western region, is severely constrained, and numerous regional study groups have identified the pressing need for investment in new transmission infrastructure.

Q. Please describe the findings of the regional transmission studies related to Energy Gateway and specifically the Populus to Terminal segment.

A. Over the past decade, numerous studies have documented the need for new transmission in the Western United States. As early as 2002, the Department of Energy National Transmission Grid Study identified the Wyoming-Idaho interface as a major constrained interface, and found, that under optimal conditions, the Wyoming-Northern Utah interface is congested during 50 percent or more of the hours during the year.[1]

In 2004, the Rocky Mountain Area Transmission Study reached similar conclusions, the result of which was a recommended expansion of the 345 kV transmission lines connecting the Bridger substation to points south and west as critically needed improvements.[2] In addition, the Department of Energy's 2006 National Electric Transmission Congestion Study ("DOE Congestion Study")

[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] RMATS 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

identified several constrained transmission paths in the West as shown in Exhibit RMP___(JAC-1), including lines used to deliver electricity from generation plants in Wyoming to loads in Utah and Oregon.[3] Specifically, the DOE Congestion Study illustrated that the expansion of the Bridger West facility is critical for relieving congestion from Wyoming to Northern Utah, and Wyoming to Idaho.[4] Similarly, the Western Interconnection 2006 Congestion Assessment Study, which was issued by the DOE Western Congestion Analysis Task Force, identified areas of congestion in the Rocky Mountain states, and projected that based on 2005 load and resource forecasts and a production model, many of the paths associated with the various segments of the Energy Gateway Project were forecasted to be heavily congested.[5]

Reports initiated by the Western Governors' Association ("WGA") also show certain paths in PacifiCorp's service territory (such as the Populus to Terminal segment) to be constrained.[6] Lastly, the Department of Energy sponsored a study through Idaho National Laboratories to assess the economic impact of not building transmission. While the report focused on assessing economic impact on the Pacific Northwest, it also provides discussion and support for the "hub and spoke" design which is similar to the Energy Gateway model for

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[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 SSG-WI. The full report is available at http://nietc.anl.gov/documents/docs/Congestion_Study_2006-9MB.pdf.

[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.

connecting resource areas to load. The report also describes the interconnected nature of transmission as being geographically dispersed, yet interdependent.[7]

Existing NTTG sub-regional transmission planning studies, conducted in accordance with the Federal Regulatory Energy Commission's ("FERC") Order 890-A, show overall benefits to the region as a result of PacifiCorp's proposed Energy Gateway.[8] Additionally, the Company's request for incentive rate treatment was granted by the FERC on July 3, 2008, which is analogous to a need determination[9]. The full FERC order is provided in Exhibit RMP___(JAC-2).

Further information regarding the existing transmission system limits and operational constraints in the Populus to Terminal line is discussed in Mr. Darrell T. Gerrard's testimony.

Q. Please describe any other documentation that points to the need for the Energy Gateway project and the Populus to Terminal transmission line.

A. On September 4, 2008, this Commission approved the Certificate of Public Convenience and Necessity for the Populus to Terminal transmission line, in Docket No. 08-035-42, Report and Order Granting Certificate and Certificate of Public Need and Necessity. The Commission also approved cost recovery of the

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[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.

[8] Northern Tier Transmission Group 2008-2009 Biennial Transmission Plan Report full report is available at http://nttg.biz/site/index.php?option=com_docman&task=cat_view&gid=220&Itemid=31

[9] PacifiCorp, Docket No. EL08-75-000, "Order On Petition For Declaratory Order" (October 21, 2008); 125 F.E.R.C. ¶ 61,076 (2008).

first section of the Populus to Terminal transmission segment, the Ben Lomond to Terminal section in its Report and Order issued June 15, 2010 in Docket No. 10-035-13.

Q. Did MEHC make any transmission facilities commitments when it acquired PacifiCorp?

A. Yes. The regulatory commissions in all six states in the Company's service territory approved the Company's capital commitments specifically in transmission and distribution as part of the acquisition of the Company by MEHC. MEHC made specific commitments and developed plans for a significant capital expansion program across the system to support future demands and growth of its customers. As part of the acquisition approval process, MEHC committed to increase transfer capacity on a constrained path known as Path C by 300 MW.[10] Populus to Terminal improves the capacity on Path C and has a planned increase in transfer capacity of 1,400 MW when combined with other segments of Energy Gateway. As such, the Populus to Terminal transmission segment will significantly improve a point of constraint on the system that currently affects numerous transmission customers, and strengthen reliability and enable the Company to achieve the planned transfer capability rating of subsequent Energy Gateway segments.

