BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-15_____

DOCKET NO. UG-15_____

DIRECT TESTIMONY OF

KAREN K. SCHUH

REPRESENTING AVISTA CORPORATION

1

2

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.
- 8 A. I graduated from Eastern Washington University in 1999 with a Bachelor of 9 Arts Degree in Business Administration, majoring in Accounting. After spending six years 10 in the public accounting sector, I joined Avista in January of 2006. Since 2006, I have 11 worked in various positions within the Company in the Finance Department (Plant 12 Accounting and Resource Accounting) and joined the State and Federal Regulation 13 Department as a Regulatory Analyst in 2008. Currently, as a Senior Regulatory Analyst, I 14 am responsible for, among other things, preparing the capital pro forma adjustments in determination of revenue requirements for all jurisdictions. 15
- 16

O.

What is the scope of your testimony?

A. My testimony and exhibits in this proceeding will cover the Company's capital investments in utility plant through December 31, 2016. As explained by Company witness Ms. Andrews, the Company is basing its electric and natural gas revenue increase requested in this case on its electric and natural gas Attrition Studies. However, as a "cross check" to the Company's request, Company witness Ms. Smith has also prepared electric and natural gas Pro Forma Cross Check Studies, which incorporate Washington's share of

1	the 2016 rate year adjustments for expenses and capital additions described further in my
2	testimony.

In addition, for informational purposes only, I am providing information on capital investment through 2017 as an indication of the ongoing capital investments by the Company.

A table of contents for my testimony is as follows:

7	Desci	ription	Page
8	I.	Introduction	1
9 10	II.	Capital Additions from September 30, 2014 through December 2016	3
11	III.	Capital Budget and Review	4
12	IV.	Advanced Meter Infrastructure	26
13 14	V.	Compliance with past Commission Order on Capital Expenditure Reporting	28
15	VI.	2017 Capital Additions	29

16

17

6

Q. Are you sponsoring any exhibits?

Yes. I am sponsoring Exhibit Nos. _(KKS-2) through (KKS-5) which were 18 A. 19 prepared by me or under my direction, and have been included to provide supporting 20 information for the capital investment as described in this testimony. Exhibit No. (KKS-2) 21 shows capital expenditures from 2005 through 2019. Exhibit No. (KKS-3) depicts the 22 increases in costs of transmission substations, transmission equipment, distribution 23 substations, and distribution equipment that the utility industry has experienced over the past 24 fifty years. Exhibit Nos. __(KKS-4) and __(KKS-5) list and describe the capital projects included in this case. 25

1

2

II. CAPITAL ADDITIONS FROM SEPTEMBER 30, 2014 THROUGH DECEMBER 2016

Q. How were the capital additions through the 2016 rate year developed in
this case?

5	A. As in prior rate cases, Avista started with rate base for the historical test year,
6	which, for this case, is the average-of-monthly-averages ("AMA") for the twelve months
7	ended September 30, 2014. An adjustment was made to restate plant-in-service at September
8	30, 2014 to an end-of-period ("EOP) basis at December 31, 2014. Adjustments were also
9	made to include additions for the period October 1, 2014 through December 31, 2014 on an
10	EOP basis, together with the associated accumulated depreciation ("A/D") and deferred
11	federal income taxes ("DFIT") ^{1/2} . These adjustments include annualizing the associated
12	depreciation expense on the plant-in-service at September 30, 2014 and the additions
13	through December 31, 2014. These adjustments were made to determine rate base at
14	December 31, 2014, which reflects the most recent historical period information.
15	My testimony also includes 2015 capital additions ³ , together with the associated AD

and ADFIT at a 2015 EOP basis. This included associated depreciation expense for the

17 capital additions. These specific capital additions are identified later in my testimony. In

¹ The revenue-producing capital for the period ended September 30, 2014, was adjusted separately to a December 31, 2014 EOP basis in Ms. Andrews Attrition Analysis as shown in Exhibit Nos.___(EMA-2) and (EMA-3), because the Attrition Analysis reflects the growth in customers and growth in revenue from the test year to the rate year. The revenue-producing distribution plant for the twelve-months-ended September 30, 2014 capital additions for the Pro Forma Cross Check Analysis was not adjusted for EOP growth, because the Pro Forma Cross Check Analysis does not include growth in customers and revenue beyond the historical test year.

year. 2 For each of the periods October-December 2014, as well as 2015 and 2016, distribution-related capital expenditures associated with connecting new customers to the Company's system were excluded. The Pro Forma Cross Check Analysis does not include the increase in revenues from growth in the number of customers from the historical test year to the 2016 rate year, and therefore, the growth in plant investment associated with customer growth should also be excluded.

1 addition, the plant-in-service at December 31, 2014 was adjusted to a 2015 EOP basis. Finally, my testimony also includes 2016 capital additions⁴, together with the 2 associated AD and ADFIT at a 2016 AMA basis. This included associated depreciation 3 4 expense for the capital additions. These specific capital additions are identified later in my 5 testimony. In addition, the plant-in-service at December 31, 2015 was adjusted to a 2016 6 AMA basis. Tables depicting the electric and natural gas Pro Forma Cross Check Study 7 adjustments for October 2014 through 2016 are shown later in my testimony at Tables 9 8 through 12. 9 10 **<u>III. CAPITAL BUDGET</u>** AND REVIEW Q. Please describe Avista's capital budgeting process. 12 Avista has revised the capital budgeting process over the last few years. The A.

- 11

13 revised process allows for further and more detailed review of capital projects and the 14 progress on those projects, by using "business cases". A business case is a summary 15 document that provides support and analysis for a capital project or program. Components of 16 a business case include: the project description, project alternatives, cost summary, business 17 risk, financial assessment, strategic assessment, justification for the project (e.g., mandatory, 18 resource requirements, etc), milestones, key performance indicators. Business cases, along 19 with a cover sheet for the projects included in this case, have been provided as additional 20 support in Exhibit No. ___(KKS-5).

