Rocky Mountain Power
Docket No. 13-035-184
Witness: Douglas N. Bennion

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Direct Testimony of Douglas N. Bennion

Transmission and Distribution Capital Expenditures

January 2014

Introduction

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

A. My name is Douglas N. Bennion. My business address is 1407 West North Temple, Suite 270, Salt Lake City, Utah 84116. I am the Vice President of Engineering Services and Asset Management, supporting both the Company's Rocky Mountain Power and Pacific Power Divisions.

Q. Please briefly describe your education and business experience.

A. I received a Bachelor of Science Degree in Electrical Engineering from the University of Utah and I am a registered professional engineer in the state of Utah. In addition to formal education, I have attended various educational, professional and electric industry seminars to remain current on industry issues. I joined the Company in 1978, and during those 35 years I have held various engineering and management positions of increased responsibility providing extensive experience working across PacifiCorp's service territory prior to assuming my current position. Additionally, I have provided testimony on various matters before the Public Service Commission of Utah, the Idaho Public Utilities Commission, and the Wyoming Public Service Commission (the "Commission").

Q. Please describe your present duties.

A. I am responsible for the engineering services and asset management functions for all of PacifiCorp's transmission and distribution system that generally applies to voltages less than 230 kilovolts. This department, through its technical expertise, provides assistance and leadership in providing safe, economic, and reliable

energy delivery to our customers. This includes developing material standards and design applications, engineering design services for all major projects, reliability analysis, and prioritizing investments to manage risk and planning future T&D investments to meet customer energy needs while maintaining industry reliability and operation standards.

Purpose of Testimony

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

A. The purpose of my testimony is to explain and support the T&D operating capital expenditures included in the Company's revenue requirement, with the exception of the large transmission main grid projects (i.e. generally 230 kV or higher), which will be addressed by Company witness Ms. Natalie L. Hocken. Specifically, my testimony includes an explanation of the Company's T&D operating capital investment plan, plant additions to support capacity increases, and justification for program funding for asset replacements and to support distribution reliability in Utah.

Q. Please describe the major T&D investments that the Company is adding to rate base in this case.

A. Between June 30, 2013 (the conclusion of the base period in this filing), and June 30, 2015 (the conclusion of the test period), the Company will place into service approximately $771.1 million of total transmission investment, as discussed in the direct testimony of Ms. Hocken. Of that amount my testimony addresses $194.7 million of non-main grid transmission investment. My testimony also addresses approximately $178.4 million of Utah distribution investment. These investments

are summarized in the following table:

T&D Capital Investment (excluding large main grid transmission projects)	Total Non-Main Grid Investment ($ millions)	Utah Allocated Transmission ($ millions)	Utah Distribution ($ millions)
System Reinforcement - Distribution			19.9
System Reinforcement - Transmission	49.1	21.0	
System Compliance - Distribution			12.5
System Compliance - Transmission	78.1	33.4	
New Residential Connections			46.4
New Commercial Connections			32.5
New Industrial Connections - Distribution			1.7
New Industrial Connections - Transmission	7.0	3.0	
Miscellaneous - Distribution			3.2
Asset Replacement - Distribution			56.7
Asset Replacement - Transmission	60.5	25.9	
Reliability - Distribution			5.5
Total	**194.7**	**83.3**	**178.4**

Significant distribution and T&D related projects in this filing include the following:

West Point - New 138kV Line and Substation: This project will construct approximately 4-miles of 138 kV line, build one (1) new 138-12.5 kV, 40 MVA substation (West Point) with four distribution feeders, and modify a 138 kV substation (Clearfield South) for the transmission tap to feed loads in the western sections of Davis and Weber Counties. The western sections of Davis and Weber Counties (consist of the following cities: Layton, Syracuse, West Point, Clinton, Hooper, and West Haven) have increased construction activity that require additional electric capacity to serve these developments. Numerous residential and commercial developments are being planned and constructed in this area. The customer load is currently served by distribution feeders that are approximately seven miles long and being fed from substations located near or east of the

existing Syracuse-Ben Lomond 138 kV transmission corridor. The capability of these distribution feeders and substations are limited to serve new customers and will become fully loaded in 2014. A new 138 kV line needs to be built on the west side of Weber and Davis Counties to support the construction of new substations capable of serving the new customers and expected energy loads.

EMS / SCADA Replacement / Upgrade: This project will replace the existing EMS/SCADA system with a new system that supports present and projected future operational and compliance requirements. The existing system is running obsolete software. The underlying information technology platforms are no longer supported by the vendors and replacement components are very difficult to obtain. The system is critical to operations and is essential to provide safe, reliable power and maintain compliance with Federal Energy Regulatory Commission and North American Electric Reliability Corporation standards.

The capital investments mentioned above, as well as all of the other T&D capital projects included in the revenue requirement, are reflected in Mr. Steven R. McDougal's plant additions Exhibit RMP__(SRM-3).

