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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION)	CASE NO. AVU-E-15-05
OF AVISTA CORPORATION FOR THE)	CASE NO. AVU-G-15-01
AUTHORITY TO INCREASE ITS RATES)	
AND CHARGES FOR ELECTRIC AND)	
NATURAL GAS SERVICE TO ELECTRIC)	DIRECT TESTIMONY
AND NATURAL GAS CUSTOMERS IN THE)	OF
STATE OF IDAHO)	KAREN K. SCHUH
)	

FOR AVISTA CORPORATION

(ELECTRIC AND NATURAL GAS)

1 I. INTRODUCTION

2 Q. Please state your name, employer and business
3 address.

4 A. My name is Karen K. Schuh. I am employed by
5 Avista Corporation as a Senior Regulatory Analyst in the
6 State and Federal Regulation Department. My business
7 address is 1411 East Mission, Spokane, Washington.

8 Q. Please briefly describe your educational
9 background and professional experience.

10 A. I graduated from Eastern Washington University in
11 1999 with a Bachelor of Arts Degree in Business
12 Administration, majoring in Accounting. After spending six
13 years in the public accounting sector, I joined Avista in
14 January of 2006. Since 2006, I have worked in various
15 positions within the Company in the Finance Department
16 (Plant Accounting and Resource Accounting) and joined the
17 State and Federal Regulation Department as a Regulatory
18 Analyst in 2008. Currently, as a Senior Regulatory
19 Analyst, I am responsible for, among other things,
20 preparing the capital pro forma adjustments in
21 determination of revenue requirements for all
22 jurisdictions.

23 Q. What is the scope of your testimony?

24 A. My testimony and exhibit schedules in this
25 proceeding will cover the Company's planned capital

1 investments in utility plant through December 31, 2017.
2 Company witness Ms. Andrews, has included adjustments to
3 reflect these investments in her electric and natural gas
4 revenue requirements for the 2016 and 2017 two-year rate
5 plan.

6 A table of contents for my testimony is as follows:

7	<u>Description</u>	<u>Page</u>
8	I. Introduction	1
9	II. Capital from December 2014 through	
10	December 2017	3
11		
12	III. Capital Investment Planning and Review	6

13

14 **Q. Are you sponsoring any Exhibits?**

15 A. Yes. I am sponsoring Exhibit No. 11, Schedules 1
16 through 3, which were prepared by me or under my direction,
17 and have been included to provide supporting information
18 for the capital investment as described in this testimony.
19 Exhibit No. 11, Schedule 1 shows a summary of capital
20 expenditures from 2005 through 2019. Exhibit No. 11,
21 Schedule 2 depicts the increases in costs of transmission
22 substations, transmission equipment, distribution
23 substations, and distribution equipment that the utility
24 industry has experienced over the past fifty years.
25 Schedule 3 lists and describes the capital projects
26 included in this case.

27

**II. CAPITAL INVESTMENT FROM DECEMBER 31, 2014
THROUGH DECEMBER 2017**

Q. Why has the company included three years (2015 - 2017) of capital additions in this case?

A. As discussed further by Company witness Ms. Andrews, the Company is proposing a two-year rate plan for calendar years 2016 and 2017. This rate plan is proposed in order to avoid annual rate cases in its Idaho jurisdiction.

Q. How were the capital additions through the 2017 rate year developed in this case?

A. As in prior rate cases, Avista started with rate base for the historical test year, which, for this case, is the average-of-monthly-averages ("AMA") for the twelve months ended December 31, 2014, and made the following adjustments as shown in Illustration 1 and described below:

Illustration 1:

Timeline of Capital Adjustment				
	2016 Rate Year			2017 Rate Year
	2014	2015	2016	2017
2014 Plant In Service	A → E	→ E	→ A	→ E → A
2015 Capital Additions		→ E	→ A	→ E → A
2016 Capital Additions			→ A	→ E → A
2017 Capital Additions				→ A
A = AMA Balance E = EOP Balance				

1 2016 Rate Year:

2 (1) 2014 Plant In Service - The 2014 AMA plant in
3 service balance is adjusted to a 2016 AMA
4 balance. This is done by first walking forward
5 the accumulated depreciation ("AD") and
6 accumulated deferred federal income
7 taxes("ADFIT") to a 2014 EOP balance, then to a
8 2015 EOP balance, and finally, to a 2016 AMA
9 balance, as shown in the illustration above.

10 (2) 2015 Capital Additions - This adjustment adds
11 capital additions to plant in service during
12 2015¹, including the AD, depreciation expense and
13 ADFIT associated with these additions, on a 2015
14 EOP basis. This also includes an adjustment for
15 the impact of asset retirements in 2015². Next,
16 these additions are carried forward to a 2016 AMA
17 basis by extending AD, and ADFIT balances.

18 (3) 2016 Capital Additions - This adjustment adds the
19 capital additions to plant in service during 2016
20 on an AMA basis. This adjustment includes the

¹ For each of the periods 2015, 2016 and 2017, distribution-related capital expenditures associated with connecting new customers to the Company's system were excluded. The Pro Forma adjustments do not include the increase in revenues from growth in the number of customers from the historical test year to the 2016 and 2017 rate years, and therefore, the growth in plant investment associated with customer growth should also be excluded.

² The 2014 test year and the adjustment from AMA 2014 to EOP 2014 capture the impacts of retirements for 2014. The adjustment to capital rate base for 2015 - 2017 includes reducing rate base and depreciation expense for the impact of retirements.

1 depreciation expense, accumulated depreciation
2 and ADFIT associated with these additions. This
3 also includes an adjustment for the impact of
4 asset retirements in 2016³.

5 **2017 Rate Year:**

6 (1) **2014 Plant In Service** - The 2014 plant in service
7 balance is adjusted from a 2016 AMA basis to a
8 2017 AMA basis by carrying forward the plant
9 balances. This is done by first extending AD and
10 ADFIT balances on utility plant in service from
11 the 2016 AMA basis to a 2016 EOP basis, and then
12 from 2016 EOP to a 2017 AMA basis.

13 (2) **2015 Capital Additions** - This adjustment takes
14 the capital additions to plant in service during
15 2015, to a 2017 AMA basis. This is done by first
16 extending AD and ADFIT balances on utility plant
17 in service from the 2016 AMA basis to a 2016 EOP
18 basis, and then from 2016 EOP to a 2017 AMA
19 basis.

20 (4) **2016 Capital Additions** - This adjustment takes
21 the capital additions to plant in service during
22 2016 to an EOP basis. This adjustment includes
23 the depreciation expense, accumulated
24 depreciation and ADFIT associated with these

³ Id.

1 additions. This also includes carrying the 2016
2 EOP balance forward by extending AD and ADFIT to
3 a 2017 AMA balance. Finally, this includes an
4 adjustment for the impact of asset retirements in
5 2016⁴.

