

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**IN THE MATTER OF THE APPLICATION)
OF PUBLIC SERVICE COMPANY OF NEW)
MEXICO FOR REVISION OF ITS RETAIL)
ELECTRIC RATES PURSUANT TO ADVICE)
NOTICE NO. 513)**

Case No. 15-00261-UT

**PUBLIC SERVICE COMPANY OF NEW)
MEXICO,)**

Applicant)

DIRECT TESTIMONY AND EXHIBITS

OF

ERIK C. BUCHANAN

AUGUST 27, 2015

NMPRC CASE NO. 15-00261-UT
INDEX TO THE DIRECT TESTIMONY OF ERIK C. BUCHANAN
WITNESS FOR
PUBLIC SERVICE COMPANY OF NEW MEXICO

I.	INTRODUCTION AND PURPOSE	1
II.	SUMMARY OF CAPITAL PROJECTS INCLUDED IN THE TEST PERIOD REVENUE REQUIREMENTS	3
III.	THE CAPITAL BUDGETING PROCESSES.....	10
	A. Introduction.....	10
	B. Capital Prioritization.....	11
	C. Capital Budget Reforecasts (Project Trade-Offs).....	15
IV.	THE HYPERION SYSTEM AND ITS USE IN BUDGET DEVELOPMENT...	16
	A. Introduction.....	16
	B. Capital Forecast Calculations and Adjustments	17
	1. Electric Plant Account Allocations.....	19
	2. Cost of Removal	23
	3. Retirements.....	25
	4. Capital Loads	26
V.	ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION	28
	A. Introduction.....	28
	B. Calculation of AFUDC	28
VI.	REMOVAL OF PNM’S 132 MW INTEREST IN THE SAN JUAN.....	30
VII.	CONCLUSION.....	32

PNM EXHIBIT ECB-1	Résumé of Erik C. Buchanan
PNM EXHIBIT ECB-2	Electric Plant Account Allocations
PNM EXHIBIT ECB-3	Cost of Removal
PNM EXHIBIT ECB-4	Retirements
PNM EXHIBIT ECB-5	Calculation of Allowance for Funds Used During Construction Rates

AFFIDAVIT

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1

I. INTRODUCTION AND PURPOSE

2 **Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.**

3 **A.** My name is Erik C. Buchanan. I am the Director, Corporate Budget for PNM
4 Resources, Inc. ("PNMR"). My address is 414 Silver Avenue, SW, Albuquerque,
5 New Mexico 87102.

6

7 **Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS DIRECTOR,**
8 **CORPORATE BUDGET.**

9 **A.** As Director, Corporate Budget, I am responsible for compiling the Annual
10 Operating Plan (AOP), and quarterly reforecast budgets of PNMR, and its
11 subsidiaries including Public Service Company of New Mexico ("PNM" or
12 "Company"). These responsibilities include budgeting for the capital of the
13 Company. A copy of my resume is attached as PNM Exhibit ECB-1.

14

15 **Q. HAVE YOU PREVIOUSLY TESTIFIED IN UTILITY REGULATION**
16 **PROCEEDINGS?**

17 **A.** No.

18

19 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS**
20 **PROCEEDING?**

21 **A.** The purpose of my testimony is to:

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 (1) Summarize the capital projects cleared to plant in service during the Capital
2 Investment Period¹ as well as the construction balances included in rate base
3 at the end of the Test Period.

4 (2) Present and support the capital budgeting process as it relates to the Capital
5 Investment Period, and quarterly reforecast (project trade-off) processes;

6 (3) Support and explain the Hyperion® budgeting system (“Hyperion²”),
7 including a discussion of Hyperion system calculations and adjustments
8 necessary to complete the capital budget such as:

9 (a) Calculation and allocation of budgeted capital clearings to the Federal
10 Energy Regulatory Commission (“FERC”) electric plant accounts;

11 (b) Calculation of forecasted cost of removal³;

12 (c) Calculation of forecasted electric plant retirements, and;

13 (d) Removal of the ownership interest in San Juan Generation Station (“San
14 Juan”) associated with PNM’s forecasted additional 132 MW ownership
15 interest in unit 4 and related common facilities.

16 (4) Support and explain the calculation of forecasted Allowance for Funds Used
17 During Construction (“AFUDC”) rates.
18

¹ The “Capital Investment Period” includes linkage data from April 1, 2015, through September 30, 2015, and continues through the Test Period ending September 30, 2016.

² As discussed later in my testimony, Hyperion is an Oracle software product that provides centralized budgeting and financial forecasting capability.

³ As discussed later in my testimony, cost of removal means the demolition, dismantling, tearing down or otherwise removing electric plant, including the cost of transportation and handling incidental thereto.

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 **Q. PLEASE LIST THE RULE 530 SCHEDULES THAT YOU ARE**
2 **SPONSORING.**

3 **A.** I am sponsoring the following Rule 530 Schedules: B-1, B-2, B-4 through B-6, J-
4 1, J-2, P-2, and P-3 as these schedules pertain to linkage data and the Test Period.
5 These Rule 530 Schedules are being provided in executable electronic format on a
6 DVD-ROM, but are neither fully functional nor required to be filed as fully
7 functional under the FTY Rule. Each of these schedules was prepared by me or
8 under my direct supervision. Information in these schedules pertaining to the
9 base period is sponsored by PNM Witness Peters.

10

11 **II. SUMMARY OF CAPITAL PROJECTS INCLUDED IN THE TEST**
12 **PERIOD REVENUE REQUIREMENTS**

13 **Q. PLEASE SUMMARIZE HOW CAPITAL PROJECTS WERE**
14 **FORECASTED, HOW THE COMPANY HAS SUPPORTED ITS**
15 **REQUEST FOR THESE PROJECTS, AND WHICH PNM WITNESSES**
16 **WILL SUPPORT THE COMPANY'S REQUESTED CAPITAL**
17 **ADDITIONS IN THIS CASE.**

18 **A.** The Company issues capital targets to the various business segments (i.e.,
19 transmission and distribution, generation, and corporate) annually for a five year
20 forecast period. Business segments identify and prioritize capital projects and
21 provide expenditure and clearing information which is captured by the Hyperion
22 system. Additional calculations and adjustments to forecasted capital activities
23 are made to complete the capital budget. These calculations result in adjustments

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 to forecast the clearing of construction to the electric plant accounts, cost of
2 removal, and retirements. In addition, other adjustments were made to remove
3 PNM's forecasted 132 MW ownership in San Juan and to remove AFUDC on
4 certain projects included in rate base at the end of the Test Period. The Company
5 has filed specific documentation to support its request for capital additions in the
6 testimonies of PNM Witnesses Johnson, Olson, and Mendez.

7
8 **Q. PLEASE SUMMARIZE THE DOCUMENTATION PROVIDED TO**
9 **SUPPORT CAPITAL ADDITIONS AND HOW IT IS ORGANIZED FOR**
10 **THIS CASE.**

11 **A.** For purposes of this case, the Company categorized capital project additions into
12 Tier 1, Tier 2 and Tier 3 based on the size of project clearings during the Capital
13 Investment Period and the Capital Clearing Period⁴. While all capital projects are
14 explained and supported, the Tier 1 projects are discussed in more detail because
15 they represent the largest projects and the greatest percentage of capital additions.

16
17 PNM Table ECB-1 below outlines project Tiers for both PNM (Generation and
18 transmission and distributions ("T&D") and corporate segment projects.

19

⁴ The period from April 1, 2015 through February 28, 2017, encompassing the Capital Investment Period and Construction Work in Progress ("CWIP") period (October 1, 2016 through February 28, 2017) is referred to as the "Capital Clearing Period".

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

Table ECB-1

Tier	Description
Tier 1	<ul style="list-style-type: none">• Generation and T&D projects with clearings equal to or greater than \$750K• Corporate projects with clearings equal to or greater than \$500K
Tier 2	<ul style="list-style-type: none">• Generation and T&D projects with clearings between \$100 – \$750K• Corporate projects with clearings between \$100K - \$500K
Tier 3	<ul style="list-style-type: none">• All projects with clearings less than or equal to \$100K

Tier 1 contains those projects with the greatest amount of clearings during the Capital Clearings Period. These projects require the most explanation and include a *project estimate approach* section which provides an overview of how the estimated cost for the project was developed. Tier 2 projects provide the same level of documentation as Tier 1 projects but do not include the *project estimate approach* discussion. Tier 3 projects contain projects with the least clearings during the Capital Investment Period and include a general discussion of the projects.

Q. PLEASE DESCRIBE THE CAPITAL BUDGET DOCUMENTATION DEVELOPED TO SUPPORT THE CAPITAL PROJECTS ADDRESSED IN THIS CASE.

A. The capital budget documentation provides basic information on each project including Project ID, Name, Business Segment (referred to as Company on the documentation), Location, Project Need Justification, Project Alternatives, Technical Aspects, and for Tier 1 projects the Project Estimate Approach

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 discussion. In addition, monthly spend and clearing data is provided by cost type
2 for each capital project. Monthly spend and clearing data were provided for these
3 specific projects from April 2015 through calendar year 2017, if applicable.
4 Projects for which documentation is not provided are those cleared to plant in
5 service by March 31, 2015, which is the end of the Base Period.

6
7 **Q. PLEASE SUMMARIZE PROJECTED CAPITAL ADDITIONS THROUGH**
8 **THE CAPITAL INVESTMENT PERIOD.**

9 **A.** PNM has included in this filing plant additions related to 460 individual capital
10 projects which includes plant additions net of retirements during the Linkage and
11 Test Period of \$783.9 million and \$78.2 million related to certain individual
12 capital projects with clearings to plant in service from the end of the Test Period
13 through February 2017. This amount also includes adjustments for “Other” items
14 as discussed below.

15
16 PNM Table ECB-2 below provides a summary of capital additions by business
17 segment and describes “Other” adjustments necessary to obtain gross additions to
18 plant in service during the period April 1, 2015 and September 30, 2016.

