DAVID J. MEYER
VICE PRESIDENT AND CHIEF COUNSEL FOR
REGULATORY & GOVERNMENTAL AFFAIRS
AVISTA CORPORATION
P.O. BOX 3727
1411 EAST MISSION AVENUE
SPOKANE, WASHINGTON 99220-3727
TELEPHONE: (509) 495-4316
FACSIMILE: (509) 495-8851
DAVID.MEYER@AVISTACORP.COM

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

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

FOR AVISTA CORPORATION

(ELECTRIC AND NATURAL GAS)

I. INTRODUCTION

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

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

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

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

Q. What is the scope of your testimony?

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

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

A table of contents for my testimony is as follows:

Q. Are you sponsoring any Exhibits?

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

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

2016 Rate Year:

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

(2) **2015 Capital Additions** – This adjustment adds capital additions to plant in service during 2015[1], including the AD, depreciation expense and ADFIT associated with these additions, on a 2015 EOP basis. This also includes an adjustment for the impact of asset retirements in 2015[2]. Next, these additions are carried forward to a 2016 AMA basis by extending AD, and ADFIT balances.

(3) **2016 Capital Additions** – This adjustment adds the capital additions to plant in service during 2016 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.

depreciation expense, accumulated depreciation and ADFIT associated with these additions. This also includes an adjustment for the impact of asset retirements in 2016[3].

2017 Rate Year:

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

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

(4) 2016 Capital Additions – This adjustment takes the capital additions to plant in service during 2016 to an EOP basis. This adjustment includes the depreciation expense, accumulated depreciation and ADFIT associated with these

[3] Id.

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

(5) **2017 Capital Additions** – This adjustment adds the capital additions to plant in service during 2017 on an AMA basis. This adjustment includes the depreciation expense, accumulated depreciation and ADFIT associated with these additions. This also includes an adjustment for the impact of asset retirements in 2017[5].

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

III. CAPITAL INVESTMENT PLANNING AND REVIEW

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

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

[4] Id.

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

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

[5] Id.

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

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

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

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

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

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

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

TABLE NO. 1
Planned vs. Actual Expenditures

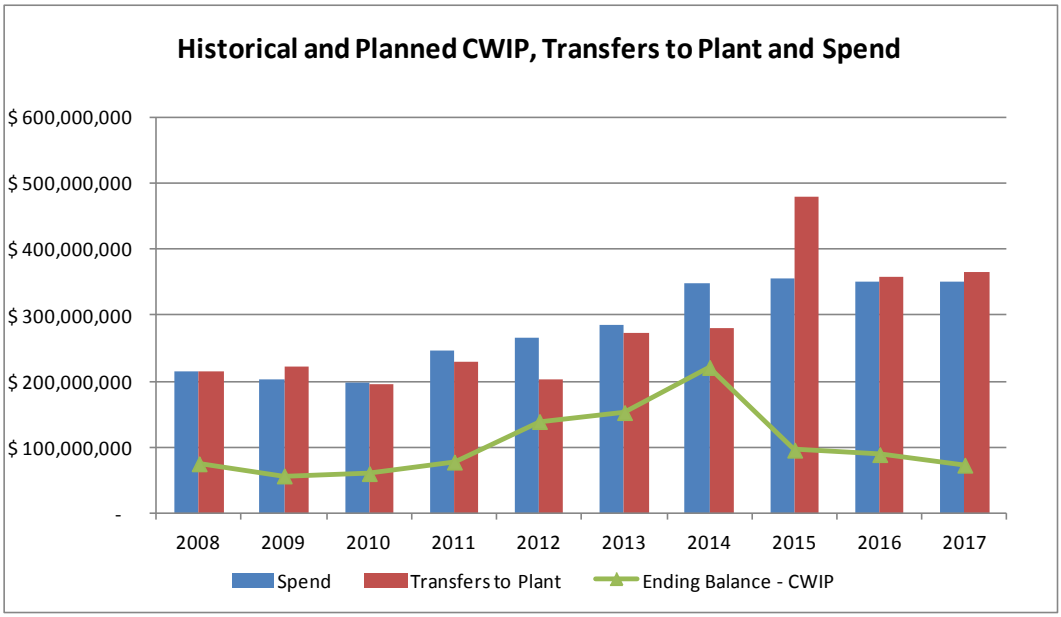
	Planned Expenditures ($ millions)	Actual Expenditures ($ millions)	Percentage of Planned
2006	$159.60	$158.30	99%
2007	183.60	198.40	108%
2008	190.00	205.40	108%
2009	202.00	199.70	99%
2010	235.00	206.80	88%
2011	260.00	247.00	95%
2012	256.50	262.00	102%
2013	274.60	296.00	108%
2014	331.00	352.00	106%
Nine Year Average	**$232.48**	**$236.18**	**102%**