³ Id.

⁴ Id.

1 The budget process starts with project sponsors submitting new and updated business 2 cases to the Financial Planning and Analysis ("FP&A") group for the upcoming five year 3 period. The business cases are reviewed by FP&A and then included in the list of valid 4 projects and programs to be considered for funding by the Capital Planning Group ("CPG"). 5 The CPG is currently a group of Directors that represent all capital intensive areas of the 6 Company. The CPG meets to review the submitted Business Cases and prioritize funding to 7 meet the capital budget targets set by senior management. After approval from senior 8 management, the capital budget is sent to the Board of Directors to approve the capital 9 budget amount for the five year period. The CPG meets monthly to review the status of the 10 capital projects and programs, and approve or decline new business cases as well as monitor 11 the overall capital budget. 12 Q. Is the Company confident that the capital additions that are presented in

13

this case will actually occur for the period October 2014 through December 31, 2016?

- 14 A. Yes. The October through December 2014 projects are completed and many of the 2015 projects are already underway, either through actual construction, signed 15 16 contracts, and/or ordered materials, and in some cases are already completed.
- 17 **Q**. What is the historical and projected level of annual capital spending for 18 Avista?
- 19 A. Avista's annual capital requirements have steadily increased from 20 approximately \$158 million in 2006 to approximately \$352 million in 2014. Capital 21 spending of approximately \$726 million is planned for 2015-2016 for customer growth, 22 investment in generation upgrades and transmission and distribution facilities, as well as 23 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. Exhibit No. (KKS-2) reflects this trend that Avista has experienced
 and what is planned for in the near future.

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 <u>actual</u> 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.

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

- 19
- Q. Please discuss how the increase in capital spending impacts transfers-to-
- 20 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. 1 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 in the upcoming years, as compared to previous years, thus accelerating the growth in rate base.



Illustration 1:

Q.

17

8

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 year will be significantly greater than the historical test period rate base.

21

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

A. As Company witnesses Mr. Thies, 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), and investment in new technology.

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.

10 Q. What data is available that depicts the increase in the cost of utility plant 11 assets that have been added in recent years, as compared to the cost of the facilities 12 being replaced?

A. Using the Handy-Whitman Index Manual⁵, the Company analyzed several major categories of plant. Exhibit No. ___(KKS-3) 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. ___(KKS-3), and also shown in Illustration No. 2 below,

19

⁵ "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.

1 distribution poles fifty years ago would have a cost of approximately 9% of the 2 current replacement cost.



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

20

O. With respect to Avista's capital additions through 2016, would there be 21 operation and maintenance (O&M) savings associated with the replacement of some of 22 the aging equipment?

1	A. In some instances there will be a reduction to O&M associated with the
2	investment, and O&M cost savings have been identified and reflected in this filing.
3	However, on a net basis, we will continue to experience increased O&M costs to maintain a
4	system that continues to age. Our general practice is to attempt to replace our aging
5	equipment before it fails, because it is not only less costly to replace this equipment on a
6	systematic, planned basis, but it also results in more reliable service to customers, which is
7	expected by all utility stakeholders. If our practice were to avoid replacing utility equipment
8	until it failed, the reliability of our system would suffer.
9	Therefore, it is imperative that we continue every year to reinvest and upgrade a
10	portion of our utility system, in addition to the investments needed to meet mandatory
11	reliability requirements. The reinvestment and upgrades actually serve, to a large extent, to
12	slow the growth of annual O&M costs, but does not result in a year-over-year reduction to
13	overall O&M costs.
14	Q. Please provide a summary of the October 2014 through December 2016
15	capital projects.
16	A. Exhibit No(KKS-4), details the system-level capital projects that were, or
17	will be, transferred to plant from October 2014 through December 2016. A listing and/or
18	description of the capital projects and their system costs as provided below:
19	Generation:
20 21 22	The electric generation projects that will transfer to plant-in-service are described in detail in Mr. Kinney's direct testimony, Exhibit No(SJK-1T). A listing of these projects on a system basis are included in Table No. 2 below.

projects on a system basis are included in Table No. 2 below.

<u><u>T</u></u>	ABLENO. 2		
Generation / Produc	ction Capital Projects (System)		
Business Case Name	October-December 2014 \$(000's)	2015 \$(000's)	2016 \$ (000's)
Hydro - Base Load Hydro	\$ 1,126	\$ 1,149	\$ 1,149
Hydro - Clark Fork Settlement Agreement	8,001	13,988	6,054
Hydro - Generation Battery Replacement	100	250	250
Hydro - Hydro Safety Minor Blanket Hydro - Little Falls Plant Upgrade Hydro - Nine Mile Rehab	65	70	75
Hydro - Little Falls Plant Upgrade		2015 \$(000's) \$ 1,149 13,988 250	9,000
Hydro - Nine Mile Rehab	5,175	51,323	9,871
Hydro - Regulating Hydro	3,027	51,323 4,136 462	3,533
Hydro - Spokane River License Implementation	(9)	462	16,898
Other - Base Load Thermal Plant	201	2,200	2,200
Other - Peaking Generation		462 2,200	500
Thermal - Kettle Falls Water Supply	1,000		
Thermal - Colstrip Thermal Capital	1,459	2,497	10,480
Other - Coyote Springs LTSA			2,000
Hydro - Noxon Spare Coils		1,350	
Hydro - Post Falls South Channel Replacement		11,008	
Hydro - Cabinet Gorge Unit 1 Refurbishment		11,400	
Kettle Falls Generating Station Ash Collector	19		
	\$ 20,164	\$ 114,633	\$ 62,010

14

1 <u>Electric Transmission:</u>

The electric transmission projects that will transfer to plant-in-service are described
in detail in Mr. Cox's direct testimony, Exhibit No.__(BAC-1T). A listing of these
projects and system costs are included in Table No. 3 below.