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1

Table ECB-2

Business Segment	Linkage and Test Period				Total
	Tier 1	Tier 2	Tier 3	Other ¹	
Generation	\$ 451,403,342	\$ 15,367,076	\$ 1,831,211	\$ 114,610,340	\$583,211,968
T&D	\$ 191,296,033	\$ 27,137,748	\$ 1,910,481	\$ 18,211,772	\$238,556,035
Corporate	\$ 13,803,456	\$ 9,254,392	\$ 467,512	\$ -	\$ 23,525,360
Business Segment Totals	\$ 656,502,831	\$ 51,759,216	\$ 4,209,204	\$ 132,822,112	\$845,293,364
Remove San Juan 132MW	\$ -	\$ -	\$ -	\$ (16,975,136)	\$ (16,975,136)
Cost of Removal	\$ -	\$ -	\$ -	\$ (13,373,400)	\$ (13,373,400)
Generation & T&D Retirements	\$ -	\$ -	\$ -	\$ (30,229,586)	\$ (30,229,586)
Corporate Retirements	\$ -	\$ -	\$ -	\$ (790,458)	\$ (790,458)
Sub-Total	\$ -	\$ -	\$ -	\$ (61,368,580)	\$ (61,368,580)
Grand Total	\$ 656,502,831	\$ 51,759,216	\$ 4,209,204	\$ 71,453,533	\$783,924,784

¹ Generation and T&D "Other" includes adjustments to gross plant in service as well as an acquisition adjustment to record acquired plant at its original depreciated basis in accordance with FERC guidelines. Generation "Other" includes adjustments to record plant in service and an acquisition adjustment for the purchase of PV2 leased assets of \$53,379,589 and \$61,230,751 million, respectively. T&D "Other" includes \$18,211,772 to record plant in service related to the acquisition of EIP transmission line assets. See additional discussion of these adjustments in the testimonies of PNM Witness Peters. "Other" also includes adjustments to remove PNM's forecasted incremental 132 MW interest in San Juan, forecasted cost of removal, and forecasted retirements which are discussed later in my testimony.

2 As shown above, \$583.2 million represent capital clearings for generation. PNM

3 Witness Olson addresses capital investments for generation. Included in the

4 generation projects is the purchase of the 64 MW interest in Palo Verde Nuclear

5 Generating Station ("PVNGS"). This purchase is discussed further in the

6 testimonies of PNM Witnesses Eden and Olson. T&D projects make up the

7 second largest component of capital clearings which total \$238.6 million and

8 include the purchase of the Eastern Interconnect Project ("EIP") transmission line.

9 PNM Witness Johnson addresses capital investments for T&D. The balance of

10 capital projects, \$23.5 million, is related to corporate capital investments which

11 are discussed in PNM Witness Mendez's testimony. The amounts provided in

12 "Other" are discussed by PNM Witness Peters and in my testimony below. PNM

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 Witness Peters also discusses acquisition adjustments related to the PVNGS and
2 EIP purchases. My testimony discusses the adjustments to the capital investments
3 to remove the forecasted 132 MW interest in San Juan, cost of removal, and
4 retirements.

5
6 **Q. HAS THE COMPANY INCLUDED ANY CONSTRUCTION WORK IN**
7 **PROGRESS (“CWIP”) BALANCES AT THE END OF THE TEST**
8 **PERIOD IN THIS FILING?**

9 **A.** Yes. As discussed by PNM Witness Monroy, the Company included CWIP
10 balances in its Test Period rate base request. PNM included the CWIP balance as
11 of September 30, 2016, for any project that has an estimated clearing from
12 October 2016 through February 2017. PNM included the lesser of the CWIP
13 balance as of September 30, 2016, or the estimated clearings for the capital
14 project through February 2017.

15
16 **Q. PLEASE SUMMARIZE THE PROJECTED CWIP REQUESTED IN THE**
17 **TEST PERIOD.**

18 **A.** As discussed in the testimony of PNM Witness Monroy, the Company has
19 included certain capital projects with CWIP balances at September 30, 2016.
20 PNM included the lesser of CWIP balances at the end of the Test Period or
21 clearings thereafter through February 2017 of approximately \$78.2 million. PNM
22 Table ECB-3 below provides a summary of these capital projects by business
23 segment.

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1

Table ECB-3

Business Segment	CWIP				
	Tier 1	Tier 2	Tier 3	Other ¹	Total
Generation	\$ 26,607,292	\$ 578,720	\$ 201,464	\$ -	\$ 27,387,476
Transmission & Distribution	\$ 22,506,415	\$ 4,569,003	\$ 233,794	\$ -	\$ 27,309,212
Corporate	\$ 23,319,844	\$ 2,087,713	\$ 341,374	\$ -	\$ 25,748,931
Business Segment Totals	\$ 72,433,551	\$ 7,235,436	\$ 776,633	\$ -	\$ 80,445,620
Remove San Juan 132MW	\$ -	\$ -	\$ -	\$ (1,279,703)	\$ (1,279,703)
AFUDC	\$ -	\$ -	\$ -	\$ (1,013,483)	\$ (1,013,483)
Other Totals	\$ -	\$ -	\$ -	\$ (2,293,186)	\$ (2,293,186)
Grand Total	\$ 72,433,551	\$ 7,235,436	\$ 776,633	\$ 2,293,186	\$ 78,152,433

¹ "Other" includes adjustments to remove capital additions on the additional 132 MW interest PNM will acquire in San Juan, and to remove AFUDC for the period July 1, 2016 through February 2017 on CWIP projects included in rate base at September 30, 2016. The AFUDC adjustment includes approximately \$289,155 and \$724,328 for T&D and Generation projects, respectively. Additional discussion of these adjustments is provided later in my testimony and in the testimony of PNM Witness Monroy.

2 The development of project costs and forecasted clearings provided in Tiers 1
3 through 3 in the table above are discussed further in the testimonies of PNM
4 Witnesses Olson, Johnson, and Mendez. The amounts provided in "Other" are
5 discussed in more detail later in my testimony below.

6

7 **Q. HAS THE COMPANY ALSO PROVIDED CAPITAL BUDGET**
8 **DOCUMENTATION FOR CWIP BALANCES INCLUDED IN RATE**
9 **BASE AT THE END OF THE TEST PERIOD?**

10 **A.** Yes. This documentation that has been provided for projects completed during
11 the Capital Investment Period has been provided for CWIP included in rate base
12 as of September 30, 2016.

13

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 **III. THE CAPITAL BUDGETING PROCESSES**

2 **A. *Introduction***

3 **Q. HOW ARE CAPITAL PROJECTS PLANNED, AND APPROVED?**

4 **A.** The annual capital budgeting process starts with initiatives identified during the
5 business financial planning process. The business financial planning process
6 develops capital targets which are communicated to the various business segments
7 of PNMR, including PNM. Business segments (T&D, generation, and corporate)
8 utilize these targets to develop their portfolios of capital projects. Estimated
9 capital expenditures and clearings related to each project are loaded into
10 Hyperion. Capital expenditure and clearings information from Hyperion is
11 reviewed and approved by the Resource Council (comprised of the Chief
12 Operations Officer, Chief Financial Officer, Chief Information Officer and Vice
13 President Controller, Vice President of New Mexico Operations, Vice President
14 of Generation, and Director of Supply Chain) and the PNMR Board of Directors
15 ("Board").

16 **Q. PLEASE EXPLAIN HOW CAPITAL TARGETS ARE DEVELOPED AND**
17 **UTILIZED IN THE CAPITAL BUDGETING PROCESS.**

18 **A.** The capital planning cycle consists of four distinct, but related, planning efforts.
19 The first is PNM's Integrated Resource Plan ("IRP") which defines how future
20 power needs in New Mexico will be addressed. PNM filed its 2014-2033 IRP
21 Report with the Commission in July 2014. The second component of the
22 planning cycle is the development of a Long Range Plan ("LRP") based on

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 modeling and analysis of economic, operational, and financial scenarios, typically
2 over a five-year planning horizon. The final two components entail business
3 planning and budgeting. Business planning and budgeting activities are
4 conducted on an annual basis and are the basis for PNM's AOP, or budget, which
5 is finalized in the last quarter of each calendar year.

6
7 The AOP process provides individual business segments with five-year capital
8 targets. These targets are based on numerous factors, including strategic
9 objectives set by senior management, environmental compliance requirements,
10 equipment reliability, expected load and customer growth, and system reliability.
11 The targets serve as a guide to the individual business segments to enable them to
12 more accurately plan future capital projects.

13
14 ***B. Capital Prioritization***

15 **Q. PLEASE EXPLAIN HOW THE POTENTIAL CAPITAL PROJECTS ARE**
16 **RANKED BY EACH BUSINESS SEGMENT FOR INCLUSION IN THE**
17 **BUDGET.**

18 **A.** Based on the five-year capital expenditure targets and the factors listed above,
19 each business segment identifies the capital projects that must be completed in
20 order to accomplish their strategic and business objectives. In order for a project
21 to be considered, it must align with the Company's strategic and operational
22 performance improvement objectives. Projects are prioritized based upon key

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 metrics which include regulatory compliance, safety, customer and stakeholder
2 value, corporate responsibility, and operational improvement. Key metrics
3 include sub metrics such as customer satisfaction, impacts to government and
4 regulatory relationships. Cost estimates are then developed using guidelines for
5 key materials costs, labor costs, warehouse materials, permitting, land rights, and
6 any other items necessary to complete the project. Finally, capital overhead or
7 “loads” are applied to determine the final forecasted cost estimate.

8
9 Projects are also categorized into order of importance. The highest priority or
10 most important projects are those PNM must do because they are already
11 underway or they are required due to equipment failure, or regulatory,
12 environmental, or contractual obligations. The second highest priority projects
13 are projects PNM should do because they have clear beneficial economic or
14 operational outcomes from a cost or reliability perspective, or because not
15 completing these projects could lead to increased economic or operational risk.
16 The last category contains projects assigned the lowest priority. These projects
17 are those PNM would like to do and can be justified due to other factors such as
18 expected performance improvements, cost savings, or the extension of the useful
19 life of an asset. The results of the above steps are loaded to Hyperion and are
20 ultimately approved for inclusion in the capital budget by the PNMR Board of
21 Directors.

22

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 **Q. PLEASE EXPLAIN HOW THE CAPITAL BUDGET IS REVIEWED AND**
2 **APPROVED FOR INCLUSION IN THE AOP.**

3 **A.** PNM's Resource Council reviews the capital requests of each business segment.
4 The Resource Council can request adjustments to proposed project plans. For
5 example, the Resource Council can request changes to ranking of projects or to
6 the amount of capital to be allocated to each business segment over the five year
7 period. If necessary, each business segment updates their capital plan based on
8 Resource Council review and finalizes the list of projects that will receive
9 funding. The Resource Council reconvenes to approve the adjusted budget, if
10 any. Finalized capital budget information for the five-year period is submitted to
11 the PNMR Board for approval which includes a review of all projects in excess of
12 \$25 million. Once approved by the PNMR Board, the five-year capital plan is
13 formally included in the AOP.