6 (5) **2017 Capital Additions** - This adjustment adds the
7 capital additions to plant in service during 2017
8 on an AMA basis. This adjustment includes the
9 depreciation expense, accumulated depreciation
10 and ADFIT associated with these additions. This
11 also includes an adjustment for the impact of
12 asset retirements in 2017⁵.

13 The specific capital additions are identified later in my
14 testimony. In addition, the plant tables depicting the
15 electric and natural gas Pro Forma adjustments for December
16 2014 through 2017 are shown later in my testimony at tables
17 9 through 14.

18

19 **III. CAPITAL INVESTMENT PLANNING AND REVIEW**

20 **Q. Please describe Avista's capital investment**
21 **planning, or capital budgeting process.**

22 A. Avista's capital budgeting process provides for a
23 detailed review of capital projects and the progress on
24 those projects, by using "Business Cases." A Business Case

⁴ Id.

1 is a summary document that provides support and analysis
2 for a capital project or program. Components of a Business
3 Case include: the project description, project
4 alternatives, cost summary, business risk, financial
5 assessment, strategic assessment, justification for the
6 project (e.g., mandatory, resource requirements, etc),
7 milestones, and key performance indicators. Business Cases,
8 along with a cover sheet for the projects included in this
9 Case, have been provided as additional support in Exhibit
10 No. 11, Schedule 3.

11 The budget process starts with project sponsors
12 submitting new and updated Business Cases to the Financial
13 Planning and Analysis ("FP&A") group for the upcoming five
14 year period. The Business Cases are reviewed by FP&A and
15 then included in the list of projects and programs to be
16 considered for funding by the Capital Planning Group
17 ("CPG"). The CPG is a group of Directors that represent all
18 capital-intensive areas of the Company. The CPG meets to
19 review the submitted Business Cases and prioritize funding
20 to meet the capital budget targets set by senior
21 management. After approval from senior management, the
22 five-year capital spending plan is sent to the Company's
23 Board of Directors for approval. The CPG meets monthly to
24 review the status of the capital projects and programs, and

⁵ Id.

1 approve or decline new Business Cases as well as monitor
2 the overall capital budget.

3 **Q. Is the Company confident that the capital**
4 **additions that are presented in this case will actually**
5 **occur for the period January 2015 through December 31,**
6 **2017?**

7 A. Yes. The January through May 2015 projects are
8 completed and many of the projects for the balance of 2015
9 are already underway, either through actual construction,
10 signed contracts, and/or ordered materials.

11 **Q. What is the historical and projected level of**
12 **annual capital spending for Avista?**

13 A. Avista's annual capital requirements have
14 steadily increased from approximately \$158 million in 2006
15 to approximately \$352 million in 2014. Capital spending of
16 approximately \$1.08 billion is planned for 2015-2017 for
17 customer growth, investment in generation upgrades and
18 transmission and distribution facilities, as well as
19 necessary maintenance and replacements of our natural gas
20 utility systems. Capital expenditures of approximately
21 \$1.77 billion are planned for the five-year period ending
22 December 31, 2019, as shown in Exhibit No. 11, Schedule 1.

23 The actual and planned capital spending for the
24 utility for the years 2006 through 2014 are shown in Table
25 No. 1 below. The table shows that actual capital spending

1 has been very close to the planned spending on a consistent
 2 basis. The nine-year average of actual additions is 102% of
 3 the planned spending. This table also shows that while
 4 Avista has been increasing its capital spending, it is
 5 generally remaining on budget.

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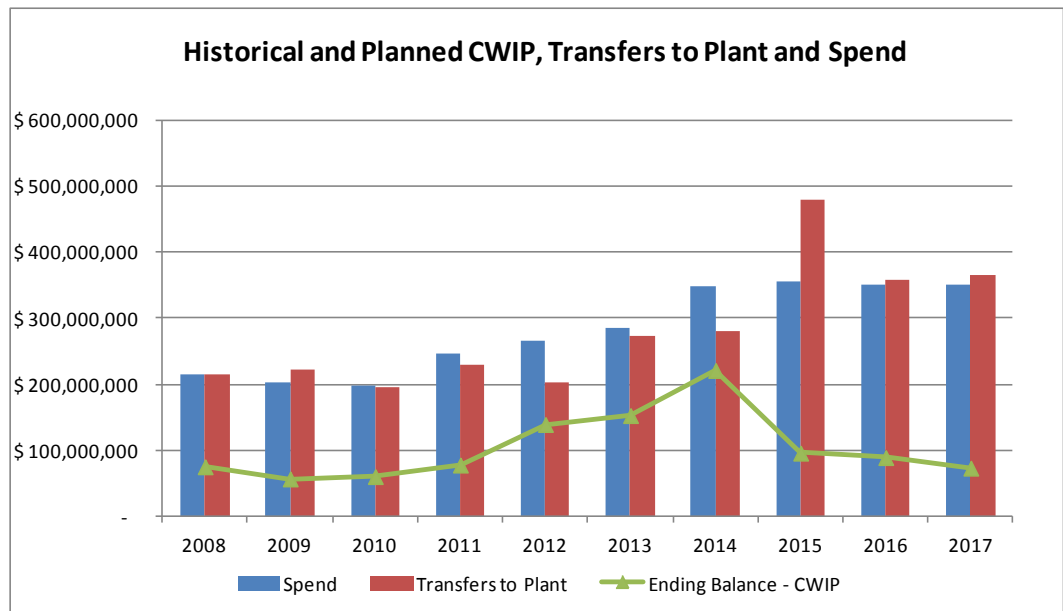
TABLE NO. 1			
Planned vs. Actual Expenditures			
	Planned Expenditures (\$ millions)	Actual Expenditures (\$ millions)	Percentage of Planned
2006	\$159.60	\$158.30	99%
2007	183.60	198.40	108%
2008	190.00	205.40	108%
2009	202.00	199.70	99%
2010	235.00	206.80	88%
2011	260.00	247.00	95%
2012	256.50	262.00	102%
2013	274.60	296.00	108%
2014	331.00	352.00	106%
Nine Year Average	\$232.48	\$236.18	102%

17 **Q. Please discuss how the increase in capital**
 18 **spending impacts transfers-to-plant included in this case.**

19 A. The increase in spending will increase the level
 20 of Construction Work in Progress ("CWIP") and eventually
 21 the levels of transfers-to-plant. Illustration No. 2 below,
 22 shows capital spending, CWIP, and transfers-to-plant for
 23 historical and planned levels. The level of CWIP will
 24 increase during the years of construction of larger multi-
 25 year projects such as Project Compass, and the Nine Mile

1 Generation Project. This is shown below where the trend in
 2 CWIP increases starting in 2012, and ramps up until these
 3 projects go into service in 2015. In 2015, the amount in
 4 CWIP will return to more normal levels after these large
 5 projects have transferred to service. However, the spending
 6 and transfer-to-plant amounts shown below will be at a
 7 higher level for the next couple of years.