5	<u>TABLE NO. 3</u> Transmission Capital Projects (System)			
6		October-December	2015	2016
	Business Case Name	2014 \$(000's)	\$(000's)	\$ (000's)
7				
	Colstrip Transmission/PNACI	\$ 75		\$ 497
8	Environmental Compliance	8		350
	Reconductors and Rebuilds	10,686	11,763	21,161
9	Storms	427		890
)	Substation - 115 kV Line Relay Upgrades	262	1,525	
10	Substation - Asset Mgmt. Capital Maintenance	74	1,200	3,300
10	Substation - Capital Spares	245	3,900	4,915
	Substation - Distribution Station Rebuilds	23	350 11,763 1,000 1,525 1,200 3,900 275 1,430 2,900 500 1,709 500	3,565
11	Tribal Permits and Settlements	110	1,430	316
	Spokane Valley Transmission Reinforcement	1,900	3 275 0 1,430 0 2,900 5 500	7,440
12	Clearwater Sub Upgrades	506	500	500
	Moscow 230 Substation Rebuild	6,363		
13	Transmission - Asset Management	1,279	1,709	1,772
	Transmission - NERC High Priority Mitigation	1,900	,	,
14	Transmission - NERC Low Priority Mitigation	250	500	2,000
	Transmission - NERC Medium Priority Mitigation	1,717	3.294	2,251
15	SCADA - SOO & BUCC	1,229		1,002
	Noxon Switchyard Rebuild	-,>		500
16	Westside Rebuild Phase One		-,	1,780
17		\$ 27,054	\$ 40,183	\$ 52,239
18				

19

Electric Distribution:

1

2 3

4

5

The electric distribution projects that will transfer to plant-in-service are described in detail in Mr. Cox's direct testimony, Exhibit No.__(BAC-1T). A listing of these projects and system costs are included in Table No. 4 below.

7	<u>TABLE NO. 4</u> Distribution Capital Projects (System)			
8	Distribution Capit	al Projects (System) October-December	2015	2016
9	Business Case Name	2014 \$(000's)	2015 \$(000's)	2016 \$ (000's)
10	Distribution Grid Modernization	\$ 4,252	\$ 10,925	\$ 11,000
-	Distribution Line Protection	147	125	125
11	Distribution Minor Rebuild	1,545	8,300	8,300
11	Distribution Transformer Change-Out Program	597	4,700	4,700
12	Distribution Wood Pole Management	1,198	11,000	11,000
12	Meter Minor Blanket	1,039	5,806	5,806
12	Electric Replacement/Relocation	437	2,400	2,500
13	Environmental Compliance	38	150	150
1.4	Primary URD Cable Replacement	74	1,000	
14	Reconductors and Rebuilds		2,500	2,500
	Segment Reconductor and FDR Tie Program	2,689	2,920	2,675
15	Spokane Electric Network	441	2,300	2,298
	Storms	530	2,000	1,900
16	Substation - Asset Mgmt. Capital Maintenance	155	1,508	1,519
	Substation - Capital Spares	6	1,200	1,200
17	Substation - Distribution Station Rebuilds	5,850	2,112	2,284
	Substation - New Distribution Stations	412	2,026	75
18	Tribal Permits and Settlements		_,	
	Worst Feeders	1,351	1,999	2,000
19	Franchising for WSDOT	759	427	494
	Harrington 4 kV Cutover	10)	2,025	1,000
20	Smart Grid Demonstration Project	554	2,025	1,000
20	Transmission - NERC Medium Priority Mitigation			
21	Spokane Smart Circuit	192		
21	Street Light Management	1)2	1,500	1,500
22 23	Washington AMI		1,500	32,243
25 24				52,27.
		\$ 22,266	\$ 66,924	\$ 95,268
25		φ 22,200	ψ 00,724	φ ,5,400
26 27				

General Plant:

1

2 3

4

5 6

17

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.

0				
7	TABI	<u>LENO. 5</u>		
	General Plant Cap	ital Projects (System)		
8	Business Case Name	October-December 2014 \$(000's)	2015 \$(000's)	2016 \$ (000's)
9	Capital Tools & Stores Equipment	\$ 589	\$ 2,348	\$ 2,400
9	COF Long-Term Restructuring Plan	2,085	8,500	4,000
	Dollar Road Service Center Addition & Remodel	1		
10	Structures and Improvements/Furniture	575	4,600	3,600
	Battery Storage		2,063	406
11	Apprentice Training	5	60	60
	HVAC Renovation Project	3	9,250	
12	New Deer Park Service Center		2,750	
13	COF Long-term Restructure Ph2		2,000	
14				
15		\$ 3,258	\$ 31,571	\$ 10,466
16				

18 Capital Tools & Stores Equipment - 2014: \$589,000; 2015: \$2,348,000; 2016: 19 \$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.

27 Central Office Facility (COF) Long Term Campus Restructuring Plan – 2014: 28 \$2,085,000; 2015: \$8,500,000; 2016: \$4,000,000

29 The central operating facility (COF) campus restructuring plan, phase one, is a two-30 year, multiple project plan to address material storage, field recovery operations, and 31 office space needs. Over the past few years, our warehouse material inventory has 32 increased and presently the materials are scattered in multiple locations on the COF, 33 due to them outgrowing their allocated space. The campus restructuring will increase 34 and consolidate their storage area, resulting in greater efficiencies for the warehouse 35 and field crews. In addition, two new structures will be built to consolidate 36 transformer recovery (both PCB and non-PCB), hazardous waste & material, and 37 investment recovery (recycling) operations. This will improve the safety and 38 efficiencies for collection of all field recovery materials, as well as provide a one-39 stop drop location for field crews (instead of the three different locations on the COF 40 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 41

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. After revenue requirement was finalized, it was determined that the savings were should have been allocated to all services and jurisdictions rather than only to Washington Electric and Gas. Savings are \$6,000 in 2014, \$77,000 in 2015 and \$21,000 in 2016 on a system level. The allocation to Washington is 48.25% for Electric and 14.31% for Gas making the Washington allocated savings \$2,900 Electric and \$900 Gas in 2014, \$37,000 Electric and \$11,000 Gas in 2015, and \$10,000 Electric and \$3,000 Gas in 2016.