14

15 **Q. DO PROJECTS REQUIRE ADDITIONAL APPROVAL AFTER THE**
16 **CAPITAL BUDGET IS FINALIZED IN THE AOP?**

17 **A.** Yes. Prior to the commencement of a capital project, project managers must
18 submit formal documentation, a Capital Approval Process ("CAP") form, before
19 capital funds will be released. This form contains project specific information
20 including a description of the project, background, performance analysis, risk
21 analysis, and a final recommendation that has considered potential alternatives
22 and justification for the project. Due to the ownership structure at San Juan, and
23 Luna Generating Stations, which are owned jointly by PNM and other owners,

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 PNM utilizes the Capital Budget Item (“CBI”) form which is necessary to obtain
2 participant owner approval of projects. The CBI form also includes the
3 requirements of the CAP form utilized for other PNM projects. Upon approval of
4 the CAP/CBI form, the capital spend is authorized and the funds are released for
5 the project. Due to the nature of the capital process, CAP forms are submitted
6 near the time of project commencement; therefore a CAP may not yet be available
7 for all 2015 or 2016 projects.

8
9 **Q. ARE CAPITAL PROJECTS EVALUATED AFTER CAPITAL HAS BEEN**
10 **RELEASED TO FUND THE PROJECT?**

11 **A.** It is ultimately the responsibility of the project manager to monitor the status of a
12 specific project, including adherence to the approved budget, scope, and schedule.
13 Though the project manager is responsible for the successful delivery of a project,
14 each business segment has a budget oversight and project monitoring team that
15 continuously evaluates capital projects to ensure expenditures and clearings are
16 within the project guidelines. Project managers are also required to report any
17 capital projects that have a projected budget over-run of more than 10%. If a
18 project falls into this category, the project manager must submit a Request for
19 Additional Funds (“RFAF”) document outlining the rationale for the cost
20 overruns, the additional capital needed in order to complete the project, and any
21 project tradeoffs necessary to ensure approved capital targets are not exceeded.
22 Upon submission of this form, management reviews the rationale for the cost
23 overruns and determines if the project will be provided with additional capital.

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1

2 **Q. DOES THE COMPANY MONITOR CAPITAL PROJECTS IN ANY**
3 **OTHER WAY DURING THE YEAR?**

4 **A.** Yes. Beyond the individual business segments, monthly and quarterly
5 management reviews of spend and clearings on capital projects are also
6 conducted. During these reviews, management analyzes any differences between
7 budgeted and actual results, and, if necessary, has the authority to alter planned
8 capital projects.

9

10 **C. *Capital Budget Reforecasts (Project Trade-Offs)***

11 **Q. HOW OFTEN DOES THE COMPANY UPDATE ITS CAPITAL**
12 **BUDGET?**

13 **A.** Factors outside of PNM's control, including but not limited to, equipment
14 delivery delays, unforeseen scope changes, or new must do projects that emerge
15 due to storm damage, wild fires, regulatory compliance and other factors, may
16 require updates to the capital project list during the year. The Company must
17 respond to these changes as necessary and the capital budget is updated each
18 calendar quarter.

19

20 Due to the long-term nature of many capital projects, updates made during the
21 quarterly reforecast often impact several years of budgeted expenditures and
22 clearings to plant in service. For example, an unexpected must do project can be

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 funded by shifting an existing project to a later year. Similarly, funds allocated to
2 a cancelled project can be utilized by shifting projects from subsequent years to
3 the current year or by funding a project which had not previously been allocated
4 funds. Trade-offs between projects are identified and captured in the budget to
5 ensure annual capital spending is in line with approved targets.

6
7 **IV. THE HYPERION SYSTEM AND ITS USE IN BUDGET**
8 **DEVELOPMENT**

9 **A. Introduction**

10 **Q. PLEASE PROVIDE AN OVERVIEW OF HYPERION, THE COMPANY'S**
11 **CAPITAL BUDGETING SYSTEM.**

12 **A.** The Company utilizes Hyperion to compile its capital budgets. Hyperion is an
13 Oracle software product that provides centralized budgeting and financial
14 forecasting capability. For capital projects, information is populated to Hyperion
15 through the use of capital templates, or directly through 'ad hoc' updates.
16 Information in Hyperion is aggregated into basic account strings which contain,
17 business segment, company, funding project, cost type, location, home center, and
18 amount, as well as the month in which forecasted transactions will occur.

19
20 **Q. DOES HYPERION CONTAIN CAPITAL INFORMATION OTHER THAN**
21 **FORECASTED CAPITAL?**

22 **A.** Yes. Actual information from other financial systems such as the general ledger
23 can be brought into the Hyperion system. Actual information can either replace

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 budgeted information in order to include actual ending balances or transactions to
2 support new budget cycles or it can be brought into Hyperion while maintaining
3 budgeted information to support financial reporting or analysis which compares
4 actual to budgeted results. For purposes of this filing, actual capital balances at
5 the end of the Base Period were used as the starting point for the capital forecast.
6

7 **Q. HOW IS INFORMATION IN HYPERION ACCESSED TO SUPPORT**
8 **THE COMPANY'S LINKAGE AND TEST PERIOD FORECASTED**
9 **CAPITAL INFORMATION?**

10 **A.** Information in Hyperion is accessed and extracted through the use of the Essbase
11 querying tool ("Essbase"). Essbase can query information from the various
12 sources in the Hyperion system at the aggregated account string level (e.g.
13 business segment, company, funding project, cost type, etc.).
14

15 ***B. Capital Forecast Calculations and Adjustments***

16 **Q. WHAT CALCULATIONS DOES HYPERION PERFORM TO**
17 **COMPLETE THE CAPITAL BUDGET?**

18 **A.** In addition to compiling budgeted data, the Hyperion system performs numerous
19 calculations necessary to complete the budget. For capital, system calculations
20 include items such as the allocation of budgeted capital clearings to the various
21 electric plant accounts (e.g., to accounts 353, station equipment, or other electric
22 plant accounts as defined by the FERC Uniform System of Accounts), calculation

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 of capital loads, and the clearing of construction to plant in service. In some
2 cases, additional adjustments not performed by system calculation processes are
3 needed to complete the budget.

4
5 **Q. PLEASE DESCRIBE NON-SYSTEMATIC ADJUSTMENTS NECESSARY**
6 **TO COMPLETE THE CAPITAL BUDGET.**

7 **A.** As previously discussed, additional non-systematic adjustments are necessary to
8 complete the capital budget and are made to reflect assumptions about future
9 activity not otherwise captured during the capital budgeting process. For
10 example, Hyperion has limited ability to allocate capital to the electric plant
11 accounts using allocation rates. Such allocation rates are input by system
12 locations which provide only a general identification of the type of construction
13 (e.g., distribution, transmission, generation, or corporate). Hyperion does not
14 have the ability to perform the allocation at a level of detail lower than the
15 location. Therefore, additional adjustments are made to more accurately allocate
16 capital to the various electric plant accounts. In addition, Hyperion does not
17 perform any system calculations to forecast retirements or cost of removal which
18 are transactions typical of most capital projects. Finally, other adjustments that
19 cannot be systematically performed are necessary to align forecasted capital
20 information with PNM's rate case request. These include such adjustments as
21 removing AFUDC on certain project balances included in rate base at the end of
22 the Test Period, and the removal of PNM's forecasted additional 132 MW
23 ownership interest in the San Juan.

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1

2 **1. Electric Plant Account Allocations**

3 **Q. PLEASE EXPLAIN WHY IT IS NECESSARY TO ALLOCATE PLANT**
4 **ADDITIONS TO THE ELECTRIC PLANT ACCOUNTS.**

5 **A.** Capital budget information is loaded to Hyperion at the general ledger account
6 level. Similarly, clearings to plant in service are performed by transferring
7 construction to plant in service at the general ledger account level (e.g. reduce
8 account 107 and increase account 101). It is necessary to allocate activity to the
9 various electric plant accounts to forecast how construction will actually be added
10 to plant in service or to calculate depreciation expense which requires a
11 combination of both the location and the electric plant account.

12

13 **Q. PLEASE DESCRIBE THE PROCESS TO ALLOCATE PLANT**
14 **ADDITIONS TO THE ELECTRIC PLANT ACCOUNTS.**

15 **A.** Based on historical clearings to plant in service, allocation rates are loaded to the
16 system by general ledger location. As previously discussed, general ledger
17 locations define at a summary level the kind of work being performed (e.g.,
18 distribution, transmission, generating facility, or corporate support functions such
19 as IT hardware, telecom, etc.). Hyperion uses “default” rates to perform a system
20 calculation which allocates clearings at each location to the appropriate electric
21 plant accounts. In many cases the “default” or location level allocation of
22 clearings to the electric plant accounts reasonably reflects anticipated future

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 capital additions and no additional adjustments are needed. In other cases, more
2 refinement is necessary to better allocate forecasted additions to the various
3 electric plant accounts.

4
5 **Q. HOW DID THE COMPANY DETERMINE THE “DEFAULT” OR**
6 **LOCATION ALLOCATION RATES UTILIZED BY HYPERION TO**
7 **ALLOCATE BUDGETED CLEARINGS TO THE ELECTRIC PLANT**
8 **ACCOUNTS?**

9 **A.** The Company reviewed historical additions to plant in service by major operating
10 unit (i.e., distribution, transmission, generating facility, and corporate), and
11 funding project type to determine rates used to allocate clearings to the electric
12 plant accounts. PNM utilized a five-year period ending December 31, 2014, to
13 determine average allocation rates to apply to forecasted capital additions in the
14 generation and corporate segments. Capital expenditures and clearings for the
15 T&D segment have increased significantly in recent years. Therefore, the
16 Company utilized a shorter, two year, period ending December 31, 2014 to
17 determine electric plant account allocation rates for the T&D segment. The
18 resulting allocation rates were entered into Hyperion by location to perform the
19 systematic allocation of forecasted clearings to the electric plant accounts. The
20 “default” electric plant account allocation rates for each segment or generating
21 facility are provided in PNM Exhibit ECB-2.