As described earlier in my testimony, this line will be placed in service in two phases. The first phase includes the section of the line from the Ben Lomond substation (near Ogden, Utah) to the Terminal substation and was fully energized and all elements were placed into service by April 2010. The second phase

[10] *See* Order No. 29998 at Page 6 (Commitment No. 34).

includes the remaining section of line from the Populus substation to the Ben Lomond substation will be in-service by November 16, 2010.

Overview of Energy Gateway Transmission Expansion

Q. Please generally describe Energy Gateway.

A. Energy Gateway is a comprehensive transmission expansion plan that includes a series of immediate action items that focus on long-term needs. Energy Gateway will enhance reliability, reduce transmission system constraints and improve the flow of electricity to Rocky Mountain Power's customers. The Energy Gateway plan is comprised of eight interrelated and interdependent transmission segments as outlined in Exhibit No. RMP___(JAC-3). The eight line segments within Energy Gateway have been grouped and labeled as Gateway Central, Gateway West, Gateway South and the Westside. Energy Gateway, when fully implemented, will be spread among six states, numerous communities and counties, and significant areas of federally-administered lands and will add approximately 2,000 miles of new transmission lines to PacifiCorp's transmission system. Due to the interconnected nature of PacifiCorp's transmission network, investments may be required at other facilities in order to maximize the effectiveness and efficiency of the network. For Energy Gateway, the eight identified transmission segments provide specific capabilities, but also support other transmission segments to enhance the full potential of Energy Gateway.

Q. Please describe Gateway Central relative to the overall Energy Gateway plan?

A. Gateway Central is comprised of two transmission segments (Populus to Terminal and Mona to Oquirrh) that establish the necessary electrical interconnection between Gateway West and Gateway South. The Gateway West and Gateway South line segments, when complete, will be the first 500kV lines to be installed in Wyoming, southeast Idaho and Utah. Gateway Central will provide an essential reliability backbone allowing Gateway West and Gateway South to operate at a higher reliability and at an overall higher capacity than would otherwise be possible without the Gateway Central interconnection. This investment will not only add incremental transmission capacity, but will also strengthen PacifiCorp's overall system while supporting future generation resource development to benefit all Rocky Mountain Power customers.

As described earlier in my testimony, the Populus to Terminal transmission segment is comprised of two smaller sections, which in total extend 135 miles from the new Populus substation near Downey, Idaho, south to the existing Terminal substation near the Salt Lake International Airport west of Salt Lake City, Utah. The Populus to Terminal transmission line is a key element of the Energy Gateway's Gateway Central segment. Populus to Terminal is designated as Segment B within Gateway Central in the Exhibit RMP___(JAC-3).

Q. How will the Populus to Ben Lomond transmission line benefit Rocky Mountain Power's customers?

A. The Populus to Ben Lomond section of the Populus to Terminal transmission line and subsequent investments within Energy Gateway satisfy multiple objectives of efficiently operating a six-state transmission system in the long-term. The benefit to Utah and all Rocky Mountain Power customers initially is to enhance reliability and improve transfer capability within the existing system. In the future it will also provide benefits by establishing incremental capacity to deliver the resources within the Company's 2008 integrated resource plan ("IRP") and 2008 IRP Update and meet long-term resource development objectives. Reliability is fundamental to effectively and efficiently managing the Company's six-state transmission system. As a federally-regulated transmission provider, the Company must comply with reliability standards mandated by FERC through NERC and WECC. By meeting these standards the Company continues to maintain a stable and reliable system during a variety of operating conditions which minimizes potential outages to all customers and financial impacts of having to deliver higher cost resources if required. The Populus to Terminal addresses reliability for all Rocky Mountain Power customers. Beyond reliability, when completed, the two sections of this transmission line increase transfer capability from north to south and south to north across the Company's transmission system. By doing so, the Company addresses a key constraint (Path C), meets an MEHC transaction commitment and improves the Company's ability to import and export lower cost resources depending on seasonal needs and operating conditions.

Populus to Terminal also establishes incremental capacity to provide long term benefits to customers. Over the next 10 years, Utah load has a forecasted average annual growth rate of 2.7 percent according to the 2008 Integrated Resource Plan Update filed on March 31, 2010 placing more demand on an already constrained system. Additionally, the 2010 Economic Report to the

Governor shows a growing population combined with average life expectancy and birth rates higher than the national average. The State's population is projected to be 2.9 million in 2010 and 3.7 million in 2020. This increase in population will result in additional residential, municipal, and industrial electrical demands. To accommodate the increased population's needs, the Company must ensure not only that there are adequate supplies of electricity to meet ongoing customer demands for energy, but also that the transmission system has the capacity and reliability to deliver this increased demand for electricity to customers. At the same time, adequate transmission capability is essential for the Company to maintain its obligations to provide reliable and safe electricity to its customers.