8 **Illustration 2:**



18 **Q. How does new investment in utility plant change**
 19 **rate base over time?**

20 **A.** Avista's investment in utility plant continues to
 21 significantly exceed depreciation expense. Because of this,
 22 rate base in the rate years will be significantly greater
 23 than the historical test period rate base.

24 **Q. What is driving the significant investment in new**
 25 **utility plant?**

1 A. Company witness Mr. Kensok discusses the
2 Company's replacement of its Customer Information System
3 (Project Compass) that went into service in February of
4 2015, as well as other investments in technology. As
5 Company witnesses Mr. Kinney and Mr. Cox, in particular,
6 explain in their testimony, it is necessary to add or
7 upgrade generation facilities and expand transmission and
8 distribution facilities, due in part to customer growth and
9 reliability requirements. Other issues driving the need for
10 capital investment include aging infrastructure and
11 municipal compliance issues (e.g., street/highway
12 relocations).

13 A significant factor in the growth in net plant
14 investment or rate base is the cost of new utility
15 equipment and facilities today, as compared to the cost of
16 the older facilities that are now being replaced. Some of
17 the facilities we are replacing or upgrading were installed
18 40-60 years ago, or even before that time. The cost to
19 replace this equipment and facilities today is many times
20 more expensive than when they were installed decades ago.

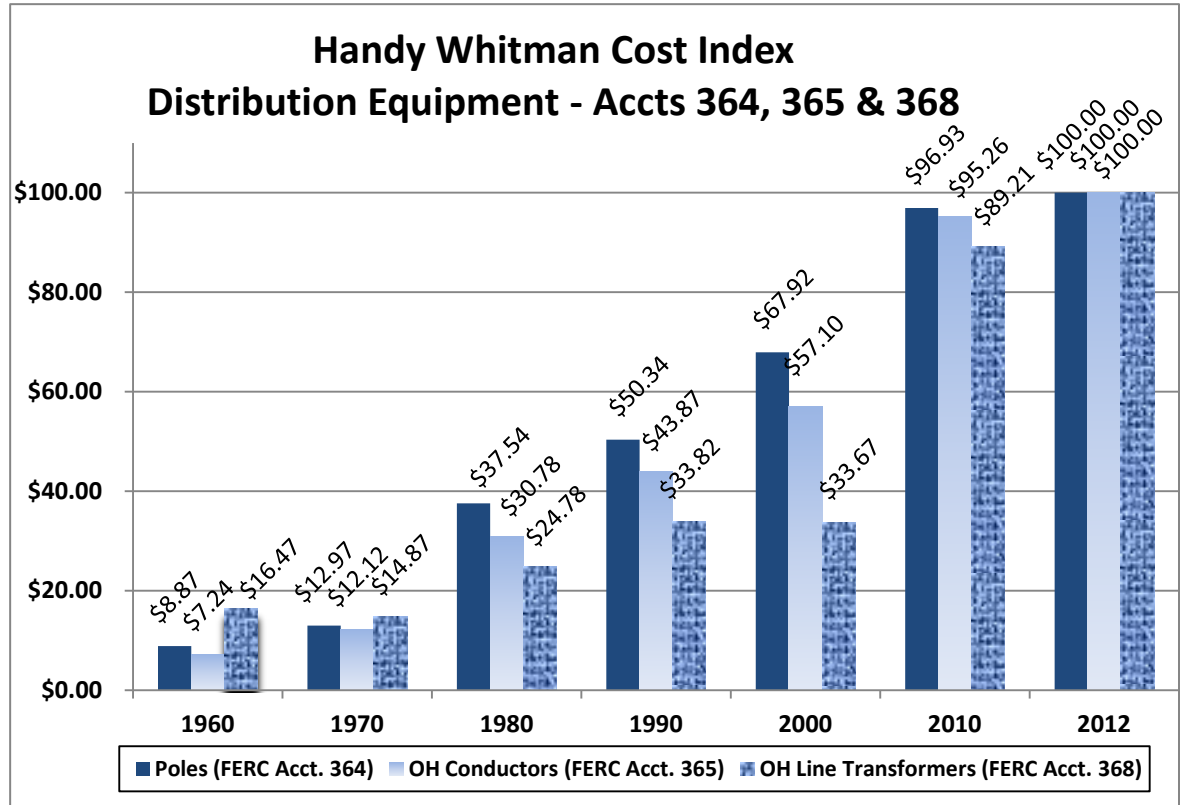
21 **Q. What data is available that depicts the increase**
22 **in the cost of utility plant assets that have been added in**
23 **recent years, as compared to the original cost of the**
24 **facilities being replaced?**

1 A. Using the Handy-Whitman Index Manual⁶, the
2 Company analyzed several major categories of plant. Exhibit
3 No. 11, Schedule 2 depicts the increases in costs of
4 transmission substations, transmission equipment,
5 distribution substations, and distribution equipment that
6 the utility industry has experienced over the past fifty
7 years. These charts show what these categories of plant
8 have cost historically on a relative scale. For example, on
9 Page 4 of Exhibit No. 11, Schedule 2, and also shown in
10 Illustration No. 3 below, distribution poles fifty years
11 ago would have a cost of approximately 9% of the current
12 replacement cost.

13

⁶ "The Handy-Whitman Index of Public Utility Construction Costs," is published by Whitman, Reardon and Associates, Baltimore, Maryland, published in May 2013. The Handy-Whitman Indices of Public Utility Construction Costs show the level of costs for different types of utility construction. Separate indices are maintained for general items of construction, such as reinforced concrete, and specific items of material or equipment, such as pipe or turbo-generators. Handy-Whitman Index numbers are used to trend earlier valuations and original cost at prices prevailing at a certain date.

1 **Illustration No. 3:**



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 13
 14 Illustration No. 3 above and Exhibit No. 11, Schedule
 15 2, show that the cost of the equipment and facilities that
 16 are being added today are many times more expensive than
 17 those same facilities installed in the past. Our retail
 18 rates are "cost-based" and reflect the low cost of the old
 19 equipment serving customers. When the equipment is
 20 replaced, it requires an increase in rates to reflect the
 21 much higher cost of the new equipment.

22 **Q. With respect to Avista's capital additions**
 23 **through 2017, would there be operation and maintenance**
 24 **(O&M) savings associated with the replacement of some of**
 25 **the aging equipment?**

1 A. In some instances there will be a reduction to
2 O&M associated with the investment, and O&M cost savings
3 have been identified and reflected in this filing. However,
4 on a net basis, we will continue to experience increased
5 O&M costs to maintain a system that continues to age. Our
6 general practice is to attempt to replace our aging
7 equipment before it fails, because it is not only less
8 costly to replace this equipment on a systematic, planned
9 basis, but it also results in more reliable service to
10 customers, which is expected by all utility stakeholders.
11 If our practice were to avoid replacing utility equipment
12 until it failed, the reliability of our system would
13 suffer.