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 **Q. WHAT REFINEMENT IS PROVIDED BY ADJUSTING “DEFAULT” OR**
2 **LOCATION LEVEL ALLOCATION RATES?**

3 **A.** In some cases, the allocation of clearings at the location level is too broad to
4 reasonably reflect the type of work being performed. For example, certain
5 clearings at a distribution location may be specific to distribution pole
6 replacements. Clearings for this type of work should not be allocated to electric
7 plant accounts not associated pole replacements. In some cases, capital work
8 specific to certain activities can be identified by the funding project type. An
9 evaluation of capital clearings in such funding projects (such as pole replacements
10 as previously discussed) is performed and the “default” results from the system
11 calculation are adjusted to refine more accurately allocated forecasted capital
12 additions to the appropriate account.

13

14 **Q. PLEASE DESCRIBE HOW THE COMPANY DETERMINES THE**
15 **ALLOCATION OF CLEARINGS TO CERTAIN PROJECT TYPES.**

16 **A.** The allocation of forecasted clearings for certain projects is performed in a
17 manner similar to the “default” or location allocation rates. That is, certain
18 allocation rates for project types utilized the same historical periods as were used
19 for the “default” allocation rates.

20

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 **Q. PLEASE DESCRIBE WHICH UTILITY PROJECT TYPES WERE**
2 **ADJUSTED TO MORE ACCURATELY ALLOCATE CLEARINGS TO**
3 **THE ELECTRIC PLANT ACCOUNTS.**

4 **A.** The Company uses blanket funding projects to perform some capital work.
5 Blanket projects include work with limited scope such as transformer
6 replacements, meter replacements, or pole replacements. Forecasted expenditures
7 in these types of projects should not be allocated to unrelated electric plant
8 accounts. For example, planned capital expenditures in the transformer
9 replacement blanket project type should not be to electric plant accounts not
10 related to transformer replacements. PNM performs T&D capital blanket work in
11 funding project types numbered 001 to 013 (funding project types are identified
12 by the middle three digits of each 8 digit project ID). Adjustments were made to
13 results of the “default” allocation to more accurately forecast the allocation of
14 capital additions in these project types to the electric plant accounts. PNM
15 Exhibit ECB-2 separately identifies forecasted capital additions that were
16 allocated by projects type.

17

18 **Q. WERE ANY OTHER ALLOCATIONS TO THE ELECTRIC PLANT**
19 **ACCOUNTS ADJUSTED?**

20 **A.** Yes, the Company also adjusted the allocation of capital additions to the electric
21 plant accounts for specific large funding projects. The Company made
22 adjustments to the “default” allocation for capital addition related to the La Luz
23 Generating Facility, 2015 40 MW Solar generating facility, the PVNGS 64 MW

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 leased asset acquisition, the San Juan Selective Non-Catalytic Reduction
2 (“SNCR”), the EIP transmission line purchase. The allocation of expenditures in
3 these capital projects were determined based upon information provided by
4 company personnel. PNM Exhibit ECB-2 separately identifies these funding
5 projects and the allocation rates used to forecast additions to the electric plant
6 accounts.

7
8 **2. Cost of Removal**

9 **Q. PLEASE DESCRIBE COST OF REMOVAL AND WHY IT IS**
10 **NECESSARY TO ADJUST FOR COST OF REMOVAL IN THE CAPITAL**
11 **BUDGET.**

12 **A.** As defined in the FERC Uniform System of Account (“USOA”) Definitions, cost
13 of removal means the demolition, dismantling, tearing down or otherwise
14 removing electric plant, including the cost of transportation and handling
15 incidental thereto. The majority of capital projects are performed to replace
16 existing capital assets and it is not appropriate to abandon retired assets in place.
17 Instead, these assets are removed and disposed and the cost of these activities
18 reflects the cost of removal. The Company does not separately budget removal
19 costs. Instead, anticipated cost of removal is budgeted in Hyperion as a
20 component of CWIP and, like CWIP, is cleared to plant in service at forecasted
21 completion dates. Therefore, it is necessary to reduce plant in service to reflect
22 anticipated removal costs.

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 **Q. PLEASE DESCRIBE HOW PLANT IN SERVICE IS ADJUSTED IN THE**
2 **BUDGET FOR FORECASTED COST OF REMOVAL.**

3 **A.** Forecasted cost of removal is determined using an estimated cost of removal rate
4 (percentage) associated with capital expenditures by operating unit (i.e.,
5 distribution, transmission, individual generating plants, and corporate) based on
6 historical experience, adjusting for changes in capital spend patterns if necessary.
7 The historical periods used are the same as those used to calculate the allocation
8 of clearings to the electric plant accounts. Cost of removal is applied using
9 “contra” funding projects. “Contra” funding projects reflect activities and
10 balances to offset, or reduce, other budgeted activities. For cost of removal, the
11 “contra” serves to reduce forecasted additions to plant in service and the provision
12 for accumulated depreciation which reflects how forecasted cost of removal will
13 actually be recorded (i.e., as a component of accumulated depreciation). Similar
14 to other clearings to plant in service, the cost of removal “contra” must be
15 allocated to the electric plant accounts which is accomplished using the allocation
16 to electric plant accounts process previously discussed. Corporate assets typically
17 do not have cost of removal due to the nature of capital projects at the corporate
18 entity. There are typically limited costs associated with removing a software
19 system, or removing office equipment. Therefore, the budget does not include a
20 forecast for cost of removal for the corporate segment. For the Linkage and Test
21 Period, the reduction to PNM’s plant in service and accumulated reserve for cost
22 of removal is \$13,373,400. PNM Exhibit ECB-3 provides historical CWIP and

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 cost of removal expenditures (reflected in the exhibit as “RWIP”) used to
2 calculate forecasted cost of removal rates.

3
4 **3. Retirements**

5 **Q. PLEASE DESCRIBE RETIREMENTS AND WHY IT IS NECESSARY TO**
6 **ADJUST FOR RETIREMENTS IN THE CAPITAL BUDGET.**

7 A. A retirement occurs when an item of plant in service which, when retired, with or
8 without replacement, is accounted for by crediting the book cost to the electric
9 plant account in which it is included. In other words, a retirement occurs when an
10 assets is removed from plant in service regardless of replacement. The Company
11 does not generally forecast the retirement of specific assets as part of its capital
12 budgeting process. Instead, historical retirement activity is used as a basis for
13 forecasting future retirements.

14
15 **Q. PLEASE DESCRIBE HOW THE COMPANY HAS ADJUSTED PLANT IN**
16 **SERVICE FOR RETIREMENTS.**

17 A. PNM determined estimated average retirements (dollar amounts) by major
18 operating unit (i.e., distribution, transmission, individual generating plants and
19 corporate) based on historical experience, adjusting as necessary for changes in
20 retirement patterns. The historical periods used are the same as those used to
21 calculate the allocation of clearings to the electric plant accounts and for cost of
22 removal. However, for general plant asset (i.e., plant accounts 390 – 399) in

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 distribution, transmission, generation and corporate, forecasted retirements are
2 assumed to occur when assets are fully depreciated. Similar to cost of removal,
3 retirements are applied using “contra” funding projects as reductions to electric
4 plant in service and accumulated depreciation. For the Linkage and Test period,
5 forecasted retirements at PNM total \$30,229,586 (the total of lines 47 and 151 in
6 PNM Exhibit ECB-4) and at Corporate total \$790,458. PNM Exhibit ECB-4
7 provides the calculation of forecasted retirements that were applied to the Linkage
8 and Test Period.

9
10 **4. Capital Loads**

11 **Q. WHAT IS A CAPITAL LOAD?**

12 **A.** As discussed by PNM Witness Peters, a capital load, normally referred to as a “load”
13 or a “load factor”, is the percentage of additional costs to be applied to base
14 construction costs to reflect company indirect costs incurred in support of the
15 construction project.

16
17 **Q. HOW DOES HYPERION CALCULATE CAPITAL LOADS ON**
18 **FORECASTED CAPITAL PROJECTS?**

19 **A.** Each type of capital load rate is entered into the Hyperion system on an annual
20 basis. The Hyperion system applies these load rates to the various types of capital
21 expenditures to determine capital load amounts. Generally, capital load rates are
22 applied to associated capital expenditures to determine the dollar amount of

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 capitalized loads. For example, payroll load rates are applied to forecast capital
2 payroll expenditures. In this way, capital load rates are applied to capital
3 expenditures to determine the dollar amount of capital loads in the forecast.

4
5 **Q. WHY ARE CAPITAL LOADS APPLIED TO CAPITAL PROJECTS?**

6 **A.** As discussed by PNM Witness Peters, direct costs are charged to each project
7 during the construction phase. In addition to these direct costs, the Company
8 incurs costs in support of these construction activities that cannot be applied
9 directly to the project. These costs are applied to construction projects based on a
10 load factor which is applied to direct costs. These load factors include payroll
11 loads, material loads, engineering and supervision (“E&S”) loads, capitalized fleet
12 load, and A&G loads. In addition, the company applies AFUDC loads to capital
13 projects using an AFUDC rate as discussed later in my testimony.

14
15 **Q. HOW ARE CAPITAL LOAD RATES USED BY THE HYPERION**
16 **SYSTEM TO FORECAST CAPITAL LOADS?**

17 **A.** Capital load rates are entered into Hyperion as miscellaneous account entries.
18 These “misc” accounts provide Hyperion with the information necessary to apply
19 the load rate to direct project charges. Hyperion applies the rate entered for each
20 type of capital load to the associated direct capital expenditures. For example,
21 Hyperion applies capital load rates associated with direct capital payroll charges
22 to calculate the value of payroll loads. Similarly, Hyperion applies A&G load
23 rates to the appropriate direct capital expenditures to calculate the value of the

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 A&G load. The majority of capital loads are calculated by applying the
2 forecasted load rate to the associated direct capital expenditure. However,
3 AFUDC load rates are applied to average construction balances by individual
4 project to determine the value of AFUDC loads.

5

6 **V. ALLOWANCE FOR FUNDS USED DURING CONSTRUCTION**

7 **A. *Introduction***

8 **Q. WHAT IS AFUDC AND HOW DOES HYPERION APPLY AFUDC TO**
9 **CAPITAL PROJECTS?**

10 **A.** AFUDC reflects the cost of borrowed funds used for construction purposes and a
11 reasonable rate of return on other funds used for construction. In other words, it
12 represents capitalized interest cost and a reasonable return on capital expenditures
13 during the construction period. The Company records AFUDC on its
14 jurisdictional construction and nuclear fuel in process assets in accordance with
15 FERC Order No. 561.