Q. What is the capital investment of the Populus to Ben Lomond section included in the revenue requirement of this case?

A. This case includes approximately $548 million of capital investment (total Company) for the Populus to Ben Lomond section of the Populus to Terminal transmission line segment. Mr. Brian S. Dickman's testimony describes the revenue requirement calculations associated with the inclusion of this transmission investment. Mr. Gerrard's testimony describes, in more detail, the components of the $548 million.

Populus to Ben Lomond Transmission Investment

Q. Please describe the Populus to Ben Lomond section of transmission line in more detail.

A. Exhibit RMP___(JAC-4) is a map of the Populus to Terminal transmission line segment. Ben Lomond to Terminal, in-service by April 2010, is the southern section of the transmission line segment and is highlighted in red on the map. Populus to Ben Lomond, the remaining section of the line, is highlighted in yellow, green and blue on the map.

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

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

- Current and future forecasts for demand and energy required from existing and new resources to new and existing loads. These considerations are addressed in the Company's 2008 IRP including demand side and energy conservation programs;
- Alternatives including building local generation near load and/or energy market purchases;
- The Company's use of existing land rights and existing right-of-way corridors;
- Upgrades to increase operability, and reliability from existing transmission lines and substations; and
- Maximizing the capacity and capabilities of existing facilities.

Because prudent transmission investments are typically large scale to maximize efficiencies and gain economies of scale, the benefits are realized over the long-term. More details related to these considerations are provided in Mr. Gerrard's direct testimony.

Q. Is PacifiCorp's transmission expansion plan a component of integrated resource planning?

A. Yes. As part of MEHC's acquisition of PacifiCorp, the Company performed a review of the integrated resource planning process. From that review, the Company determined there was a need for a long-term transmission investment strategy to support the long-term resource needs of customers. Historically, IRPs were relatively silent on transmission investments assuming transmission would follow generation investments. Given the long-term needs of customers, existing transmission system constraints, the time required to build new transmission lines and the challenges associated with designing, permitting and constructing transmission lines, transmission is now a key element of the Company's IRP, as evidenced by the inclusion of Energy Gateway in PacifiCorp's 2008 IRP. The Company's 2008 IRP, filed in May 2009, and subsequent 2008 IRP Update filed in March 2010, identified the need for investment in major new transmission facilities to meet the forecast loads of PacifiCorp's customers.

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

A. Once the decision is made to invest in new transmission, capacity sizing of the transmission line is taken into consideration to balance current and future needs. Constructing long, linear facilities such as a transmission line is an extensive process. Siting, permitting and constructing new transmission can take up to seven years and potentially involves acquiring new rights-of-way and permits from local, state and federal agencies. There are also a series of design and routing considerations to minimize the environmental, visual and human impacts.

Q. What land rights and permits were acquired for the Populus to Terminal segment?

A. The Company holds all of the necessary land rights, either in easements or fee ownership, between the Populus substation and the Terminal substation. However, the Company was required to secure numerous permits and approvals from federal and state entities, such as:

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

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

A. The Company holds a franchise agreement with each municipality and county within the route that grants the necessary rights for the construction of the transmission line. In addition, the Company secured conditional use permits from all cities and counties, based on each community's requirements. This Commission and the Idaho Public Utilities Commission issued Certificates of Public Convenience and Necessity in 2008, as described previously in my testimony.

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

A. The Company initiated a competitive bidding process to receive blind sealed bids for the project work scope to be delivered on a turnkey, fixed price, guaranteed completion date basis using an engineer, procure and construct form of contracting. The competitive bidding process began in October 2007 and provided two separate blind-sealed bidding opportunities. All bid responses were due for submittal in May 2008 and again in July 2008 after additional information was provided to bidders allowing a refinement of previously submitted design solutions, terms and conditions including price. Three qualified bids were received and evaluated resulting from the May 2008 proposal submissions. During the evaluation period one of the bidders withdrew from the bidding process. The Company received two competing proposals in July 2008 with qualified prices of $609 million and $528 million, respectively. After extensive evaluations of bidder proposals and review of exceptions to work scope and base terms and conditions from each bid proposal, the Company ultimately awarded the contract in October 2008, details of which are provided in Mr. Gerrard's testimony. The scope of the bidding process included the Populus to Terminal segment, which includes the sections outlined in Exhibit RMP___(JAC-3). More details related to the selection process and project scope are provided in Mr. Gerrard's direct testimony.

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

A. The engineer, procure and construct ("EPC") solicitation is a common form of contracting for large construction projects such as the Populus to Terminal transmission segment and is regarded in the industry as a prudent approach for cost control and managing design, procurement and construction risks. This approach provides certainty relative to schedule and cost outcomes for the benefit of customers and caps potential cost escalations where possible upon the occurrence of defined risks. It also ensures more timely delivery to support system needs and transmission reliability.