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

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

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

Illustration 2:



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

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

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

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

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

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

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

[6] "The Handy-Whitman Index of Public Utility Construction Costs," is published by Whitman, Requardt 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.

Illustration No. 3:

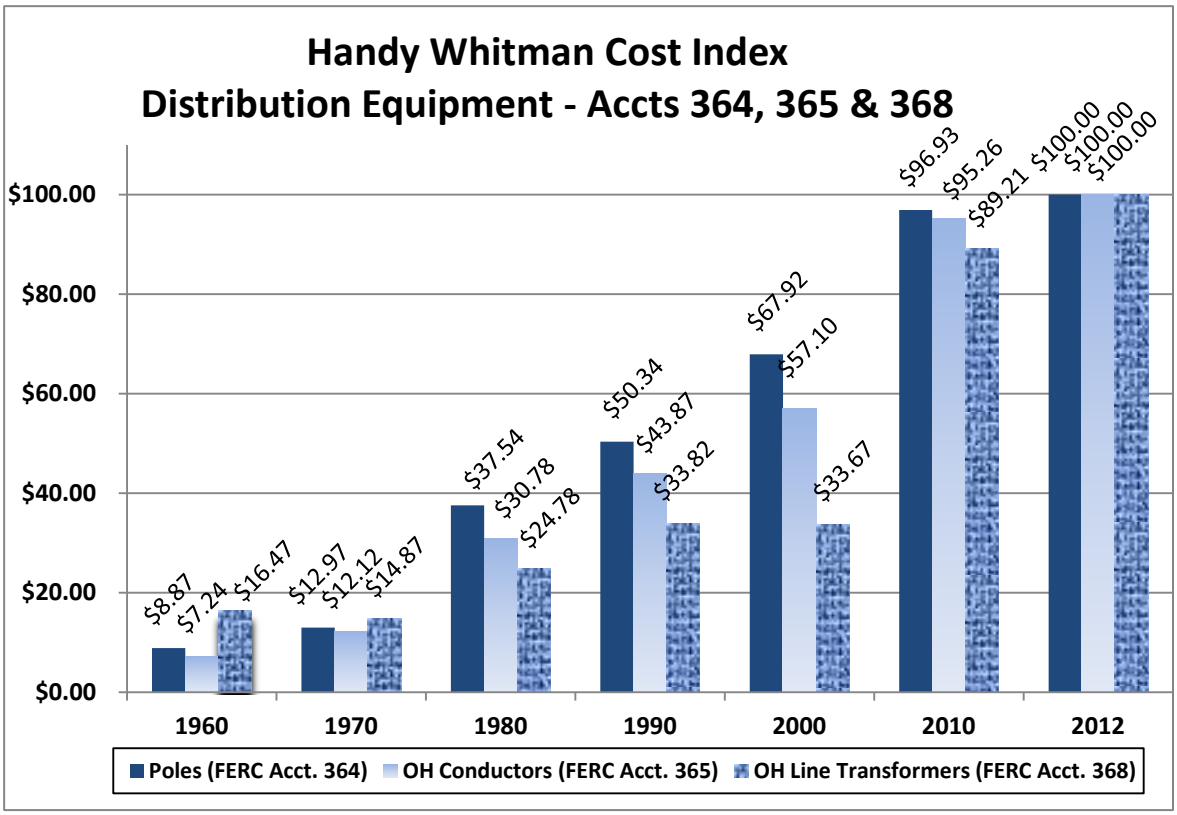


Illustration No. 3 above and Exhibit No. 11, Schedule 2, show that the cost of the equipment and facilities that are being added today are many times more expensive than those same facilities installed in the past. Our retail rates are "cost-based" and reflect the low cost of the old equipment serving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

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

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

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

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

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

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

Generation:

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

TABLE NO. 2
Generation / Production Capital Projects (System)

Business Case Name	2015 $ (000's)	2016 $ (000's)	2017 $ (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**

Electric Transmission:

The electric transmission 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. 3 below.