- Dollar Road Service Center Addition & Remodel 2014: \$1,000
- From 2012 2014, Avista constructed a 12,900 sq. ft. 6-bay fleet facility. The facility enables Avista to service CNG vehicles and gas department vehicles on-site. The service of the gas vehicles was taking place at a leased facility several miles north of the Dollar Rd. property. The Dollar Rd. expansion includes a CNG filling station for the Avista fleet. The justification of the fleet facility was found in efficiencies gained by having mechanics on-site to maintain Avista vehicles.
- 20
 Structures and Improvements/Furniture 2014: \$575,000; 2015: \$4,600,000;

 21
 2016: \$3,600,000;
- This program is for the Capital Maintenance, Improvements, and Furniture budgets 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.).
- 29 Battery Storage –2015: \$2,063,000; 2016: \$406,000

1

2

3

4

5

6

7

8

9

10

11 12

13

14

15

16 17

18 19

28

36

- This project will purchase eight storage units (shipping containers) and two Power Control System units. The eight storage units will be filled with an electrolyte containing vanadium suspension, which will maintain the electro-chemical charge. This will augment the current portfolio of supply assets in addition to local load management. The project is also available for matching funds made available by the Department of Commerce grant opportunity.
- 37 Apprentice Training 2014: \$5,000; 2015: \$60,000; 2016: \$60,000
- 38 This program is for on-going capital improvements to support the essential skills 39 needed for journeyman workers, apprentices and pre-apprentices now and for the 40 future. It is important to provide the types of training scenarios that employees face 41 in the field. Capital expenditures under this program include items such as building 42 new facilities or expanding existing facilities, purchase of equipment needed, or 43 build out of realistic utility field infrastructure used to train employees. Examples 44 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 45

facility in Spokane, which could include commercial and residential building replicas, and distribution, transmission, smart grid, metering, gas and substation infrastructure.

4 5

1

2

3

HVAC Renovation Project – 2014: \$3,000; 2015: \$9,250,000

6 The HVAC Renovation Project began in 2007. The HVAC Project is a systematic 7 replacement of the original 1956 Heating, Ventilation and Air Conditioning System 8 for the Service Building, Cafeteria/Auditorium and General Office Building. The 9 original HVAC equipment has been operating 24/7 since original construction in 10 1956. The Project entails a floor by floor evacuation and relocation of employees and 11 a complete demolition of each floor; including a massive Asbestos Abatement 12 component, and removing the original fire proofing on the basic steel structure. The 13 Project requires exhaustive demolition and reconstruction of each floor. Sustainable energy savings and conservation are built into the Project as we apply for LEED 14 15 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 16 17 construction phases. The goal of this project is to re-purpose and recycle the entire 18 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 19 20 choices during the design phase. The design team chose energy efficient equipment 21 that was designed for 30 to 50 year life cycles. After revenue requirements was 22 finalized, it was determined that the savings were should have been allocated to all 23 services and jurisdictions rather than only to Washington Electric and Gas. The 24 O&M offset is calculated as \$66,000 occurring in 2015 with Washington's portion 25 being \$32,000 Electric and \$9,500 Gas. An additional \$10,000 will occur in 2016 26 with Washington's portion being \$4,800 Electric and \$1,400 Gas. This has been 27 included in the O&M Offsets adjustment as shown in Company witness Ms. Smith's 28 workpapers.

30 New Deer Park Service Center- 2015: \$2,750,000

31 This investment will replace the existing Deer Park Service Center. The current 32 building is over 40 years old, and the existing storage yard is too small for ever-33 growing inventory. There are environmental concerns with the existing site located 34 near railroad tracks, and the close proximity to city water well. The existing building 35 is tight for current line truck sizes, the warehouse is undersized, and has code compliance and security issues. Deer Park is one of our lower-performing service 36 37 centers on the Facilities Building Survey Report. No O&M offsets are presented on 38 the attached copy of the Business Case, however after further discussion it was 39 determined that \$16,000 of annual savings would occur after the in-service date of 40 September 2015. The O&M offset is calculated as \$16,000 occurring in 2015 with 41 Washington's portion being \$12,600 Electric and \$3,400 Gas. This has been included 42 in the O&M Offsets adjustment as shown in Company witness Ms. Smith's 43 workpapers.

44

29

1Central Office Facility (COF) Long-Term Restructure Phase 2- 2015:2\$2,000,000

3 Avista's Central Office Facility (COF) Long Term Restructuring Plan, Phase 2 4 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 5 cubicles. Our parking lots will be beyond maximum capacity. The Company 6 7 currently leases space from Burlington Northern for employee parking. This lease 8 space could be at risk in the future, if Burlington needs the space. The Fleet Garage is 9 over 50 yrs old and is constrained. The new garage will allow for maintenance of 10 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 11 vehicles and employee vehicles. This separation will increase safety by eliminating 12 13 intermingling of pedestrians in work areas. The office building & parking garage is 14 projected to allow the Call Center and any leased facilities to come back to Mission 15 campus. The Ross Park conversion to office will cover any future employee expansion that will occur. After revenue requirement was finalized, it was 16 17 determined that the savings were should have been allocated to all services and 18 jurisdictions rather than only to Washington Electric and Gas It was determined that 19 O&M costs of \$11,000 will occur in 2015 and again in 2016 for a total of \$22,000. 20 These O&M costs are the result of additional maintenance costs associated with 21 employees returning to Mission campus. Washington's apportionment of this amount 22 is \$10,600 Electric and \$3,148 Gas.