14 Therefore, it is imperative that we continue every
15 year to reinvest and upgrade a portion of our utility
16 system, in addition to the investments needed to meet
17 mandatory reliability requirements. The reinvestment and
18 upgrades actually serve, to a large extent, to slow the
19 growth of annual O&M costs, but does not necessarily result
20 in a year-over-year reduction to overall O&M costs.

21 **Q. Please provide a summary of the January 2015**
22 **through December 2017 capital projects.**

23 A. Exhibit No. 11, Schedule 3, details the system-
24 level capital projects that were, or will be, transferred
25 to plant from January 2015 through December 2017. A listing

1 and/or description of the capital projects and their system
 2 costs are provided below:

3 **Generation:**

4 The electric generation projects that will transfer to
 5 plant-in-service are described in detail in Mr.
 6 Kinney's direct testimony. A listing of these projects
 7 on a system basis are included in Table No. 2 below.
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11 **TABLE NO. 2**

12 **Generation / Production Capital Projects (System)**

	2015	2016	2017
Business Case Name	\$ (000's)	\$ (000's)	\$ (000's)
Hydro - Base Load Hydro	\$ 1,974	\$ 1,149	\$ 1,149
Hydro - Clark Fork Settlement Agreement	13,988	6,054	22,836
Hydro - Generation Battery Replacement	434	250	250
Hydro - Hydro Safety Minor Blanket	151	75	80
Hydro - Little Falls Plant Upgrade	14,300	9,000	10,000
Hydro - Nine Mile Rehab	56,567	9,871	858
Hydro - Regulating Hydro	5,186	3,533	3,533
Hydro - Spokane River License Implementation	1,266	397	17,018
Other - Base Load Thermal Plant	2,200	2,200	2,201
Other - Peaking Generation	501	500	500
Thermal - Kettle Falls Water Supply	1,529	-	-
Thermal - Colstrip Thermal Capital	2,497	10,480	9,617
Other - Coyote Springs LTSA	-	2,000	730
Hydro - Noxon Spare Coils	1,350	-	-
Hydro - Post Falls South Channel Replacement	9,309	-	-
Hydro - Cabinet Gorge Unit 1 Refurbishment	11,687	-	-
Cabinet Gorge Automation Replacement	-	-	2,842
Kettle Falls Stator Rewind	-	-	7,930
Long Lake Replace Field Windings	-	-	4,172
	\$ 122,939	\$ 45,509	\$ 83,716

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1 **Electric Transmission:**

2 The electric transmission projects that will transfer
 3 to plant-in-service are described in detail in Mr.
 4 Cox's direct testimony. A listing of these projects
 5 and system costs are included in Table No. 3 below.

6 **TABLE NO. 3**
Transmission Capital Projects (System)

7 Business Case Name	2015	2016	2017	
	\$ (000's)	\$ (000's)	\$ (000's)	
8 Colstrip Transmission/PNACI	\$ 491	\$ 497	\$ 516	
9 Environmental Compliance	434	350	350	
10 Reconductors and Rebuilds	11,776	21,161	18,327	
11 Lewiston Mill Rd. 115 kV Substation	684	-	-	
12 Storms	1,000	890	883	
13 Substation - 115 kV Line Relay Upgrades	1,230	-	-	
14 Substation - Asset Mgmt. Capital Maintenance	1,647	3,300	3,300	
15 Substation - Capital Spares	3,250	4,915	1,200	
16 Substation - Distribution Station Rebuilds	250	3,565	2,865	
17 Tribal Permits and Settlements	1,430	316	297	
18 Spokane Valley Transmission Reinforcement	3,468	7,440	-	
19 Clearwater Sub Upgrades	500	500	-	
20 Noxon Switchyard Rebuild	9,906	500	7,700	
	Transmission - Asset Management	1,813	1,772	1,780
	Transmission - NERC Low Priority Mitigation	500	2,000	3,000
	Transmission - NERC Medium Priority Mitigati	3,306	2,251	-
	SCADA - SOO & BUCC	1,061	1,002	1,044
	South Region Voltage Control	-	4,900	-
	Westside Rebuild Phase One	-	1,780	-
		\$ 42,746	\$ 57,139	\$ 41,262

Electric Distribution:

The electric distribution projects that will transfer to plant-in-service are described in detail in Mr. Cox's direct testimony. A listing of these projects and system costs are included in Table No. 4 below.

TABLE NO. 4			
Distribution Capital Projects (System)			
Business Case Name	2015 \$ (000's)	2016 \$ (000's)	2017 \$ (000's)
Distribution Grid Modernization	\$ 14,081	\$ 11,000	\$ 13,000
Distribution Line Protection	125	125	125
Distribution Minor Rebuild	8,300	8,300	8,300
Distribution Transformer Change-Out Program	4,700	4,700	1,100
Distribution Wood Pole Management	11,000	11,000	12,000
Meter Minor Blanket	5,806	5,806	4,977
Electric Replacement/Relocation	2,403	2,500	2,600
Environmental Compliance	150	150	-
Primary URD Cable Replacement	1,000	-	-
Reconductors and Rebuilds	2,892	2,500	2,500
Segment Reconductor and FDR Tie Program	3,894	3,809	4,175
Storms	2,000	1,900	2,000
Substation - Asset Mgmt. Capital Maintenance	2,679	1,519	1,551
Substation - Capital Spares	1,200	1,200	800
Substation - Distribution Station Rebuilds	2,297	2,284	3,315
Substation - New Distribution Stations	1,995	75	2,323
Worst Feeders	2,435	2,000	2,000
Street Light Management	1,500	1,500	1,500
	\$ 68,457	\$ 60,368	\$ 62,266

1 **General Plant:**

2
3 The detailed listing of the general plant projects and
4 system costs that will transfer to plant-in-service
5 are included in Table No. 5 below, with narrative
6 summaries following the table.
7

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TABLE NO. 5			
General Plant Capital Projects (System)			
Business Case Name	2015 \$ (000's)	2016 \$ (000's)	2017 \$ (000's)
Capital Tools & Stores Equipment	\$ 2,348	\$ 2,400	\$ 2,400
COF Long-Term Restructuring Plan	7,500	4,000	-
Structures and Improvements/Furniture	6,030	3,600	3,600
Apprentice Training	121	60	60
HVAC Renovation Project	9,520	-	-
COF Long-term Restructure Ph2	2,723	-	5,000
Sandpoint Renovation	500	-	-
New Airport Hangar	-	-	1,500
	\$ 28,742	\$ 10,060	\$ 12,560