TABLE NO. 3
Transmission Capital Projects (System)

Business Case Name	2015 $ (000's)	2016 $ (000's)	2017 $ (000's)
Colstrip Transmission/PNACI	$ 491	$ 497	$ 516
Environmental Compliance	434	350	350
Reconductors and Rebuilds	11,776	21,161	18,327
Lewiston Mill Rd. 115 kV Substation	684	-	-
Storms	1,000	890	883
Substation - 115 kV Line Relay Upgrades	1,230	-	-
Substation - Asset Mgmt. Capital Maintenance	1,647	3,300	3,300
Substation - Capital Spares	3,250	4,915	1,200
Substation - Distribution Station Rebuilds	250	3,565	2,865
Tribal Permits and Settlements	1,430	316	297
Spokane Valley Transmission Reinforcement	3,468	7,440	-
Clearwater Sub Upgrades	500	500	-
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**

General Plant:

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

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**

Capital Tools & Stores Equipment – 2015: $2,348,000; 2016: $2,400,000; 2017: $2,400,000
This category includes equipment utilized in warehouses throughout the service territory, such as forklifts, manlifts, shelving, cutting/binding machines, etc. Expenditures in this category also include large tools and instruments used throughout the Company for gas and/or electric construction and maintenance work, distribution, transmission, or generation operations, telecommunications, and some fleet equipment (hoists, winch, etc.) not permanently attached to the vehicle.

Central Office Facility (COF) Long Term Campus Restructuring Plan – 2015: $7,500,000; 2016: $4,000,000
The central operating facility (COF) campus restructuring plan, phase one, is a two-year, multiple project plan to address material storage, field recovery operations, and office space needs. Over the past few years, our warehouse material inventory has increased and presently the materials are scattered in multiple locations on the COF, due to them outgrowing their allocated space. The campus restructuring will increase and consolidate their storage area, resulting in greater efficiencies for the warehouse and field

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

Structures and Improvements/Furniture – 2015: $6,030,000; 2016: $3,600,000; 2017: $3,600,000

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

Apprentice Training – 2015: $121,000; 2016: $60,000; 2017: $60,000

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

HVAC Renovation Project – 2015: $9,520,000

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

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

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

Sandpoint Renovation – 2015: $500,000

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

New Airport Hangar – 2017: $1,500,000

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

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

Transportation:

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

TABLE NO. 6
Transportation Capital Projects (System)

Business Case Name	2015 $ (000's)	2016 $ (000's)	2017 $ (000's)
Fleet Budget	$ 10,184	$ 7,700	$ 7,700
	$ 10,184	**$ 7,700**	**$ 7,700**

Fleet Budget – 2015: $10,184,000; 2016: $7,700,000; 2017: $7,700,000
Expenditures are for the scheduled replacement of trucks, off-road construction equipment and trailers that meet the Company's guidelines for replacement including age, mileage, hours of use and overall condition. This also includes additions to the fleet for new positions or crews working to support the maintenance and construction of our electric and natural gas operations.

IS/IT:

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

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

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

Jackson Prairie Storage – 2015: $1,356,000; 2016: $1,175,000; 2017: $1,356,000

These projects include various capital improvements that Avista and its partners will complete at the Jackson Prairie facility.