16

17 **B. *Calculation of AFUDC***

18 **Q. PLEASE DESCRIBE HOW AFUDC RATES WERE CALCULATED**
19 **DURING THE LINKAGE AND TEST PERIODS.**

20 **A.** AFUDC rates are calculated using the AFUDC rate formula provided under Order
21 No. 561 which provides that rates be calculated using average balances of

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 construction expenditures and short-term as well as long-term debt and equity
2 balances at the end of the prior year including rates associated with debt and
3 equity balances. The capital forecast calculates AFUDC rates on a calendar year
4 basis. The inputs and results of the Company's AFUDC rate calculation are
5 provided in PNM Exhibit ECB-5

6
7 **Q. PLEASE DESCRIBE HOW THE HYPERION SYSTEM DETERMINES**
8 **THE AMOUNT OF CAPITALIZED AFUDC.**

9 **A.** At a summary level, AFUDC is calculated by applying the rate to capital
10 construction and nuclear fuel in process average balances by individual project.
11 The Hyperion system applies the rates to the average monthly balances by
12 individual project to determine the amount of capitalized AFUDC recorded during
13 the Linkage and Test Periods.

14
15 **Q. DID THE COMPANY MAKE ANY ADJUSTMENTS TO THE HYPERION**
16 **CALCULATION OF AFUDC?**

17 **A.** Yes. The Company removed forecasted AFUDC subsequent to July 1, 2016 on
18 projects included in this filing's request for CWIP at the end of the Test Period.

19
20 **Q. HOW WAS THE REDUCTION TO CWIP FOR AFUDC AT THE END OF**
21 **THE TEST PERIOD DETERMINED?**

22 **A.** The Company has requested that rates become effective July 1, 2016. It would
23 not be appropriate to continue accruing AFUDC on CWIP balances included in

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

1 the Company's requested revenue requirement after request rates have taken
2 effect. Therefore, the Company removed AFUDC on CWIP balances for projects
3 included in rate base subsequent to the requested date of rates under this case or
4 July 1, 2016. This adjustment resulted in the removal of \$1,013,483 of AFUDC
5 from CWIP at September 30, 2016.

6
7 **VI. REMOVAL OF PNM'S 132 MW INTEREST IN THE SAN JUAN**

8 **Q. WHY DOES THE BUDGET INCLUDE AN ADDITIONAL 132 MW OF**
9 **CAPITAL IN THE SAN JUAN?**

10 **A.** The Company assumed in its forecast for 2015 and 2016 capital expenditures
11 related to an additional 132 MW interest in San Juan. The approval of this
12 additional capacity is currently pending in NMPRC Case No. 13-00390-UT.

13
14 **Q. HAS PNM EXCLUDED THE FORECASTED CAPITAL EXPENDITURES**
15 **AND ADDITIONS FOR THE ADDITIONAL 132 MW INTEREST IN SAN**
16 **JUAN FOR PURPOSES OF THIS CASE?**

17 **A.** Yes. As discussed earlier in my testimony forecasted capital expenditures reflect
18 PNM's ownership interest in San Juan. Without adjustment, forecasted capital
19 expenditures and clearings include PNM's ownership interest in an additional 132
20 MW in San Juan Unit 4, plant common to both Units 3 and 4, and plant common
21 to all units. PNM is not asking for recovery of the portion of capital investment
22 related to the 132 MW in San Juan in this proceeding as the acquisition of the 132

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

MW in San Juan Unit 4 is still pending approval before the Commission. This is also discussed in PNM Witness Monroy's testimony.

Q. PLEASE EXPLAIN HOW PNM'S 132 MW INTEREST WAS REMOVED FROM FORECASTED CAPITAL EXPENDITURES AND ADDITIONS.

A. PNM's additional ownership in San Juan Unit 4, Unit 3 and 4 common, and overall common related to the 132 MW increased by 40.4%, 31.6%, and 21.1%, respectively. Corresponding reductions to forecasted construction and associated clearings to plant in service during the Linkage and Test Period, as well as CWIP included in rate base at September 30, 2016, were made to reduce PNM's forecasted capital investment in the facility. This reduction includes all capital loads associated with projects at San Juan. The reduction to future capital clearings was recorded as a "contra" funding project similar to the process for cost of removal and retirements.

PNM Table ECB-4 provides the adjustment to reduce forecasted clearings related to PNM's 132 MW ownership interest in the facility.

Table ECB-4

Removal of San Juan Generating Station 132 MW Interest		
	FERC	Amount
Plant in Service Reduction for 132MW Interest		
San Juan Unit 4 - SNCR	101	\$ (13,131,595)
San Juan Unit 4 - Other	101	\$ (2,547,763)
San Juan Common - All Units	101	\$ (1,295,778)
Total		\$ (16,975,136)

**DIRECT TESTIMONY OF
ERIK C. BUCHANAN
NMPRC CASE NO. 15-00261-UT**

VII. CONCLUSION

1

2 **Q. WHAT ARE YOUR GENERAL CONCLUSIONS?**

3 **A.** The Company forecasts capital additions based upon capital targets and the
4 capital expenditures and clearing assumptions provided by the various business
5 segments. Hyperion applies capital load rates, including AFUDC, to forecasted
6 capital expenditures to determine the total cost of capital projects and to
7 determine total capital additions to plant in service. To complete the capital
8 budget, adjustments are made to allocate capital additions to various electric plant
9 accounts, to reflect forecasted cost of removal and retirement activities, and to
10 align certain items, such as PNM's additional 132 MW ownership in the San
11 Juan, with the Company's rate case request. Together, the above items provide a
12 reasonable basis for the forecasted capital construction and plant in service
13 additions, accumulated depreciation balances, and the calculation of depreciation
14 expense.

15

16 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

17 **A.** Yes.

GCG#520336

Resume of Eric C. Buchanan

PNM Exhibit ECB-1

Is contained in the following 1 page.

ERIK C. BUCHANAN
EDUCATION AND PROFESSIONAL SUMMARY

Name: Erik C. Buchanan

Address: PNM Resources, Inc.
MS 0915
414 Silver Avenue, SW
Albuquerque, NM 87102

Position: Director, Corporate Budget

Education: Bachelor of Business Administration, University of New Mexico, 2003
Certified Public Accountant in the State of New Mexico, October 2005.

Employment: Employed with the Public Service Company of New Mexico since 2008.
Positions held within the Company include:

Director, Corporate Budget
Senior Manager, General Accounting
Manager, Corporate Accounting
Project Manager, SEC Reporting and GAAP Analysis

Testimony Filed:

None.

Plant Utility Accounts Allocations

PNM Exhibit ECB-2

Is contained in the following 5 pages.

A		B		C	D	E	F	G	H	I	J	K	L	M
1 PNM Exhibit ECB-2														
2 Electric Plant Account Allocation Rates														
3														
4														
5														
6	T&D	Electric Plant Account												
7														
8														
9	100	Station Equip						8,752,949	7,171,793	7,952,371			11,480,881	
10	100	Underground Conductors & De						5,269,316	3,833,743				15,144	
11	100	Overhead Conductors & Devic						2,454,316					5,527,844	
12	100	Poles,Towers & Fixtures						1,542,905	5,658,590	3,575,747			5,455,843	
13	100	Comp Hardware						374,318	4,187,783	2,256,051			3,252,982	
14	100	Structures & Improvement						23	3,432,994	1,706,658			2,460,817	
15	100	Communication Equip						55,289	3,337,739	1,688,004			2,433,970	
16	100	Off Turn & Ed Comp Hardwar						5,882,583	2,213,374	1,248,718			1,603,892	
17	100	Underground Conduit						286,583	701,705				1,268,432	
18	100	Total						1,057,684	7,007,989	3,478			1,056,356	
19	100	T&D Shop & Garage Equip						2,752,296	(1,230,060)	732,618			1,000,00%	
20								26,122,444	24,509,930	23,316,187			36,903,214	
21														
22	155	Station Equip						3,876,092	447,469	2,162,775			2,217,303	
23	155	Poles,towers & fixtures						183,346	937,707	527,226			581,835	
24	155	Overhead conductors & devic						10,894,811	1,058,843	2,323,811			10,894,811	
25	155	Structures & improvement						326,529	756,333	397,166			323,811	
26	155	Underground Conductors & De						282,449	853,289	183,669			188,504	
27		Total						4,870,406	2,793,675	3,632,040			3,928,653	
28														
29														
30	650	Station Equip						[165,022]	4,450,976	2,142,377			85,606,805	
31	650	Poles & Fixtures						67,507	1,359,359	713,493			28,499,959	
32		Total						[97,513]	5,810,356	2,856,410			314,108,763	
33														
34														
35	220	Station Equip						19,344,262	32,544,589	25,944,430			5,554,381	
36	220	Poles & Fixtures						4,591,265	11,858,050	8,224,657			1,760,797	
37	220	Structures & Improvement						3,345,765	317,823	1,831,344			392,111	
38	220	Overhead Conductors & Devic						264,903	1,679,817	972,560			208,170	
39	220	Towers & Fixtures						246,489	1,225,278	737,588			137,859	
40	220	Off Turn & Ed Comp Hardwar						929,072	251,200	590,186			126,341	
41	220	Communication Equip						415,748	454,623	434,885			91,051	
42		Total						29,140,934	48,593,585	35,735,171			8,291,770	
43		T&D 'Default' Allocation Total											162,831,350	
44														
45														

Exhibit ECB-2
Page 1 of 5
Case 15-00261
UT

PNM Exhibit EGB-2		A		B		C		D		E		F		G		H		I		J		K		L		M	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		10		11		12		13	
Electric Plant Account Allocation Rates		1		2		3		4		5		6		7		8		9		1							