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24 **Capital Tools & Stores Equipment - 2015: \$2,348,000;**
25 **2016: \$2,400,000; 2017: \$2,400,000**

26 This category includes equipment utilized in
27 warehouses throughout the service territory, such as
28 forklifts, manlifts, shelving, cutting/binding
29 machines, etc. Expenditures in this category also
30 include large tools and instruments used throughout
31 the Company for gas and/or electric construction and
32 maintenance work, distribution, transmission, or
33 generation operations, telecommunications, and some
34 fleet equipment (hoists, winch, etc.) not permanently
35 attached to the vehicle.
36

37 **Central Office Facility (COF) Long Term Campus**
38 **Restructuring Plan - 2015: \$7,500,000; 2016:**
39 **\$4,000,000**

40 The central operating facility (COF) campus
41 restructuring plan, phase one, is a two-year, multiple
42 project plan to address material storage, field
43 recovery operations, and office space needs. Over the
44 past few years, our warehouse material inventory has
45 increased and presently the materials are scattered in
46 multiple locations on the COF, due to them outgrowing
47 their allocated space. The campus restructuring will
48 increase and consolidate their storage area, resulting
49 in greater efficiencies for the warehouse and field

1 crews. In addition, two new structures will be built
2 to consolidate transformer recovery (both PCB and non-
3 PCB), hazardous waste & material, and investment
4 recovery (recycling) operations. This will improve the
5 safety and efficiencies for collection of all field
6 recovery materials, as well as provide a one-stop drop
7 location for field crews (instead of the three
8 different locations on the COF right now). Due to
9 employee increases and off-site leased space, Avista
10 is also remodeling two existing areas in our service
11 building that will provide approximately 30 new
12 cubicles, meeting rooms, and offices. This will help
13 accommodate our new growth and may allow leased space
14 employees to return to the COF. In addition, savings
15 are gained due to line trucks and employees not having
16 to travel and off-load waste matter that is recyclable
17 or hazardous.

18
19 **Structures and Improvements/Furniture - 2015:**
20 **\$6,030,000; 2016: \$3,600,000; 2017: \$3,600,000**

21 This program is for the Capital Maintenance,
22 Improvements, and Furniture at 50 plus Avista offices
23 and service centers (over 700,000 square feet in
24 total). Many of the included service centers were
25 built in the 1950's and 1960's and are starting to
26 show signs of severe aging. The program includes
27 capital projects in all construction disciplines
28 (roofing, asphalt, electrical, plumbing, HVAC, energy
29 efficiency projects etc.).

30
31 **Apprentice Training - 2015: \$121,000; 2016: \$60,000;**
32 **2017: \$60,000**

33 This program is for on-going capital improvements to
34 support the essential skills needed for journeyman
35 workers, apprentices and pre-apprentices now and for
36 the future. It is important to provide the types of
37 training scenarios that employees face in the field.
38 Capital expenditures under this program include items
39 such as building new facilities or expanding existing
40 facilities, purchase of equipment needed, or build out
41 of realistic utility field infrastructure used to
42 train employees. Examples include: new or expanded
43 shops, truck canopies, classrooms, backhoes and other
44 equipment, build out of "Safe City" located at the
45 Company's Jack Stewart training facility in Spokane,
46 which would include commercial and residential
47 building replicas, and distribution, transmission,
48 smart grid, metering, gas and substation
49 infrastructure.

50

1 **HVAC Renovation Project - 2015: \$9,520,000**

2 The HVAC Renovation Project began in 2007. The HVAC
3 Project is a systematic replacement of the original
4 1956 Heating, Ventilation and Air Conditioning System
5 for the Service Building, Cafeteria/Auditorium and
6 General Office Building. The original HVAC equipment
7 has been operating 24/7 since original construction in
8 1956. The Project entails a floor by floor evacuation
9 and relocation of employees and a complete demolition
10 of each floor; including a massive Asbestos Abatement
11 component, and removing the original fire proofing on
12 the basic steel structure. The Project requires
13 exhaustive demolition and reconstruction of each
14 floor. Sustainable energy savings and conservation are
15 built into the Project as we apply for LEED
16 certification for each floor. The 5th, 4th, and 3rd
17 floor has obtained LEED-CI Gold status recognizing all
18 of the renewable strategies we employed during the
19 design and construction phases. The goal of this
20 project is to re-purpose and recycle the entire
21 Facility for the next generation of Avista employees
22 to use for 50 more years. Life cycle costs weighed
23 heavily on our Construction Specifications and
24 equipment choices during the design phase. The design
25 team chose energy efficient equipment that was
26 designed for 30 to 50 year life cycles. The O&M offset
27 associated with this project will result in a
28 reduction to energy costs of \$66,000 in 2015 and an
29 incremental reduction to energy costs of \$10,000 in
30 2016. The allocations to Idaho are \$21,190 Electric /
31 \$3,830 Gas in 2015 and additional reduced energy costs
32 of \$3,210 ID Electric / \$580 Gas in 2016. This has
33 been included in the O&M Offsets adjustment as shown
34 in Ms. Andrews' workpapers.

35
36

1 **Central Office Facility (COF) Long-Term Restructure**
2 **Phase 2 - 2015: \$2,723,000; 2017: \$5,000,000**

3 Avista's Central Office Facility (COF) Long Term
4 Restructuring Plan, Phase 2 involves the construction
5 of a new Fleet Vehicle Garage and four story parking
6 structure. By the end of 2015, facilities projects
7 will add approximately 183 new cubicles. Our parking
8 lots will be beyond maximum capacity. The Company
9 currently leases space from Burlington Northern for
10 employee parking. This lease space could be at risk in
11 the future, if Burlington needs the space. The Fleet
12 Garage is over 50 yrs old and is constrained. The new
13 garage will allow for maintenance of Compressed
14 Natural Gas vehicles as the current building does not
15 allow for this. Once Fleet is relocated there will be
16 a distinct separation between operational/service
17 vehicles and employee vehicles. This separation will
18 increase safety by eliminating intermingling of
19 pedestrians in work areas. The office building &
20 parking garage is projected to allow the Call Center
21 and any leased facilities to come back to Mission
22 campus. The Ross Park conversion to office space is
23 designed to cover future employee expansion that will
24 occur. We anticipate increases in O&M costs in both
25 2015 and 2016 related to this project, as a result of
26 the need for additional parking at our Mission Campus.
27 We have included an increase in O&M costs of \$11,000
28 in 2015 and an incremental increase in O&M costs of
29 \$11,000 in 2016 (a total of \$22,000). The allocation
30 of these costs to Idaho in each year is \$3,530
31 Electric and \$640 Gas (\$7,060 Electric and \$1,280 Gas,
32 total). This has been included in the O&M Offsets
33 adjustment as shown in Company witness Ms. Andrews'
34 workpapers.