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 narrative summaries following the table.

<u>TABLENO. 6</u> Transportation Capital Projects (System)					
Business Case Name	October-December 2014 \$(000's)	2015 \$(000's)	2016 \$ (000's)		
Fleet Budget	\$ 1,404	\$ 7,700	\$ 7,700		
CNG Fleet Conversion	9				
	\$ 1,413	\$ 7,700	\$ 7,700		

Fleet Budget - 2014: \$1,404,000; 2015: \$7,700,000; 2016: \$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.

44 45

40

41

42

43

23 24

25 26

27

28

1CNG Fleet Conversion - 2014: \$9,0002This project is to convert 119 light duty

This project is to convert 119 light duty trucks to CNG over the next seven years. If more vehicles are acquired in the fleet, there is a potential for more CNG to be served from these refueling stations. Vehicle conversion began in 2012 and will continue on 15-20 vehicles per year for the foreseeable future. After the revenue requirement was finalized it was determined that there will be additional costs of approximately \$90,000 in 2015 and approximately \$90,000 in 2016, not otherwise reflected in the revenue requirement.

<u>IS/IT:</u>

The IS/IT projects that will transfer to plant-in-service are described in detail in Mr. Kensok's direct testimony, Exhibit No.__(JMK-1T). A listing of these projects and the system costs are included in Table No. 7 below:

TABLENO. 7 IS/IT Capital Projects (System)			
	October-December	2015	2016
Business Case Name	2014 \$(000's)	\$(000's)	\$ (000's)
A vistaUtilities.com Upgrade	\$ 1,538	\$ 4,125	\$ 2,000
Enterprise Business Continuity Plan	121	450	450
Mobility in the Field	189	450	320
Technology Refresh to Sustain Business Process	5,421	18,595	16,095
Customer Information and Work & Asset Management Sy	/	95,108	
Enterprise Security	666	3,800	3,200
Technology Expansion to Enable Business Process	1,661	6,069	5,552
Trove Sunstone Integration	245		
High Voltage Protection Upgrade	485	719	415
Next Generation Radio Refresh		4,200	
Microwave Refresh	653	2,363	3,050
	\$ 10,979	\$ 135,879	\$ 31,082

Jackson Prairie Storage – 2014: \$205,000; 2015: \$1,356,000; 2016: \$1,175,000
 These projects include various capital improvements that Avista and its partners will
 complete at the Jackson Prairie facility.

33 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.

1	TABLENO. 8				
2	Natural Gas Distribution	Capital Projects (System) October-December	2015	2016	
3	Business Case Name	2014 \$(000's)	2015 \$(000's)	2010 \$ (000's)	
4	Aldyl A Replacement	\$ 4,342	\$ 16,817	\$ 17,385	
5	Cathodic Protection	210	950	1,000	
	Gas Non-Revenue Program	1,060	7,664	8,594	
6	Gas Reinforcement Gas Replacement Street & Highway	122 1,010	1,000 4,500	1,000 4,500	
7	Gas Telemetry	53	4,500	400	
8	Isolated Steel Replacement	550	3,450	3,550	
9	Overbuilt Pipe Replacement	81 59	900 800	900 800	
10	Regulator Station Reliability Replacement Replace Deteriorating Steel Gas Systems		1,000	1,000	
11	Gas HP Pipeline Remediation Program			3,000	
12	Gas PMC Program - Capital Replacements	121	1,030	1,061	
	Goldendale HP NSC Greene St HP Gas Main	9	3,505		
13	ERTs Replacement Program		402	444	
14	Washington AMI			8,758	
15		\$ 7,724	\$ 42,418	\$ 52,392	
16	L			J	
17	Aldyl A Replacement – 2014: \$4,342,0	00: 2015: \$16.817.00	0: 2016: \$1	7.385.000	
18	The Company is continuing with a two		· · · · ·	<i>' '</i>	
			•	•	
19	and replace select portions of the DuPon				
20	in its natural gas distribution system in t				
21	None of the subject pipe is "high pr	essure main pipe,"	but rather,	consists of	
22	distribution mains at maximum operation	ing pressures of 60	psi and pip	e diameters	
23	ranging from 1¼ to 4 inches. This progra	am is described furthe	er by Mr. Ko	poczynski ir	
24	his testimony, Exhibit No(DFK-1T).		5	1 2	
25					
	C-4h - H- D44 2014 \$210.000	2015. 0050 000. 201	C. \$1 000 0	00	
26	Cathodic Protection – 2014: \$210,000;				
27	This annual project upgrades, replace		-	•	
28	required to ensure compliance with				
29	Administration regulations regarding pro	per cathodic protection	on of steel n	nains.	
30					
31	Gas Non-Revenue Program - 2014	4: \$1.060.000: 201	5: \$7.664.	000: 2016	
32	\$8,594,000	. 41,000,000, 201	¢7,001,	2010	
33		a of aviating natural	and nining	that requir	
	This annual project will replace section	-		-	
34	replacement to improve the operation of	u u			
35	new revenue. The project includes impre-				
36	improve system operation and/or main	tenance, replacement	t of obsole	te facilities	
37	replacement of main to improve catho	odic performance, ar	nd projects	to improve	
38	public safety and/or improve system relia	-	1 5	1	
39	r some survey und or improve system tent				
	Cag Doinformart 2014. \$122.000	3015. ¢1 000 000. 30	16. \$1 000	000	
40	Gas Reinforcement – 2014: \$122,000; 2				
41	This annual project will reinforce port		-	•	
42	ensure continued reliable service during	g a design day for a	reas that ha	ve had low	
43	pressure problems due to increased grow				
44	identify and install new sections of gas i	•			
45	-	_		-	
40	performance of the gas distribution syst	em. Execution of this	s program o	n an annua	

basis will ensure the continuation of reliable gas service that is of adequate pressure and capacity.