OWN Exhibit EC9-2		B		C		D		E		F		G		H		I		J		K		L		M	
1	2	Electric Plant Account Allocation Rates																							
3	4																								
5	6																								
7	8																								
9	10																								
11	12																								
13	14																								
15	16																								
17	18																								
19	20																								
21	22																								
23	24																								
25	26																								
27	28																								
29	30																								
31	32																								
33	34																								
35	36																								
37	38																								
39	40																								
41	42																								
43	44																								
45	46																								
47	48																								
49	50																								
51	52																								
53	54																								
55	56																								
57	58																								
59	60																								
61	62																								
63	64																								
65	66																								
67	68																								
69	70																								
71	72																								
73	74																								
75	76																								
77	78																								
79	80																								
81	82																								
83	84																								
85	86																								
87	88																								
89	90																								
91	92																								
93	94																								
95	96																								
97	98																								
99	100																								
101	102																								
103	104																								
105	106																								
107	108																								
109	110																								
111	112																								
113	114																								
115	116																								
117	118																								
119	120																								
121	122																								
123	124																								
125	126																								
127	128																								
129	130																								
131	132																								
133	134																								
135	136																								
137	138																								
139	140																								
141	142																								
143	144																								
145	146																								
147	148																								
149	150																								
151	152																								
153	154																								
155	156																								
157	158																								
159	160																								
161	162																								
163	164																								
165	166																								
167	168																								
169	170																								
171	172																								
173	174																								
175	176																								
177	178																								
179	180																								
181	182																								
183	184																								
185	186																								
187	188																								
189	190																								
191	192																								
193	194																								
195	196																								
197	198																								
199	200																								
201	202																								
203	204																								
205	206																								
207	208																								
209	210																								
211	212																								
213	214																								
215	216																								
217	218																								
219	220																								
221	222																								
223	224																								
225	226																								
227	228																								
229	230																								
231	232																								
233	234																								
235	236																								
237	238																								
239	240																								
241	242																								
243	244																								
245	246																								
247	248																								
249	250																								
251	252																								
253	254																								
255	256																								

PNM Exhibit ECB-2		A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	PNM Exhibit ECB-2												
3	4	Electric Plant Account Allocation Rates												
5	6													
7	8													
9	10													
11	12													
13	14													
15	16													
17	18													
19	20													
21	22													
23	24													
25	26													
27	28													
29	30													
31	32													
33	34													
35	36													
37	38													
39	40													
41	42													
43	44													
45	46													
47	48													
49	50													
51	52													
53	54													
55	56													
57	58													
59	60													
61	62													
63	64													
65	66													
67	68													
69	70													
71	72													
73	74													
75	76													
77	78													
79	80													
81	82													
83	84													
85	86													
87	88													
89	90													
91	92													
93	94													
95	96													
97	98													
99	100													
101	102													
103	104													
105	106													
107	108													
109	110													
111	112													
113	114													
115	116													
117	118													
119	120													
121	122													
123	124													
125	126													
127	128													
129	130													
131	132													
133	134													
135	136													
137	138													
139	140													
141	142													
143	144													
145	146													
147	148													
149	150													
151	152													
153	154													
155	156													
157	158													
159	160													
161	162													
163	164													
165	166													
167	168													
169	170													
171	172													
173	174													
175	176													
177	178													
179	180													
181	182													
183	184													
185	186													
187	188													
189	190													
191	192													
193	194													
195	196													
197	198													
199	200													
201	202													

A		B												C	D	E	F	G	H	I	J	K	L	M																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
1	PMM Exhibit ECB-2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
2	Electric Plant Account Allocation Rates																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
202	Location Abbreviations																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
203	100 - Distribution (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
204	105 - Distribution (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
205	200 - Transmission (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
206	650 - Transmission (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
207	046 - Rio Bravo Generating Station (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
208	357 - Built Power Building Allocator (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
209	703 - Lordsburg Generating Station (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
210	707 - Afton Generating Station (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
211	713 - Reeves Generating Station (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
212	715 - Four Corners Generating Station (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
213	720 - Palo Verde Nuclear Generating Station All Units(Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
214	744 - Luna Generating Station (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
215	760 - San Juan Generating Station All Units (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
216	0 - San Juan Switchyard (Company 3)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
217	999 - All Corporate Locations (Company 7)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
218																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
219																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
220																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
221																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
222																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
223																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
224																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
225																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
226																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
227																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
228																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
229																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
230																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
231																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
232																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
233																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
234																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
235																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
236																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				

Cost of Removal

PNM Exhibit ECB-3

Is contained in the following 2 pages.

	A	B	C	D	E	F	G	H	I	J	K
1	PNM Exhibit ECB-3										
2	Calculation of Cost of Removal Rate										
3											
4	Operating Units	Location	2010 Expenditures	2011 Expenditures	2012 Expenditures	2013 Expenditures	2014 Expenditures	Total Expenditures	Cost of Removal Rate	Linkage & Test Period Additions Subject to Cost of Removal	Linkage & Test Period Forecasted Cost of Removal
5	Transmission & Distribution (1)										
6	Construction Work in Progress (Account 107000)	100				57,961,691	70,624,210	128,585,901			
7	Retirement Work in Progress (Account 108000)	100	7,644	10,617	27,970	48,566	332,328	427,125	4.19%	81,619,902	(3,423,303)
8	Construction Work in Progress (Account 107000)	155	11,733,865	9,102,734	1,665,808	2,377,131	1,065,431	25,944,969			
9	Retirement Work in Progress (Account 108000)	155	285,664	177,677	338,570	170,749	29,915	1,002,576	9.75%	10,968,839	(1,069,742)
10	Construction Work in Progress (Account 107000)	220	5,312,586	3,283,751	4,137,323	4,332,092	8,950,904	26,016,655			
11	Retirement Work in Progress (Account 108000)	220	814,698	400,349	793,353	70,407	231,838	2,310,644	2.95%	8,292,720	(244,465)
12	Construction Work in Progress (Account 107000)	650	5,882,256	3,654,031	1,645,894	3,484,810	6,322,777	20,989,768			
13	Retirement Work in Progress (Account 108000)	650	361,691	270,866	(144,503)	(40,928)	253,808	700,934	0.81%	114,106,763	(922,725)
14	Construction Work in Progress (Account 107000)	650	1,399,335	3,775,652	2,892,220	1,741,682	6,315,561	16,124,450			
15	Retirement Work in Progress (Account 108000)	650	401,895	231,358	144,376	(53,927)	134,030	857,733	5.05%	6,011,090	(303,606)
16	Construction Work in Progress (Account 107000)	721	4,988,585	1,496,615	3,083,589	6,688,159	(222,930)	16,034,017	3.26%	5,323,729	(173,439)
17	Retirement Work in Progress (Account 108000)	721	435,291	5,348	289,154	(154,638)	(35,203)	539,952	0.83%	25,381,785	(211,316)
18	Construction Work in Progress (Account 107000)	724	12,440,693	15,989,525	14,855,050	12,262,918	12,851,667	68,399,854	5.23%	45,728,070	(2,389,819)
19	Retirement Work in Progress (Account 108000)	724	46,957	161,488	(12,960)	182,602	196,158	574,245			
20	Construction Work in Progress (Account 107000)	761	1,802,042	11,029,447	1,540,940	2,166,178	12,832,117	29,370,724			
21	Retirement Work in Progress (Account 108000)	761	78,794	903,576	67,980	98,257	470,994	1,619,601			
22	Construction Work in Progress (Account 107000)	762	2,705,883	3,430,344	13,488,941	1,352,402	943,212	21,920,781	6.58%	-	-
23	Retirement Work in Progress (Account 108000)	762	283,011	219,739	834,458	61,780	144,858	1,543,846	4.17%	503,425	(20,994)
24	Construction Work in Progress (Account 107000)	763	17,956,291	4,783,971	18,364,799	1,541,988	7,593	42,654,643	5.91%	47,299,409	(2,796,924)
25	Retirement Work in Progress (Account 108000)	763	1,081,887	38,442	614,127	104,753	16,974	1,856,183			
26	Construction Work in Progress (Account 107000)	764	7,530,428	2,907,197	2,998,096	12,050,241	8,037,645	33,543,607			
27	Retirement Work in Progress (Account 108000)	764	975,332	(12,525)	230,281	881,021	34,064	2,108,173			
28											
29											
30											
31											
32											
33											
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											

	A	B	C	D	E	F	G	H	I	J	K
1	PNM Exhibit ECB-3										
2	Calculation of Cost of Removal Rate										
3											
4	Operating Units	Location	2010 Expenditures	2011 Expenditures	2012 Expenditures	2013 Expenditures	2014 Expenditures	Total Expenditures	Cost of Removal Rate	Linkage & Test Period Additions Subject to Cost of Removal	Linkage & Test Period Forecasted Cost of Removal
45	Construction Work in Progress (Account 107000)	765	500,512	1,764,510	2,145,405	1,830,974	557,391	6,798,791			
46	Retirement Work in Progress (Account 108000)	765	14,694	53,935	25,493	2,047	68,765	164,934		556,745	(113,187)
47	Construction Work in Progress (Account 107000)	766	1,777,833	5,645,703	5,451,601	1,326,039	1,603,846	15,805,022			
48	Retirement Work in Progress (Account 108000)	766	8,433	43,028	283,025	401,960	140,912	877,358		8,492,005	(446,610)
49	Construction Work in Progress (Account 107000)	767	725,184	1,389,798	1,463,303	1,844,859	294,623	5,717,768			
50	Retirement Work in Progress (Account 108000)	767	50,983	9,816	4,415	17,414	(723)	81,906		9,472	(134)
51	Construction Work in Progress (Account 107000)	779	764,333	1,055,706	588,773	208,999	159,197	2,777,008			
52	Retirement Work in Progress (Account 108000)	779	33,959	1,448	18,490	10,901	3,722	68,521		200,496	(4,828)
53	Total Production										
54	Total Forecasted Cost of Removal										(7,713,165)
55											(13,373,400)
56	Notes:										
57	(1) Forecasted cost of removal is based on a rate of two-year historical retirement work in progress to construction work in progress and retirement work in progress applied to plant in service additions.										
58	(2) Forecasted cost of removal is based on a rate of five-year historical retirement work in progress to construction work in progress and retirement work in progress applied to plant in service additions.										
59											
60	Location Abbreviations										
61	100 - Distribution (Company 1)										
62	155 - Distribution (Company 34)										
63	220 - Transmission (Company 35)										
64	650 - Transmission (Company 2)										
65	707 - Afton Generating Station (Company 3)										
66	713 - Reeves Generating Station (Company 3)										
67	715 - Four Corners Generating Station (Company 3)										
68	721 - Palo Verde Nuclear Generating Station Unit 1 (Company 3)										
69	722 - Palo Verde Nuclear Generating Station Unit 2 (Company 3)										
70	723 - Palo Verde Nuclear Generating Station Unit 3 (Company 3)										
71	724 - Palo Verde Nuclear Generating Station Common (Company 3)										
72	761 - San Juan Generating Station Unit 1 (Company 3)										
73	762 - San Juan Generating Station Unit 2 (Company 3)										
74	763 - San Juan Generating Station Unit 3 (Company 3)										
75	764 - San Juan Generating Station Unit 4 (Company 3)										
76	765 - San Juan Generating Station Common Units 1&2 (Company 3)										
77	766 - San Juan Generating Station Common All Units (Company 3)										
78	767 - San Juan Generating Station Units 3&4 (Company 3)										
79	779 - San Juan Switchyard (Company 3)										
80											
81											
82											
83											
84											Attachment ECB-3 Page 2 of 2 Case 15-00261-UT

Retirements

PNM Exhibit ECB-4

Is contained in the following 6 pages.