35
36 **Sandpoint Renovation - 2015: \$500,000**

37 This project will renovate the Sandpoint service
38 center. The renovation will include the construction
39 of a new line dock facility, covered storage buildings
40 to protect equipment, modernization of office spaces
41 and meeting rooms, and the construction of a small
42 warehouse. This project will address current long-
43 standing material and equipment storage issues and
44 will result in increased efficiency of Avista's
45 operations in the service area.

46
47 **New Airport Hangar - 2017: \$1,500,000**

48 Avista's existing airport hangar will no longer be
49 available to Avista in 2017, as the owner's lease will
50 expire and the hangar will be demolished. This project

1 will address the need for a hangar to secure the
2 Company airplane.

3
4 **Transportation:**

5
6 The detailed listing of the transportation projects
7 and the system costs that will transfer to plant-in-
8 service are included in Table No. 6 below, with a
9 narrative summary following the table.

10
11

TABLE NO. 6			
Transportation Capital Projects (System)			
Business Case Name	2015	2016	2017
	\$ (000's)	\$ (000's)	\$ (000's)
Fleet Budget	\$ 10,184	\$ 7,700	\$ 7,700
	<u>\$ 10,184</u>	<u>\$ 7,700</u>	<u>\$ 7,700</u>

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21 **Fleet Budget - 2015: \$10,184,000; 2016: \$7,700,000;**
22 **2017: \$7,700,000**

23 Expenditures are for the scheduled replacement of
24 trucks, off-road construction equipment and trailers
25 that meet the Company's guidelines for replacement
26 including age, mileage, hours of use and overall
27 condition. This also includes additions to the fleet
28 for new positions or crews working to support the
29 maintenance and construction of our electric and
30 natural gas operations.

1 **IS/IT:**

2 The IS/IT projects that will transfer to plant-in-
3 service are described in detail in Mr. Kensok's direct
4 testimony. A listing of these projects and the system
5 costs are included in Table No. 7 below:
6

7

8 **TABLE NO. 7**
IS/IT Capital Projects (System)

9

10 Business Case Name	2015	2016	2017
	\$ (000's)	\$ (000's)	\$ (000's)
11			
12 AvistaUtilities.com Upgrade	\$ 5,145	\$ 2,000	\$ -
13 Enterprise Business Continuity Plan	1,043	450	450
14 Mobility in the Field	420	320	-
15 Technology Refresh to Sustain Business			
16 Process	21,379	16,095	16,095
17 Customer Information and Work & Asset			
18 Management System	96,685	-	-
19 Enterprise Security	5,400	3,200	3,200
20 Technology Expansion to Enable Business			
21 Process	7,431	5,552	5,799
22 AFM COTS Migration	-	-	15,608
23 High Voltage Protection Upgrade	1,252	415	-
24 Next Generation Radio Refresh	4,007	-	-
25 Microwave Refresh	2,755	3,050	3,050
	\$145,517	\$ 31,082	\$ 44,202

26

27

28 **Jackson Prairie Storage - 2015: \$1,356,000; 2016:**
29 **\$1,175,000; 2017: \$1,356,000**

30 These projects include various capital improvements
31 that Avista and its partners will complete at the
32 Jackson Prairie facility.
33
34

1 **Natural Gas Distribution:**

2 The detailed listing of the natural gas distribution
3 projects and system costs that will transfer to plant-
4 in-service are included in Table 8, with narrative
5 summaries following the table. The amounts listed
6 below are at a system level. Some of these costs are
7 allocated and some are directly assigned, the
8 allocation or direct assignment information is located
9 in my workpapers.

10
11 **TABLE NO. 8**
12 **Natural Gas Distribution Capital Projects (System)**

13	2015	2016	2017
14 Business Case Name	\$ (000's)	\$ (000's)	\$ (000's)
15 Aldyl A Replacement	16,817	17,385	18,263
16 Cathodic Protection	1,292	1,000	1,250
17 Gas Non-Revenue Program	7,592	8,595	8,680
18 Gas Reinforcement	1,000	1,000	800
19 Gas Replacement Street & Highway	5,035	4,500	4,500
20 Gas Telemetry	416	400	400
21 Isolated Steel Replacement	3,458	3,550	3,320
22 Overbuilt Pipe Replacement	900	900	900
23 Regulator Station Reliability Replacement	812	800	800
24 Replace Deteriorating Steel Gas Systems	1,000	1,000	1,000
25 Gas HP Pipeline Remediation Program	-	3,000	3,000
26 Gas PMC Program - Capital Replacements	1,030	1,061	1,093
27 Rathdrum Prairie HP Main Reinforcement	-	5,000	5,000
28 Chase Road Gate Station	5,987	-	-
29 ERTs Replacement Program	402	444	494
30			
31			
32	45,741	48,635	49,500
33			

34
35 **Aldyl A Replacement - 2015: \$16,817,000; 2016:**
36 **\$17,385,000; 2017: \$18,263,000**

37 The Company is continuing with a twenty-year program
38 to systematically remove and replace select portions
39 of the DuPont Aldyl A medium density polyethylene pipe
40 in its natural gas distribution system in the States
41 of Idaho, Oregon and Washington. None of the subject
42 pipe is "high pressure main pipe," but rather,
43 consists of distribution mains at maximum operating
44 pressures of 60 psi and pipe diameters ranging from 1¼
45 to 4 inches. This program is described further by Mr.
46 Kopczynski in his direct testimony.

47
48 **Cathodic Protection - 2015: \$1,292,000; 2016:**
49 **\$1,000,000; 2017: \$1,250,000**

1 This annual project upgrades, replaces, or installs
2 cathodic protection systems required to ensure
3 compliance with Pipeline and Hazardous Material Safety
4 Administration regulations regarding proper cathodic
5 protection of steel mains.
6

7 **Gas Non-Revenue Program - 2015: \$7,592,000; 2016:**
8 **\$8,595,000; 2017: \$8,680,000**

9 This annual project will replace sections of existing
10 natural gas piping that require replacement to improve
11 the operation of the natural gas system but are not
12 linked to new revenue. The project includes
13 improvements in equipment and/or technology to improve
14 system operation and/or maintenance, replacement of
15 obsolete facilities, replacement of main to improve
16 cathodic performance, and projects to improve public
17 safety and/or improve system reliability.
18

19 **Gas Reinforcement - 2015: \$1,000,000; 2016:**
20 **\$1,000,000; 2017: \$800,000**

21 This annual project will reinforce portions of the
22 existing natural gas system to ensure continued
23 reliable service during a design day for areas that
24 have had low pressure problems due to increased growth
25 and/or system demand. This project will identify and
26 install new sections of gas main to improve the
27 operating reliability and performance of the gas
28 distribution system. Execution of this program on an
29 annual basis will ensure the continuation of reliable
30 gas service that is of adequate pressure and capacity.
31

32 **Gas Replacement Street & Highways - 2015: \$5,035,000;**
33 **2016: \$4,500,000; 2017: \$4,500,000**

34 This annual project will replace sections of existing
35 natural gas piping that require replacement due to
36 relocation or improvement of streets or highways in
37 areas where natural gas piping is installed. Avista
38 installs many of its facilities in public right-of-way
39 under established franchise agreements. Avista is
40 required under the franchise agreements, in most
41 cases, to relocate its facilities when they are in
42 conflict with road or highway improvements.
43

44 **Gas Telemetry - 2015: \$416,000; 2016: \$400,000; 2017:**
45 **\$400,000**

46 The projects will include the installation of six flow
47 computers to replace existing aging infrastructure.
48 Additionally this project includes all new telemetry
49 installations, to include both wireless and hard-
50 wired.