Gas Replacement Street/Highways – 2014: \$1,010,000; 2015: \$4,500,000; 2016: \$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-ofway 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.

11 12 13

17 18

22

29

1

2

3

4 5

6

7

8

9

10

Gas Telemetry – 2014: \$53,000; 2015: \$400,000; 2016: \$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 2014: \$550,000; 2015: \$3,450,000; 2016: \$3,550,000
- The Company is implementing a special cathodic protection program for the purpose
 of finding and addressing isolated steel in its natural gas piping systems.

Overbuilt Pipe Replacement – 2014: \$81,000; 2015: \$900,000; 2016: \$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.

30 Regulator Station Reliability Replacement - 2014: \$59,000; 2015: \$800,000; 31 2016: \$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.

36 37

38

Replace Deteriorating Steel Gas Systems – 2014: \$107,000; 2015: \$1,000,000; 2016: \$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. The primary

1 focus is to address corrosion related pipe issues.

2 3

4

5 6

7

8

9

10 11

12

20

28

34

41

Gas High Pressure (HP) Pipeline Remediation Program – 2016: \$3,000,000

The Gas High Pressure Pipeline Remediation Program will replace and/or relocate sections of high pressure (>100 psig operating pressure) pipelines as determined and prioritized by various asset management programs. Reasons for the replacements might include, but are not limited to: lack of complete construction documents, lack of complete test documentation, pipe quality deficiencies from the manufacturing process, and reducing risk in highly populated areas.

Gas Planned Meter Change-Out (PMC) Program-Capital Replacements – 2014: \$121,000; 2015: \$1,030,000; 2016: \$1,061,000

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 WA, ID, 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.

21 Goldendale HP - 2015: \$3,505,000

The coating on the existing high pressure (HP) main that feeds the town of Goldendale is disbanded and is showing signs of early stages of corrosion. This line has been exposed in several different locations, and all sections have similar characteristics. Avista will replace nearly 3 miles of 4" HP feeding the town of Goldendale with new 4" steel main. Federal code mandates that the coating on steel mains must be properly adhered to the main to protect the pipe from corrosion.

29 NSC Green Street HP Gas Main – 2014: \$9,000

- 30 Due to WSDOT's North-South Corridor project, a relocation of the 20" natural gas 31 main on N Greene St is required. Avista is working with WSDOT and a railroad 32 company to determine a route for the new gas main that will have the least impact to 33 the gas system.
- 35 ERTs Replacement Program 2015: \$402,000; 2016: \$444,000
- 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.
- 42 Washington Natural Gas AMI 2016: \$8,758,000
- This project will replace existing metering system in Washington State with an
 advanced metering system. This Natural gas portion of this project involves adding a
 encoder receiver to the existing natural meter, and not replacing the meter itself. The

1 replacement will install an AMI metering system that will include: encoder receivers, 2 network, back-office systems, and a data repository. The project will take several 3 years to complete. There will be O&M savings that will come from the reduced field operations costs around billing process and the Natural Gas Meter Shop required to 4 operate and maintain the metering systems. O&M savings start in stages as the 5 The first reduction will be in reading and 6 metering technology is deployed. 7 collection costs as areas are completed. These savings in 2016 are estimated to be 8 approximately \$197,000 on a system level of which \$155,000 is allocated to 9 Washington Electric and \$42,000 is allocated to Natural Gas. Please see Company 10 witness Mr. Cox for further details on the electric offsets included in this case.

- 11 12
- Q. What is the net impact to <u>electric</u> rate base for the twelve months ended

13 September 30, 2014, in order to restate capital to an end-of-period basis, as well as the

14 impact of the October through December 31, 2014 additions?

15

A. Electric net rate base for capital investment as of year-end December 31,

16 2014 increased \$35,098,000, from \$1,217,603,000 on an September 30, 2014 AMA basis to

17 \$1,252,701,000 on an December 31, 2014 EOP basis as shown in Table No. 9 below.

18	TABLE NO. 9 Restating Electric Adjustment (000's)							
19				J	Oct-Dec]		
20		Rate Base		Adjust 9.30.14	2014 Capital Additions to			
20		9.30.2014	Adjust 9.30.14	Vintage to	12.31.14	Rate Base		
21	Plant	AMA \$ 2.242.311	to EOP Basis 2 \$ 47,891	12.31.14 EOP	EOP \$ 47,178	12.31.14 EOP \$ 2,337,380		
22	A/D	\$ 2,242,311 (780,322)	(25,928)	۰ - (16,999)	\$ 47,178 8,857	\$ 2,337,380 \$ (814,392)		
	DFIT	(244,386)	(24,438)	(1,463)	-	\$ (270,287)		
23	Rate Base \$1,217,603 \$(2,475) \$(18,462) \$56,035 \$1,252,701 ² The decrease in electric and natural gas rate base from AMA to EOP at September 30, 2014, is primarily due to an increase in accumulated deferred federal income taxes. That increase is the result of Avista							
24	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							
25	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							
26	to change mater				es not expect the	overall estimate		

1	Q. What was the net impact to <u>natural gas</u> rate base for the twelve months
2	ended September 30, 2014, in order to restate capital to a December 31, 2014 end-of-
3	period basis?

A. Natural gas net rate base for capital investment as of twelve-months-ended
September 30, 2014, increased \$2,960,000, from \$218,071,000 on an AMA basis to
\$221,031,000 on a December 31, 2014 EOP basis. Table No. 10 below summarizes the
adjustment included in the case.