	A	B	C	D	E	F	G	H	I
1	PNM Exhibit ECB-4								
2	Calculation of Forecasted Retirements								
3									
									Linkage & Test Period Forecasted Retirements
4	Utility Account	Location	FERC	2010 Actual Retirements	2011 Actual Retirements	2012 Actual Retirements	2013 Actual Retirements	2014 Actual Retirements	
5	Transmission & Distribution								
6	Transmission & Distribution Plant (1)								
7	Structures and Improvements	100	361				(11,713)	-	(8,785)
8	Station equipment	100	362				(97,990)	(176,147)	(205,603)
9	Poles, towers and fixtures	100	364				(233,765)	(330,291)	(423,043)
10	Overhead conductors and devices	100	365				(151,168)	(247,620)	(299,091)
11	Underground conduit	100	366				(54,626)	(25,259)	(59,913)
12	Underground conductors and devices	100	367				(347,298)	(508,015)	(641,485)
13	Line transformers	100	368				(846,751)	(858,834)	(1,279,189)
14	Services	100	369				(41,936)	(22,866)	(48,602)
15	Underground Services	100	369.1				-	(53,516)	(40,137)
16	Meters	100	370				(780,069)	(716,084)	(1,122,115)
17	Installations on customers' premises	100	371				(16,342)	(6,115)	(16,842)
18	Street lighting and signal systems	100	373				(111,280)	(99,688)	(158,226)
19	Station equipment	155	362				(97)	(683)	(585)
20	Poles, towers and fixtures	155	364				(190,545)	(224,822)	(311,526)
21	Overhead conductors and devices	155	365				(49,802)	(39,230)	(66,775)
22	Underground conductors and devices	155	367				(2,864)	(1,950)	(3,611)
23	Line transformers	155	368				(170,976)	(84,350)	(191,495)
24	Services	155	369				(140,106)	(131)	(105,177)
25	Meters	155	370				(155,746)	(53)	(116,850)
26	Street lighting and signal systems	155	373				(54,430)	(1,114)	(41,658)
27	Station equipment	220	353				(26,577)	(674,043)	(525,465)
28	Poles and fixtures	220	355				(29,070)	(672)	(22,306)
29	Structures and Improvements	650	352				-	(5,062)	(3,796)
30	Station equipment	650	353				(1,056,148)	(345,045)	(1,050,895)
31	Poles and fixtures	650	355				(165,192)	(65,533)	(173,043)
32	Overhead conductors and devices	650	356				(1,473)	(305,515)	(230,241)
33				See page 6 for notes and abbreviations relevant to this page.					
34									
35									Exhibit ECB-4 Page 1 of 6 Case 15-00261-UT

	A	B	C	D	E	F	G	H	I
1	PNM Exhibit ECB-4								
2	Calculation of Forecasted Retirements								
3									
4	Utility Account	Location	FERC	2010 Actual Retirements	2011 Actual Retirements	2012 Actual Retirements	2013 Actual Retirements	2014 Actual Retirements	Linkage & Test Period Forecasted Retirements
36	General Plant (2)								
37	Office furniture and equipment	100	391						(368,692)
38	Stores equipment	100	393						(6,379)
39	Tools, shop and garage equipment	100	394						(411,587)
40	Laboratory equipment	100	395						(6,171)
41	Communication equipment	100	397						(337,706)
42	Miscellaneous equipment	100	398						(23,854)
43	Office furniture and equipment	155	391						(6,105)
44	Communication equipment	155	397						-
45	Tools, shop and garage equipment	650	394						(52,750)
46	Communication equipment	650	397						(3,255,592)
47	Total Transmission & Distribution								(11,615,288)
48									
49	Production								
50	Steam, Nuclear & Other Production Plant (3)								
51	Structures and improvements	707	341	-	(93,904)	-	-	(283,719)	(113,287)
52	Fuel holders, producers and accessories	707	342	(7,470)	-	-	(50,000)	(285,405)	(102,863)
53	Generators	707	344	-	-	(110,961)	(42,558)	(536,405)	(206,977)
54	Accessory electric equipment	707	345	-	-	(27,082)	(157,160)	(239,214)	(127,037)
55	Structures and improvements	713	311	(24,459)	-	(126,824)	(194,249)	-	(103,660)
56	Boiler plant equipment	713	312	(1,138,749)	(2,077,223)	(150,874)	(1,304,619)	(78,452)	(1,424,975)
57	Turbogenerator units	713	314	(280,323)	(407,425)	(198,866)	(37,633)	(79,209)	(301,037)
58	Accessory electric equipment	713	315	(164,423)	(32,733)	-	(105,951)	(12,047)	(94,546)
59	Miscellaneous powerplant equipment	713	316	-	-	-	(677,242)	-	(203,173)
60	Structures and improvements	715	311	-	(1,978)	-	(14,130)	(203,044)	(65,746)
61	Boiler plant equipment	715	312	(1,384,357)	(729,300)	(1,989,014)	(499,490)	(516,804)	(1,535,690)
62	Turbogenerator units	715	314	(301,387)	(342,905)	(245,999)	(104,780)	-	(298,521)
63	Accessory electric equipment	715	315	(89,617)	-	(18,991)	(9,100)	-	(35,312)
64	Miscellaneous powerplant equipment	715	316	(4,694)	-	(2,746)	(12,133)	(37,222)	(17,038)
65				See page 6 for notes and abbreviations relevant to this page.					
66									Exhibit ECB-4 Page 2 of 6 Case 15-00261-UT

	A		B	C	D	E	F	G	H	I
1	PNM Exhibit ECB-4									
2	Calculation of Forecasted Retirements									
3										
4	Utility Account		Location	FERC	2010 Actual Retirements	2011 Actual Retirements	2012 Actual Retirements	2013 Actual Retirements	2014 Actual Retirements	Linkage & Test Period Forecasted Retirements
67	Structures and improvements		721	321	(26,721)	(1,478)	(4,850)	(2,126)	(1,860)	(11,111)
68	Reactor plant equipment		721	322	(209,487)	(6,158)	(72,290)	(260,955)	(31,504)	(174,118)
69	Turbogenerator units		721	323	(281,202)	-	(17,041)	(72,066)	(35,616)	(121,778)
70	Accessory electric equipment		721	324	(59,594)	-	(433)	-	-	(18,008)
71	Miscellaneous powerplant equipment		721	325	(8,363)	-	(255)	(1,725)	-	(3,103)
72	Structures and improvements		722	321	(18,803)	(623)	(1,109)	(1,954)	(1,316)	(7,142)
73	Reactor plant equipment		722	322	(338,473)	(128,614)	(3,030)	(56,235)	(75,897)	(180,675)
74	Turbogenerator units		722	323	(233,968)	(8,144)	(6,257)	(122,642)	(66,415)	(131,228)
75	Accessory electric equipment		722	324	(377,724)	(3,480)	(173)	(57,307)	(77,705)	(154,916)
76	Miscellaneous powerplant equipment		722	325	-	-	-	(646)	(98)	(223)
77	Structures and improvements		723	321	(25,411)	-	(20,888)	-	(6,738)	(15,911)
78	Reactor plant equipment		723	322	(86,000)	(1,030,578)	(7,842)	(123,020)	(677,485)	(577,477)
79	Turbogenerator units		723	323	(24,129)	(211,047)	(108,877)	(301,032)	(220,687)	(259,731)
80	Accessory electric equipment		723	324	-	(20,909)	-	(22,588)	(8,501)	(15,600)
81	Miscellaneous powerplant equipment		723	325	(1,902)	-	-	-	(14,727)	(4,989)
82	Structures and improvements		724	321	(274,657)	(48,673)	(246,825)	(917,342)	(58,521)	(463,805)
83	Reactor plant equipment		724	322	-	-	-	(2,027)	-	(608)
84	Turbogenerator units		724	323	(1,376)	-	-	-	-	(413)
85	Accessory electric equipment		724	324	(55,305)	(43,588)	(46,400)	(60,156)	(23,706)	(68,746)
86	Miscellaneous powerplant equipment		724	325	(128,523)	(35,299)	(15,959)	(518,517)	(25,545)	(217,153)
87	Structures and improvements		761	311	-	(26,912)	-	(152,680)	-	(53,878)
88	Boiler plant equipment		761	312	(821,826)	(2,382,220)	(255,988)	228,046	(3,162,613)	(1,918,380)
89	Turbogenerator units		761	314	-	(2,065,335)	(74,137)	80,483	(7,806)	(620,038)
90	Accessory electric equipment		761	315	(22,085)	(1,016,560)	(3,165)	(78,826)	-	(336,191)
91	Miscellaneous powerplant equipment		761	316	-	(189)	-	(9,134)	-	(2,797)
92	Structures and improvements		764	311	-	-	(2,188)	(136,234)	(16,358)	(46,434)
93	Boiler plant equipment		764	312	(5,416,191)	(485,799)	(1,024,540)	(2,557,202)	(757,742)	(3,072,442)
94	Turbogenerator units		764	314	(9,032,642)	(507,258)	(2,300,165)	1,116,654	(191,141)	(3,274,366)
95	Accessory electric equipment		764	315	-	-	-	(70,486)	-	(21,146)
96					See page 6 for notes and abbreviations relevant to this page.					
97										Exhibit ECB-4 Page 3 of 6 Case 15-00261-UT