1 **Isolated Steel Replacement - 2015: \$3,458,000; 2016:**
2 **\$3,550,000; 2017: \$3,320,000**

3 The Company is implementing a cathodic protection
4 program for the purpose of finding and addressing
5 isolated steel in its natural gas piping systems.
6

7 **Overbuilt Pipe Replacement - 2015: \$900,000; 2016:**
8 **\$900,000; 2017: \$900,000**

9 This annual project will replace sections of existing
10 gas piping that have experienced encroachment or have
11 been "overbuilt", i.e., where a structure has been
12 built over existing gas piping. It will address the
13 replacement of sections of gas main that no longer can
14 be operated safely and will identify and replace
15 sections of main to improve public safety. All types
16 of overbuilds will be addressed, with the primary
17 focus of the project being overbuilds in manufactured
18 home developments.
19

20 **Regulator Station Reliability Replacement - 2015:**
21 **\$812,000; 2016: \$800,000; 2017: \$800,000**

22 This annual project upgrades or replaces various
23 regulator stations within the natural gas distribution
24 system, improving station reliability and reducing
25 operation and maintenance costs. Existing stations
26 require upgrades due to many factors, such as
27 replacement of obsolete equipment and improvement in
28 regulation technology.
29

30 **Replace Deteriorating Steel Gas Systems - 2015:**
31 **\$1,000,000; 2016: \$1,000,000; 2017: \$1,000,000**

32 This annual program will replace sections of existing
33 steel gas piping that are suspect for failure or are
34 showing signs of deterioration within the gas system.
35 This program will address the replacement of sections
36 of gas main with corrosion-related issues that no
37 longer operate reliably and/or safely. Sections of the
38 gas system require replacement due to many factors
39 including material failures, environmental impact,
40 increased leak frequency, or coating problems. This
41 program will identify and replace sections of steel
42 pipe to improve public safety and system reliability.
43

44 **Gas High Pressure (HP) Pipeline Remediation Program -**
45 **2016: \$3,000,000; 2017: \$3,000,000**

46 The Gas Supply Main Remediation Program will replace
47 and/or relocate sections of gas pipelines (>100 psig
48 operating pressure as determined and prioritized by
49 Avista's asset management programs. Reasons for the
50 replacements might include, but are not limited to;

1 lack of complete construction documents due to change
2 in ownership, lack of complete test documentation due
3 to more stringent record keeping practices, pipe
4 quality deficiencies from the manufacturing process,
5 and reducing risk in highly populated areas.
6

7 **Gas Planned Meter Change-Out (PMC) Program-Capital**
8 **Replacements - 2015: \$1,030,000; 2016: \$1,061,000;**
9 **2017: \$1,093,000**

10 This annual program will provide for replacement of
11 gas meters and associated measurement equipment that
12 are completed in association with the Gas Planned
13 Meter Change-out (PMC) program. Avista is required by
14 commission rules and an approved Tariff in ID, WA, and
15 OR to test meters for accuracy and ensure proper
16 metering performance. Execution of this program on an
17 annual basis will ensure the continuation of reliable
18 gas measurement. This program will include the labor
19 and minor materials associated with the PMC program.
20

21 **Rathdrum Prairie HP Main Reinforcement - 2016:**
22 **\$5,000,000; 2017: \$5,000,000**

23 Based on recent load studies, load growth on Northwest
24 Pipeline's Coeur d'Alene lateral will exceed both
25 Avista's contractual delivery amounts as well as the
26 physical capacity of Northwest Pipeline. This project
27 includes the expansion of a gate station at Chase Road
28 off the GTN pipeline to support a phased-in high-
29 pressure pipeline reinforcement to meet projected
30 capacity requirements in Post Falls and Coeur d'Alene,
31 which are currently fed from Northwest Pipeline.
32

33 **Chase Road Gate Station - 2015: \$5,987,000**

34 This project reinforces gas service to the Rathdrum
35 and greater Coeur d'Alene area by installing a new
36 gate station near Chase Road and extending high
37 pressure main to reinforce the existing Rathdrum/Couer
38 d'Alene high pressure distribution system.
39

40 **ERTs Replacement Program - 2015: \$402,000; 2016:**
41 **\$444,000; 2017: \$494,000**

42 This program covers labor required for the replacement
43 of 19,500 natural gas Encoder Receiver Transmitters
44 (ERTs) annually for a 12-year cycle, beginning in the
45 year 2015. Analyses has identified that a levelized
46 replacement strategy will minimize the effect of unit
47 failures as well as introduce new, levelized
48 populations of ERTs into the system for future
49 predictive maintenance.
50

1 Q. What is the net impact to electric rate base for
 2 the twelve months ended December 31, 2014, in order to
 3 restate capital from an AMA to an end-of-period basis?

4 A. Electric net rate base for capital investment as
 5 of year-end December 31, 2014 increased \$226,000 from
 6 \$650,748,000 on a December 31, 2014 AMA basis to
 7 \$650,974,000 on an December 31, 2014 EOP basis as shown in
 8 Table No. 9 below.⁷

9 **Table 9: Electric Rate Base at December 31, 2014**

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11 **Plant Additions in 000's**

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	AMA	12.31.14 Adjustment	EOP 12.31.14
Total Plant Cost	1,233,739	31,469	1,265,208
Total Accumulated Depreciation	(446,557)	(9,029)	(455,586)
Total Accumulated DFIT	(136,434)	(22,215)	(158,649)
Net Rate Base	650,748	226	650,974

19

⁷ The relatively small increase in electric and a decrease in natural gas rate base from AMA to EOP at December 31, 2014, is primarily due to an increase in accumulated deferred federal income taxes. That increase is the result of Avista recording in the test period an estimate of the impact of a tax deduction the Company intends to file in its 2014 federal income tax return.

Avista plans to make a "Change of Accounting" filing to implement certain IRS Tangible Property Regulations associated with revised rules on property capitalization versus repair requirements. The study to implement this tax accounting change, which is commonly referred to as a "Repairs Study", will be finalized during the first quarter of 2015. In September 2014, the Company recorded its estimate with the best information available and currently does not expect the overall estimate to change materially.