		TA	ABLE N	[0.]	10				
	Restating Natural Gas Adjustment (000's)								
				A	Adjust	0	ct-Dec		
				9.	.30.14	201	4 Capital		
	Rate Base			Vir	ntage to	Ade	ditions to	Rate Base	
	9.30.2014	Adjust	9.30.14	12	2.31.14	12	2.31.14	12.31.14	
	AMA	to EOF	P Basis ³]	EOP		EOP	EOP	
Plant	\$ 416,051	\$	11,109	\$	-	\$	5,341	\$ 432,501	
A/D	(139,625)		(5,130)		(3,427)		2,416	(145,766)	
DFIT	(58,355)		(7,504)		155		-	(65,704)	
Rate Base	\$ 218,071	\$	(1,525)	\$	(3,272)	\$	7,757	\$ 221,031	
3 id.									
	-								
Q. What	is the net c	hange	to elect	tric	rate ba	ase f	for 2015	and 2016	

- 17 investment?
- 18 A. Electric net rate base increases \$146,661,000, from \$1,252,701,000 to
 19 \$1,399,362,000 for the 2015/2016 two-year period, as shown in Table No. 11 below.
- 20

				TABLE NO. 11 2015/2016 Planned Electric Investment in (000's)								
					201	15			2	.016		1
					Oct-I				Oct-Dec			1
			A	Adjust	201				2014	2015	2016	
				.30.14	Capi			ljust	Capital	Capital	Capital	
				-	Additio	-		0.14	Additions		Additions	D. D
		Rate B 12.31.14		2.31.15 EOP	12.31 EO			age to	to 2016 AMA	to 2016	to 2016	Rate Ba
	Plant	\$ 2,337		EOP	EO \$	- \$ 214		AMA	AMA \$ -	AMA	AMA \$ 31,861	2016 AM \$ 2,584,1
	A/D		· ·	(68,318				- 4,528)	φ - (1,099)) (5,785)		
	DFIT		,287)	(2,795			,696)	(267)	-	(5,478)		
	Rate Base	\$1,252,		71,113		198) \$223		,795)	\$(1,099)) \$(11,263)		
l											-	
			-	- 4 - 1 -	ongo t	o noture	l and ro	to h	oco for	2015 on	d 2016 /	conital
	Ω	What is	tho n			U 11/11/11/	11 gas 1 a		ase 101	2013 all	u 2010 v	capitai
	Q.	What is	the n	et cn	ange i	io matai i	-					-
	_	What is	the no	et cn	ange i							-
inve	Q. stment?	What is	the n	et cn	ange (-
inve	_	What is	the n	et ch	ange		-					-
inve	_				C		ases \$34	4,390	5,000,	from \$2	21,031,0	000 to
inve	stment?				C		ases \$34	4,390	5,000,	from \$2	21,031,	000 to
	stment? A.		gas n	iet ra	ate ba	se incre						000 to
	stment? A.	Natural	gas n	iet ra	ate ba	se incre						000 to
	stment? A.	Natural	gas n	iet ra	ate ba	se incre r period,	as show					000 to
	stment? A.	Natural	gas n 015/20	net ra 16 tv	ate ba	se incre r period, TABLE	as show	n in	Table 1	No. 12 be		000 to
	stment? A.	Natural	gas n 015/20	net ra 16 tv	ate ba	se incre r period,	as show	n in	Table 1	No. 12 be		000 to
	stment? A.	Natural	gas n 015/20	net ra 16 tv	ate ba	se incre r period, TABLE	as show	n in	Table 1	No. 12 be		000 to
	stment? A.	Natural	gas n 015/20	16 tv 16 tv 15/201	ate ba vo-yea	se incre r period, TABLE red Natural	as show	n in	Table 1	No. 12 be		000 to
	stment? A.	Natural	gas n 015/20	16 tv 16 tv 15/201	ate ba vo-yea 6 Plann 2015	se incre r period, TABLE red Natural	as show	n in	Table 1	No. 12 be		000 to
	stment? A.	Natural	gas n 015/20	16 tv	ate ba vo-yea <u>6 Plann</u> 2015 Oct-Dec	se incre r period, TABLE red Natural	as show NO. 12 Gas Inves	on in	Table 1	No. 12 be	2016	000 to
	stment? A.	Natural for the 20	gas n 015/20 20 Adju 9.30.	net ra 16 tv 15/201	ate ba vo-yea <u>6 Plann</u> 2015 Oct-Dec 2014	se incre r period, TABLE red Natural	as show NO. 12 Gas Inves Adjust 9.30.14	oc	Table 1 t in (000' 201 ct-Dec 2014	No. 12 be	2016 Capital	000 to
	stment? A.	Natural for the 20	gas n 015/20 20 Adju 9.30. Vintag	net ra 16 tv 15/201 15/201	ate ba vo-yea <u>6 Plann</u> 2015 Oct-Dec 2014 Capital Additions to	se incre r period, TABLE ed Natural 2015 Capital Additions	Adjust 9.30.14 Vintage to	o C	Table I t in (000' 201 ct-Dec 2014 'apital	No. 12 be s) 6 2015 Capital	2016 Capital Additions	
	stment? A.	Natural for the 20 Rate Base 12.31.14	gas n 015/20 20 Adju 9.30. Vintag 12.31	16 tw 16 tw 15/201	ate ba vo-yea <u>6 Plann</u> <u>2015</u> Oct-Dec 2014 Capital Additions to 12.31.15	se incre r period, TABLE red Natural	Adjust 9.30.14 Vintage t 2016	o C	Table I t in (000' 201 2014 2apital litions to 2	No. 12 be s) 6 2015 Capital Additions to	2016 Capital Additions to 2016	Rate Base
\$255	stment? A. 5,427,000	Natural for the 20 Rate Base 12.31.14 EOP	gas n 015/20 20 Adju 9.30. Vintag 12.31 EO	15/201 15/201 15/201 15/201	ate ba vo-yea <u>6 Plann</u> <u>2015</u> Oct-Dec 2014 Capital Additions to 12.31.15 EOP	se incre r period, TABLE red Natural 2015 Capital Additions to 2015 EOP	Adjust 9.30.14 Vintage t 2016 AMA	o Co Add	Table I <u>t in (000'</u> 201 ct-Dec 2014 Capital litions to 2 6 AMA	No. 12 be s) 6 2015 Capital Additions to 2016 AMA	2016 Capital Additions to 2016 AMA	Rate Base 2016 AMA
\$255 	stment? A. 5,427,000	Natural for the 20 Rate Base 12.31.14 EOP \$ 432,501	gas n 015/20 20 Adju 9.30. Vintag 12.31 EO \$	net ra 16 tv 15/201 15/201 14 4 ge to .15 P	ate ba vo-yea <u>6 Plann</u> <u>2015</u> Oct-Dec 2014 Capital Additions to 12.31.15 EOP \$ -	se incre r period, TABLE red Natural 2015 Capital Additions to 2015 EOP \$ 41,935	Adjust 9.30.14 Vintage to 2016 AMA \$ -	oc a co co co co co co co co co co co co co	Table I t in (000' 201 ct-Dec 2014 Capital litions to 2 6 AMA	No. 12 be s) 6 2015 Capital Additions to 2016 AMA \$ -	2016 Capital Additions to 2016 AMA \$ 14,330	Rate Bass 2016 AMA \$ 488,766
\$255	ant	Natural for the 20 Rate Base 12.31.14 EOP \$ 432,501 \$ (145,766)	gas n 015/20 20 Adju 9.30. Vintag 12.31 EO \$ (13	et ra 16 tv 15/201 15/201 .15 P - : .713)	ate ba vo-yea <u>6 Plann</u> <u>2015</u> Oct-Dec 2014 Capital Additions to 12.31.15 EOP	se incre r period, TABLE red Natural 2015 Capital Additions to 2015 EOP \$ 41,935) 3,984	Adjust 9.30.14 Vintage to 2016 AMA \$ - (6,857	o Co Add 201 \$7)	Table I <u>t in (000'</u> 201 ct-Dec 2014 Capital litions to 2 6 AMA	No. 12 be s) 6 2015 Capital Additions to 2016 AMA \$ - (1,486)	2016 Capital Additions to 2016 AMA \$ 14,330 1,913	Rate Base 2016 AMA \$ 488,766 \$ (162,635
\$255 Pl: DI	stment? A. 5,427,000	Natural for the 20 Rate Base 12.31.14 EOP \$ 432,501	gas n 015/20 20 Adju 9.30. Vintag 12.31 EO \$ (13 (1	net ra 16 tv 15/201 15/201 14 4 ge to .15 P	ate ba vo-yea .6 Plann 2015 Oct-Dec 2014 Capital Additions to 12.31.15 EOP \$ - (473 -	se incre r period, TABLE red Natural 2015 Capital Additions to 2015 EOP \$ 41,935	Adjust 9.30.14 Vintage to 2016 AMA \$ - (6,857	o Co Add 201 \$ 7) 2)	Table I t in (000' 201 ct-Dec 2014 Capital litions to 2 6 AMA	No. 12 be s) 6 2015 Capital Additions to 2016 AMA \$ - (1,486) (1,409)	2016 Capital Additions to 2016 AMA \$ 14,330	Rate Bass 2016 AMA \$ 488,766