	A	B	C	D	E	F	G	H	I
1	PNM Exhibit ECB-4								
2	Calculation of Forecasted Retirements								
3									
4	Utility Account	Location	FERC	2010 Actual Retirements	2011 Actual Retirements	2012 Actual Retirements	2013 Actual Retirements	2014 Actual Retirements	Linkage & Test Period Forecasted Retirements
98	Structures and improvements	765	311	-	-	(4,816)	(17,616)	(63,435)	(19,031)
99	Boiler plant equipment	765	312	-	(34,700)	(4,816)	(17,616)	(59,964)	(35,129)
100	Turbogenerator units	765	314	(42,667)	-	-	19,400	-	(6,980)
101	Accessory electric equipment	765	315	-	(26,820)	-	-	-	(8,046)
102	Structures and improvements	766	311	(60,477)	(51,381)	(66,123)	(319,800)	(320,299)	(245,424)
103	Boiler plant equipment	766	312	(47,789)	(229,987)	(355,201)	(121,802)	(109,403)	(259,254)
104	Turbogenerator units	766	314	-	-	(461,427)	39,037	(5,770)	(128,448)
105	Accessory electric equipment	766	315	-	-	-	(12,765)	(24,682)	(11,234)
106	Miscellaneous powerplant equipment	766	316	(16,245)	-	-	-	(650,567)	(200,044)
107	Structures and improvements	767	311	-	-	-	(2,093)	(11,870)	(4,189)
108	Boiler plant equipment	767	312	(6,668)	(21,847)	(6,955)	(49,129)	(373,370)	(137,391)
109	Turbogenerator units	767	314	-	-	-	(20,267)	-	(6,080)
110									
111	Transmission & Distribution Plant (3)								
112	Station equipment	715	353	(90,648)	(40,466)	(111,758)	(196,254)	(54,220)	(148,004)
113	Station equipment	721	353	-	-	(2,735)	-	-	(820)
114	Station equipment	722	353	-	-	(497)	(800)	-	(389)
115	Station equipment	723	353	-	(3,556)	-	-	(97,728)	(30,385)
116	Station equipment	724	353	(89,547)	-	-	-	(2,091)	(27,491)
117	Station equipment	761	353	-	-	-	(15,719)	-	(4,716)
118	Station equipment	764	353	-	-	(7,417)	(39,551)	-	(14,090)
119	Station equipment	766	353	(1,628)	-	(354,196)	(39,310)	-	(118,540)
120	Underground conduit	766	357	-	-	(34,626)	-	-	(10,388)
121	Overhead conductors and devices	766	365	-	-	-	-	(20,729)	(6,219)
122	Underground conductors and devices	766	367	-	-	(64,710)	-	-	(19,413)
123	Structures and improvements	767	352	-	(13,897)	-	-	-	(4,169)
124	Station equipment	779	353	-	-	-	(1)	-	(0)
125				See page 6 for notes and abbreviations relevant to this page.					
126									
127									
128									Exhibit ECB-4 Page 4 of 6 Case 15-00261-UT

	A	B	C	D	E	F	G	H	I
1	PNM Exhibit ECB-4								
2	Calculation of Forecasted Retirements								
3									
4	Utility Account	Location	FERC	2010 Actual Retirements	2011 Actual Retirements	2012 Actual Retirements	2013 Actual Retirements	2014 Actual Retirements	Linkage & Test Period Forecasted Retirements
129	General Plant (3)								
130	Bulk Power Office Building Remodeling	357	390.1	-	-	(5,000)	-	(181,902)	(56,071)
131	Transportation equipment - Light	713	392	-	-	-	(9,012)	-	(2,704)
132	Power operated equipment	713	396	-	-	-	(10,382)	-	(3,115)
133	Structures and improvements	715	390	-	-	(2,920)	-	-	(876)
134	Transportation equipment - Light	715	392	-	(29,863)	(273,116)	-	-	(90,894)
135	Transportation equipment - Heavy	715	392.1	-	-	(25,178)	-	-	(7,553)
136	Transportation equipment - Trailers	715	392.2	-	-	(3,472)	-	-	(1,042)
137	Power operated equipment	715	396	-	-	(31,401)	-	(15,281)	(14,005)
138	Transportation equipment - Light	724	392	(2,432)	(25,458)	(234,788)	(2,743)	(2,836)	(80,477)
139	Transportation equipment - Trailers	724	392.2	-	(634)	(485)	-	-	(336)
140	Power operated equipment	724	396	(6,797)	(1,789)	-	-	-	(2,576)
141	Structures and improvements	765	390	-	-	-	(41,804)	-	(12,541)
142	Power operated equipment	765	396	-	(44,802)	-	-	-	(13,441)
143	Transportation equipment - Light	766	392	-	(230,823)	(16,758)	(0)	(32,595)	(84,053)
144	Transportation equipment - Heavy	766	392.1	-	-	-	(41,943)	-	(12,583)
145	Transportation equipment - Trailers	766	392.2	-	(2,538)	-	-	-	(761)
146	Power operated equipment	766	396	-	(433,085)	(6,117)	(256,863)	(64,965)	(228,309)
147									
148	General Plant (2)								
149	Office furniture and equipment	357	391						(86,380)
150	Communication equipment	357	397						(68,441)
151	Total Production								(18,614,298)
152									
153	Corporate (2)								
154	Office furniture and equipment	999	391						(750,806)
155	Laboratory equipment	999	395						(33,378)
156	Miscellaneous equipment	999	398						(6,274)
157	Total Corporate								(790,458)
158	Total Forecasted Retirements								(31,020,044)
159									
				See page 6 for notes and abbreviations relevant to this page.					Exhibit ECB-4 Page 5 of 6 Case 15-00261-UT

	A	B	C	D	E	F	G	H	I
1	PNM Exhibit ECB-4								
2	Calculation of Forecasted Retirements								
3									
4	Utility Account	Location	FERC	2010 Actual Retirements	2011 Actual Retirements	2012 Actual Retirements	2013 Actual Retirements	2014 Actual Retirements	Linkage & Test Period Forecasted Retirements
160	Notes:								
161	(1) Forecasted retirements are based on a two-year historical average and the annual amount is converted to a monthly forecast.								
162	(2) Forecasted retirements are based on projected retirements and the annual amount is converted to a semiannual forecast applied in June and December.								
163	(3) Forecasted retirements are based on a five-year historical average and the annual amount is converted to a quarterly forecast applied in March, June, September and November.								
164									
165	Location Abbreviations								
166	100 - Distribution (Company 1)								
167	155 - Distribution (Company 34)								
168	220 - Transmission (Company 35)								
169	357 - Bulk Power Building (Company 3)								
170	650 - Transmission (Company 2)								
171	703 - Lordsburg Generating Station (Company 3)								
172	707 - Afton Generating Station (Company 3)								
173	713 - Reeves Generating Station (Company 3)								
174	715 - Four Corners Generating Station (Company 3)								
175	721 - Palo Verde Nuclear Generating Station Unit 1 (Company 3)								
176	722 - Palo Verde Nuclear Generating Station Unit 2 (Company 3)								
177	723 - Palo Verde Nuclear Generating Station Unit 3 (Company 3)								
178	724 - Palo Verde Nuclear Generating Station Common (Company 3)								
179	761 - San Juan Generating Station Unit 1 (Company 3)								
180	764 - San Juan Generating Station Unit 4 (Company 3)								
181	765 - San Juan Generating Station Common Units 1&2 (Company 3)								
182	766 - San Juan Generating Station Common All Units (Company 3)								
183	767 - San Juan Generating Station Units 3&4 (Company 3)								
184	779 - San Juan Switchyard (Company 3)								
185	999 - Corporate (Company 7)								
186									
187									
188									
189									
190									Exhibit ECB-4 Page 6 of 6 Case 15-00261-UT

Calculation of Allowance for Funds Used During Construction Rates

PNM Exhibit ECB-5

Is contained in the following 1 page.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	PNM Exhibit ECB-5															
2	AFUDC Rate Calculation															
3																
4																
5																
6																
7																
8																
9	AFUDC Debt															
10	AFUDC Equity															
11	Total AFUDC															
12																
13	Avg. ST Debt Rate															
14	LT Debt Rate															
15	Preferred Stock Rate															
16	Common Equity Rate															
17																
18																
19	ST Debt Balance															
20	CWIP Balance															
21																
22	Preferred stock (12/31/2013)															
23	LT Debt (12/31/2013)															
24	Common Equity (12/31/2013)															
25																
26																
27																
28																
29																
30																
31																
32																
33	AFUDC Debt															
34	AFUDC Equity															
35	Total AFUDC															
36																
37	Avg. ST Debt Rate															
38	LT Debt Rate															
39	Preferred Stock Rate															
40	Common Equity Rate															
41																
42																
43	ST Debt Balance															
44	CWIP Balance															
45																
46	Preferred stock (12/31/2014)															
47	LT Debt (12/31/2014)															
48	Common Equity (12/31/2014)															
49																
50																
51																
52																
53																
54																
55																
56																
57	AFUDC Debt															
58	AFUDC Equity															
59	Total AFUDC															
60																
61																
62	Avg. ST Debt Rate															
63	LT Debt Rate															
64	Preferred Stock Rate															
65	Common Equity Rate															
66																
67																
68	ST Debt Balance															
69	CWIP Balance															
70																
71	Preferred stock (prior year end)															
72	LT Debt (prior year end)															
73	Common Equity (prior year end)															
74																
75																
76																
77																

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION


**IN THE MATTER OF THE APPLICATION OF)
OF PUBLIC SERVICE COMPANY OF NEW)
MEXICO FOR REVISION OF ITS RETAIL) Case No. 15-00261-UT
ELECTRIC RATES PURSUANT TO ADVICE)
NOTICE NO. 513,)
)
PUBLIC SERVICE COMPANY OF NEW MEXICO,)
Applicant.)
_____)**

AFFIDAVIT

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

ERIK C. BUCHANAN, Director, Corporate Budget for PNM Resources,
Inc., upon being duly sworn according to law, under oath, deposes and states: I have
read the foregoing **Direct Testimony and Exhibits of Erik C. Buchanan** and it is true
and accurate based on my own personal knowledge and belief.

SIGNED this 21st day of August, 2015.


ERIK C. BUCHANAN

SUBSCRIBED AND SWORN to before me this 21st day of August, 2015.


NOTARY PUBLIC IN AND FOR
THE STATE OF NEW MEXICO

My Commission Expires:

1-21-16