1 Q. What is the net impact to natural gas rate base
 2 for the twelve months ended December 31, 2014, in order to
 3 restate capital from an AMA to a December 31, 2014 end-of-
 4 period basis?

5 A. Natural gas net rate base for capital investment
 6 as of twelve-months-ended December 31, 2014, decreased
 7 \$2,674,000, from \$109,465,000 on an AMA basis to
 8 \$106,791,000 on a December 31, 2014 EOP basis. Table No. 10
 9 below summarizes the adjustment included in the case.⁸

10

11 **Table No. 10: Natural Gas Rate Base at December 31, 2014**

12 Plant Additions in 000's

	AMA	1.03 G- RCAP 12.31.14 Adjustment	EOP BALANCE 12.31.14
Total Plant Cost	204,167	4,169	208,336
Total Accumulated Depreciation	(69,686)	(1,825)	(71,511)
Total Accumulated DFIT	(25,016)	(5,018)	(30,034)
Net Rate Base	109,465	(2,674)	106,791

19

20 Q. What is the net change to electric rate base from
 21 December 2014 EOP through 2016 AMA capital investment?

22 A. Electric net rate base increases \$75,924,000,
 23 from \$650,974,000 to \$726,898,000 from the December 2014

⁸ Id.

1 EOP basis to 2016 on an AMA basis, as shown in Table No. 11
 2 below.

3 **Table No. 11: Electric Plant Activity EOP 2014 - AMA 2016**

4 Plant Additions in 000's

	EOP	2015	EOP	2016	AMA BALANCE
	12.31.14	Adjustment	12.31.15	Adjustment	2016
Total Plant Cost	1,265,208	110,583	1,375,791	18,211	1,394,002
Total Accumulated Depreciation	(455,586)	(28,542)	(484,127)	(16,695)	(500,822)
Total Accumulated DFIT	(158,649)	(4,329)	(162,977)	(3,305)	(166,282)
Net Rate Base	650,974	77,713	728,687	(1,789)	726,898

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12 **Q. What is the net change to natural gas rate base**
 13 **from December 2014 EOP through 2016 AMA for capital**
 14 **investment?**

15 A. Natural gas net rate base increases \$11,045,000,
 16 from \$106,791,000 to \$117,836,000 from the December 2014
 17 EOP basis to 2016 on an AMA basis, as shown in Table No. 12
 18 below.

19

1 **Table No. 12: Natural Gas Plant Activity EOP 2014 - AMA**
 2 **2016**

3 Plant Additions in 000's

	EOP BALANCE	3.07 G-CAP15	EOP BALANCE	3.08 G-CAP16	AMA BALANCE
	12.31.14	2015 Adjustment	12.31.15	2016 Adjustment	2016
Total Plant Cost	208,336	17,753	226,089	3,162	229,251
Total Accumulated Depreciation	(71,511)	(4,774)	(76,285)	(2,914)	(79,199)
Total Accumulated DFIT	(30,034)	(1,264)	(31,298)	(918)	(32,216)
Net Rate Base	106,791	11,715	118,506	(670)	117,836

10 Q. What is the net increase in Electric rate base
 11 from AMA 2016 to AMA 2017 related to 2017 capital
 12 expenditures?

13 A. Electric rate base will increase \$17,746,000 from
 14 the 2016 AMA balance of \$726,898,000 to \$744,644,000 at AMA
 15 2017, as shown in Table No. 13 below.

16 **Table No. 13: Electric Plant Activity 2016 AMA to 2017 AMA**

17 Plant Additions in 000's

	AMA BALANCE	17.05 E-CAP17	AMA BALANCE
	2016	2017 Adjustment	2017
Total Plant Cost	1,394,002	55,362	1,449,364
Total Accumulated Depreciation	(500,822)	(32,760)	(533,583)
Total Accumulated DFIT	(166,282)	(4,856)	(171,138)
Net Rate Base	726,898	17,746	744,644

1 Q. What is the net increase in natural gas rate base
 2 from AMA 2016 to AMA 2017 related to 2017 capital
 3 expenditures?

4 A. Natural gas rate base increases \$3,339,000 from
 5 the 2016 AMA balance of \$117,837,000 to \$121,177,000 at AMA
 6 2017, as shown in Table No. 14 below.

7 **Table No. 14: Natural Gas Plant Activity 2016 AMA to 2017**

8 **AMA**

9 Plant Additions in 000's

	AMA BALANCE	17.03 G-CAP17 2017 Adjustment	AMA BALANCE
	2016		2017
Total Plant Cost	229,251	9,392	238,643
Total Accumulated Depreciation	(79,198)	(4,878)	(84,076)
Total Accumulated DFIT	(32,216)	(1,175)	(33,390)
Net Rate Base	117,837	3,340	121,177

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16 Q. Did you factor in retirements for the January
 17 2015 through December 2017 Electric and Natural Gas pro
 18 forma adjustments?

19 A. Yes. The Company used an estimate based on
 20 planned transfers-to-plant and historical retirements, and
 21 then allocated these by functional group to service and
 22 jurisdiction. Further detail is provided in my workpapers.

23 Q. How were the offsets determined for the January
 24 2015 through December 2017 plant investment?

1 A. Each capital addition was analyzed to determine
2 any offsets (e.g., reduced O&M costs, reduced load losses,
3 etc.). Maintenance records were reviewed to determine
4 whether any specific maintenance costs were incurred in the
5 test period that would be reduced or eliminated by the
6 investment at the facility. For transmission projects,
7 analyses were conducted to determine the amount of
8 potential load loss savings that would be achieved. Those
9 costs were quantified and included as a reduction to O&M
10 costs in the O&M Savings pro forma adjustment included by
11 Ms. Andrews in the revenue requirement as a part of her Pro
12 Forma Adjustments.

13 In addition, the output from generation assets is
14 included in the AURORA_{XMP} power cost model. Therefore, to
15 the extent that the additional investments serve to either
16 preserve or increase generation from the generation
17 projects, the benefits are already reflected in the
18 AURORA_{XMP} model.

19 **Q. What is the rationale behind the removal of**
20 **capital expenditures for connecting new customers?**

21 A. The capital expenditures for the period January
22 2015 through December 2017 exclude distribution-related
23 capital expenditures that are associated with connecting
24 new customers to the Company's system. Excluding these
25 capital expenditures from the Pro Forma Adjustments

1 recognizes the fact that new customers provide incremental
2 revenue that helps offset costs associated with these
3 distribution-related capital additions. Retail revenues for
4 the Pro Forma Adjustments are based on historical test
5 period loads, and do not include revenues from new
6 customers beyond the test period.

7 **Q. Does this conclude your pre-filed direct**
8 **testimony?**

9 A. Yes, it does.