Q. What benefits will Utah customers derive from the T&D capital projects included in this case?

A. As described by Ms. Hocken, the Company's capital investments in T&D have the common customer benefit of increasing system capacity to accommodate customer load requirements and growth, and improving service quality and reliability. Transmission facilities are considered part of the Company's integrated network, and provide benefits to all customers in the Company's six-state retail

service territory, including Utah. It is, therefore, important that the Company complete the transmission projects included in this filing to provide adequate and reliable service to all of our customers. Additionally, distribution capital investments result in a direct benefit to our Utah customers, whether it is to connect new customers, reinforce, repair or upgrade the existing system, or to meet approved industry compliance requirements.

System Reinforcement

Q. Please describe the system reinforcement portion of the capital investment plan.

A. System reinforcement is investment made by the Company on behalf of customers to serve load growth; this case includes approximately $19.9 million of system reinforcement at distribution level voltages in Utah and approximately $49.1 million of non-main grid system reinforcement investment on the Company's transmission system. In general, upgrading or adding transformers and distribution feeders is initiated when thermal loading is projected to reach 105 percent of thermal rating or when voltage delivery at the customer metering point is projected to fall outside of the American National Standards Institute ("ANSI") planning criteria. Rocky Mountain Power closely monitors the transmission and distribution system performance to identify loading issues that will require mitigation. Mitigation of issues identified during extreme hot weather that occurred during the summer of 2013 as well as those driven by increasing customer connections are included in the capital expenditures. When customers connect to the Company's electrical system, there is a possibility that customer

load additions/connections will cause thermal overloads or voltage levels to be outside of the ANSI range.

System Compliance

Q. Please describe the system compliance portion of the capital investment plan.

A. T&D compliance investments are those required by city, state or federal regulations. Customers may also request and fund projects in the compliance portion of the capital investment plan. RMP plans to place in service $12.5 million in Utah distribution system compliance capital additions and $78.1 million in Company transmission system compliance work. Examples of compliance driven projects and programs include the following:

- Environmental programs to mitigate bird mortality and spill prevention, control and countermeasure ("SPCC") projects to mitigate probability of environmental contamination total $3.4 million in Utah distribution and $2.6 million in Company transmission additions;
- Modifications to facilities to meet National Electric Safety Code requirements total $0.8 million in Utah distribution and $1.8 million in transmission system additions;
- Additions to renew distribution and transmission access permits total $0.4 million for Utah distribution and $3.3 million for the transmission system.
- Relocation of facilities for public works or customer requests, overhead to underground conversions and other miscellaneous customer or third party requests total $7.9 million for Utah distribution and $5.3 million for the transmission system.

- Projects and investment programs necessary to comply with the Federal Energy Regulatory Commission, and the North American Electric Reliability Corporation's reliability standards total $65.1 million in transmission system additions. These investments are designed to improve the reliability of the transmission system.

New Connections

Q. Please describe the new connection portion of the capital investment plan.

A. New customer connections include residential (Utah distribution connections budgeted at $46.4 million), commercial (Utah distribution connections budgeted at $32.5 million), industrial (Utah distribution connections budgeted at $1.7 million and Company transmission connections budgeted at $7.0 million), irrigation, street lighting and miscellaneous other distribution connections are budgeted at $3.2 million. Residential and commercial customers account for the majority of the new connection costs. The residential market (new housing starts) and commercial new connect volumes are expected to increase in Utah through the rate case period. For the period January 2011 through December 2012, an annual average of 9,915 new residential and commercial customers was connected to the system in Utah. The volumes included from the end of the base period through the end of the test period assume an annual average of 14,146 new residential and commercial connections. The increase in volume is based on the rebound in the housing market and large increases that have occurred in 2013 and projections that these increases will continue through the Test Period. Even with this large increase, the volumes remains significantly below highs experienced in

2008 - 2009 where over 25,000 new connections were made annually. Industrial volumes are relatively small but remain volatile as they are primarily driven by the manufacturing and data center industries.

A challenge for the Company in making large commercial and industrial new connections is the sheer magnitude of the projects. For example, depending on the size of the new load and its proximity to existing transmission system facilities, adding just one substantial new commercial or industrial customer may exceed the operating limitations of the Company's local area transmission system or substation capacity. Extensive planning, engineering and construction of transmission lines, substations, switching stations and other facilities will still be necessary.

Asset Replacements

Q. Please describe the asset replacement portion of the capital investment plan.

A. The replacement of failed or deteriorating assets is essential to maintaining and/or improving reliable service. The revenue requirement in this case includes $56.7 million in Utah distribution replacements and $60.5 million for Company transmission replacements. Due to normal aging processes, some assets are at or near the point of replacement, which may be preceded by increased failures and higher maintenance costs. Some assets may be replaced upon failure and others identified via inspection, testing and maintenance program results as approaching end of life and are identified for proactive replacement. Examples of assets subject to replacement include substation equipment, transmission poles, conductor and insulators, distribution line equipment such as transformers poles

and conductor, switchgear, and underground cable.