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

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

Q. Have there been any updates to the cost estimate for the Populus-Terminal Project?

A. Yes. At the time the Company filed its April 2008 CPCN testimony, total project costs were estimated at approximately $750 million for the transmission line and substation. The April testimony also noted that the Company was working through a competitive bid process and right-of-way acquisition and that its estimate at the time could potentially be low.

The project estimate was derived from internal cost estimates based on historical experience building similar transmission facilities. Because the internal estimates were derived from historical information, contractor material and right-of-way costs were not reflective of then-current market based costs for the 2007/2008 timeframe. The Company had not undertaken any significant transmission expansion since the early 1990's, and this was the first high-voltage transmission project involving a significant length of miles along with substation construction.

As described earlier in my testimony, the CPCN was approved for this project in September 2008. The total project cost at that time was estimated to be $930.5 million and reflected extensive evaluation of bidder proposals and internal cost estimates. Since that time, as the first section of the segment has been placed in-service and the second section nears completion, the Company has refined project estimates to reflect more informed cost estimates and actual incurred project costs.

Q. Please describe the primary variance in cost between cost estimates.

A. The table below summarizes the major cost categories between the April 2008 estimate when the CPCN testimony was filed, the September 2008 estimate when the CPCN was approved, the December 2009 forecast project cost estimate and the most recent forecast project cost estimate in June 2010.

Populus - Terminal 345 kV Line Project
Comparison of April 2008 Estimate vs. September 2008 Approval vs. Total Project Forecasts

Category	Project Estimate Apr-08	Project Budget (Signed ER) Sep-08	Total Project Forecast Dec - 09	Total Project Forecast Jun - 10
Primary Contractor	$ 412,542,621	$ 580,564,000	$ 610,030,583	$ 607,840,195
Microwave	$ 7,792,595	$ 6,166,311	$ 5,375,928	$ 5,425,929
Idaho Power Share of Populus Sub				$ (14,117,837)
External consulting, internal labor, land acquisition & owner supplied material	$ 182,035,195	$ 187,431,630	$ 155,102,767	$ 145,748,292
Allowance for funds used during construction (AFUDC) & Capital Surcharge	$ 59,629,000	$ 110,563,079	$ 95,800,000	$ 87,090,000
Sub Total	$ 661,999,411	$ 884,725,020	$ 866,309,278	$ 831,986,579
Contingency	$ 82,790,589	$ 45,786,342	$ 6,188,831	$ -
Total	$ 744,790,000	$ 930,511,362	$ 872,498,109	$ 831,986,579

The majority of the difference between the estimate provided in April 2008 and the current June 2010 forecast is attributed to the primary contractor. The competitive bid process, along with management approved changes in work, results in a forecasted primary contractor cost in the amount of $610,030,583 million forecast in December 2009, updated to a forecast amount of $607,840,195 in June 2010. The difference in the amounts is based on actual project-to-date costs plus a more recent forecast of the costs to complete the project. Additionally, the most recent June 2010 forecast includes an estimated credit for payments anticipated from Idaho Power for its portion of the Populus Substation and does not include an amount for contingency as the project is closer to completion. Finally, Allowance for Funds Used During Construction & Capital Surcharge in the June 2010 forecast has decreased by approximately $9 million compared to the December 2009 forecast due to an earlier projected in-service date for Populus to Ben Lomond.

Conclusion

Q. Please summarize your conclusions.

A. New transmission is essential to meet load growth, enhance transmission system reliability and provide capacity to integrate resources to the long-term benefit of customers. The Populus to Ben Lomond section is the remaining section necessary to increase transmission capacity from southeastern Idaho into Utah and to further facilitate a stronger interconnection to systems in Idaho, Wyoming and the Pacific Northwest. This investment and subsequent investments in Energy Gateway are prudent, cost effective and beneficial to customers.

Q. Is the Populus to Ben Lomond transmission line section a prudent investment and in the public interest?

A. Yes. The Populus to Ben Lomond section and subsequent investments within Energy Gateway satisfy multiple objectives of efficiently operating a six-state transmission system, and therefore are in the public interest. The initial benefit to

PacifiCorp's customers is enhanced reliability and improved transfer capability within the existing system. In the future, it will also provide incremental capacity for delivery of resources within the Company's 2008 IRP, which is a key to unlocking rich resource hubs for the benefit of all PacifiCorp customers and ultimately the western interconnect. The Company has effectively managed the costs of the project and the investment is prudent. The investment warrants rate base treatment and inclusion in rates and I urge the Commission to approve the Company's request.

Q. Does this conclude your testimony?

A. Yes.