Natural Gas Distribution:

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

TABLE NO. 8

Natural Gas Distribution Capital Projects (System)

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

Aldyl A Replacement – 2015: $16,817,000; 2016: $17,385,000; 2017: $18,263,000

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

Cathodic Protection – 2015: $1,292,000; 2016: $1,000,000; 2017: $1,250,000

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

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

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

Gas Reinforcement – 2015: $1,000,000; 2016: $1,000,000; 2017: $800,000

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

Gas Replacement Street & Highways – 2015: $5,035,000; 2016: $4,500,000; 2017: $4,500,000

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

Gas Telemetry – 2015: $416,000; 2016: $400,000; 2017: $400,000

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

Isolated Steel Replacement – 2015: $3,458,000; 2016: $3,550,000; 2017: $3,320,000
The Company is implementing a cathodic protection program for the purpose of finding and addressing isolated steel in its natural gas piping systems.

Overbuilt Pipe Replacement – 2015: $900,000; 2016: $900,000; 2017: $900,000
This annual project will replace sections of existing gas piping that have experienced encroachment or have been "overbuilt", i.e., where a structure has been built over existing gas piping. It will address the replacement of sections of gas main that no longer can be operated safely and will identify and replace sections of main to improve public safety. All types of overbuilds will be addressed, with the primary focus of the project being overbuilds in manufactured home developments.

Regulator Station Reliability Replacement - 2015: $812,000; 2016: $800,000; 2017: $800,000
This annual project upgrades or replaces various regulator stations within the natural gas distribution system, improving station reliability and reducing operation and maintenance costs. Existing stations require upgrades due to many factors, such as replacement of obsolete equipment and improvement in regulation technology.

Replace Deteriorating Steel Gas Systems – 2015: $1,000,000; 2016: $1,000,000; 2017: $1,000,000
This annual program will replace sections of existing steel gas piping that are suspect for failure or are showing signs of deterioration within the gas system. This program will address the replacement of sections of gas main with corrosion-related issues that no longer operate reliably and/or safely. Sections of the gas system require replacement due to many factors including material failures, environmental impact, increased leak frequency, or coating problems. This program will identify and replace sections of steel pipe to improve public safety and system reliability.

Gas High Pressure (HP) Pipeline Remediation Program – 2016: $3,000,000; 2017: $3,000,000
The Gas Supply Main Remediation Program will replace and/or relocate sections of gas pipelines (>100 psig operating pressure as determined and prioritized by Avista's asset management programs. Reasons for the replacements might include, but are not limited to;

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

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

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

Rathdrum Prairie HP Main Reinforcement – 2016: $5,000,000; 2017: $5,000,000

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

Chase Road Gate Station – 2015: $5,987,000

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

ERTs Replacement Program - 2015: $402,000; 2016: $444,000; 2017: $494,000

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

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

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

Table 9: Electric Rate Base at December 31, 2014

Plant Additions in 000's

	AMA	1.03 E- RCAP 12.31.14	EOP
	2014	Adjustment	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

[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.

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

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

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

Plant Additions in 000's

	AMA 2014	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

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

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

[8] Id.

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

Table No. 11: Electric Plant Activity EOP 2014 – AMA 2016

Plant Additions in 000's	EOP 12.31.14	3.09 E-CAP15 2015 Adjustment	EOP 12.31.15	3.10 E-CAP16 2016 Adjustment	AMA BALANCE 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

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

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

Table No. 12: Natural Gas Plant Activity EOP 2014 – AMA 2016

Plant Additions in 000's

	EOP BALANCE 12.31.14	3.07 G-CAP15 2015 Adjustment	EOP BALANCE 12.31.15	3.08 G-CAP16 2016 Adjustment	AMA BALANCE 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

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

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

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

Plant Additions in 000's

	AMA BALANCE 2016	17.05 E-CAP17 2017 Adjustment	AMA BALANCE 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

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

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

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

Plant Additions in 000's

	AMA BALANCE 2016	17.03 G-CAP17 2017 Adjustment	AMA BALANCE 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

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

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

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

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

In addition, the output from generation assets is included in the AURORA$_{XMP}$ power cost model. Therefore, to the extent that the additional investments serve to either preserve or increase generation from the generation projects, the benefits are already reflected in the AURORA$_{XMP}$ model.

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

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

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

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

A. Yes, it does.