Q. Please explain how Rocky Mountain Power determines the amount and timing of T&D capital investments.

A. The Company begins with mandated compliance requirements, customer service requests, system reinforcement projects to serve load growth, asset replacements and functional upgrades and reliability improvement needs to prepare budgets for T&D investments. Data evaluated includes the results of testing and inspection programs, a review of actual and projected load readings on equipment, review of regulatory requirements and existing commitments, historical run rates for customer driven activities and failure / fault rates. This information is analyzed and programs or preliminary project scopes are developed and initial project estimates are created to mitigate the identified issues. Once the project budget is approved, the Company initiates a process to complete detail planning, detail design engineering, and detail project scheduling, resulting in a more refined cost estimate and projected in-service date. When a project moves to the delivery (construction) phase, the Company uses internal business controls to measure and monitor the progress to ensure projects are delivered within scope and budget. The Company uses these activities to provide quality at the lowest long-term cost required to meet the needs of our customers.

Capital Efficiencies

Q. Please describe the initiatives to apply efficiencies to the delivery of the capital investment plan.

A. The capital investments in T&D are made by the Company on behalf of

customers to accommodate customer load requirements and growth, and improving service quality and reliability. The Company strives to find efficiencies that will reduce costs while still providing safe, quality and reliable service to our customers. The Company recently concluded a review where major equipment specifications were modified to more closely align with common industry standards. This effort resulted in providing an estimated $1.35 million in annual savings within the T&D capital plan.

Q. How do you apply the efficiencies to the capital projects?

A. These efficiencies will apply to the equipment purchased in support of system capital investments, for both transmission projects throughout Rocky Mountain Power and Pacific Power and distribution projects in Utah. The engineering design scopes will be prepared utilizing these revised equipment specifications.

Reliability

Q. Please describe the reliability portion of the capital investment plan.

A. The Company's reliability investment program is designed to reduce the number and impact of power interruptions to its customers. The Company continues to refine its approaches and processes to be more efficient at deploying resources to improve electric service reliability. It uses state of the art tools to rapidly implement reliability improvements as outage patterns emerge that indicate performance is straying from the expected. Included in the case is $5.5 million in distribution plant additions that are specifically targeted to improve reliability.

- The Company transitioned from its historic Service Standards Program to newly-developed state reliability rules in Commission Rule R746-313,

which were the product of collaboration amongst municipal electric cooperatives, Commission staff, Division and other stakeholders over an 18 month time period. This collaboration has helped focus the Company's programs to align with stakeholder concerns and exemplifies the manner in which the Company believes reliability goals should be set.

- The Company's reliability plans are targeted to deliver on two key areas. First, they will ensure performance consistent with the baselines that were developed in Docket No. 13-035-01, which establish that the Company's rolling 365-day performance will be between 152 and 201 minutes for outage duration, with outage frequency between 1.3 and 1.9 events. Next, the plan will designate worst performing feeders, engineer solutions and implement them to achieve a 20 percent improvement in their reliability metrics.
- The Company's performance is the result of continued leverage of industry-leading processes and tools for reliability management, including web-based outage investigative tools, area improvement teams (which are comprised of local personnel throughout the state) and other analytical tools.

The Company is confident that with the completion of planned transmission and distribution reliability investments, Utah's service reliability will continue to meet the baseline performance levels committed to, and to maintain overall electric service reliability for its customers.

Summary and Conclusion

Q. Please summarize your testimony.

A. The T&D capital expenditures included in this case are essential in meeting Rocky Mountain Power customers' needs and maintaining system reliability standards. In particular, the proposed T&D capital expenditures are required in order to:

- Serve new customers (industrial, commercial, and residential) that require an extension of the Company's existing infrastructure.
- Serve existing customers through system reinforcement (expansion or increase in capacity) of existing infrastructure.
- Serve general load growth to maintain acceptable reliability and service.
- Comply with orders issued by regulatory, state or local governmental entities.

The Company's transmission and generation projects are part of an integrated, system-wide, high voltage system that provides the foundation to move resources throughout the western United States, thus providing service and reliability benefits to Utah customers.

Q. Are the T&D capital investments included in this case in the public interest and do you recommend that the Commission include them in the Company's rate base?

A. Yes. The T&D capital investments included in this case are in the public interest for the reasons that I mentioned earlier in my testimony, including serving the public with safe, adequate and reliable service. For these reasons, I recommend

that the Commission approve these investments for inclusion in the Company's rate base.

Q. Does this conclude your direct testimony?

A. Yes.