21 **2016 Electric and Natural gas pro forma adjustments?**

1

2

3

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.

4

Q. How were the offsets determined for the October 2014 through 5 **December 2016 plant investment?**

6 A. Each capital addition was analyzed to determine any offsets (e.g., reduced 7 O&M costs, reduced load losses, etc.). Maintenance records were reviewed to determine 8 whether any specific maintenance costs were incurred in the test period that would be 9 reduced or eliminated by the investment at the facility. For transmission projects, analyses 10 were conducted to determine the amount of potential load loss savings that would be 11 achieved. Those costs were quantified and included as a reduction to O&M costs in the 12 O&M Savings pro forma adjustment included by Ms. Smith in the revenue requirement as a 13 part of her Pro Forma Cross Check Study.

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

18

19

Q. What is the rationale behind the removal of capital expenditures for connecting new customers in the Pro Forma Cross Check Study?

20 A. The capital expenditures for the period October 2014 through December 2016 21 exclude distribution-related capital expenditures that are associated with connecting new 22 customers to the Company's system. Excluding these capital expenditures from the Pro 23 Forma Cross Check Study recognizes the fact that new customers provide incremental

1 revenue that helps offset the costs associated with these distribution-related capital additions. 2 Retail revenues for the Pro Forma Cross-Check Study are based on historical test period 3 loads, and do not include revenues from new customers beyond the test period.

- 4
- 5

6

ADVANCED METER INFRASTRUCTURE (AMI) IV.

0. Please briefly describe the Electric and Natural Gas AMI projects.

7 The Company has entered the initial planning phase of a program to deploy A. 8 advanced meters for its electric and natural gas customers in Washington. The project, which 9 will encompass approximately six years, beginning in 2015, will install equipment and 10 deploy advanced meters to approximately 253,000 electric customers, and 155,000 natural 11 gas customers. Through the Company's advanced meter project, a complete replacement of 12 the existing electric meters will occur, and these meters will be replaced with a new digital 13 advanced meter. Existing natural gas meters will be upgraded with a new digital 14 communicating module referred to as an "Encoder Receiver Transmitter" or "ERT".

15

О. Has the Company included any Pro Forma transfers-to-plant for AMI in

- the adjustments above? 16
- Yes. The Company has included $$32.2^6$ million as shown in Table No. 4 17 A. above. Company witness Mr. Kopczynski discusses this project within his testimony. 18
- 19
- О. Please describe the life expectancy of the AMI Meters and 20 infrastructure.

⁶ The approximate \$32.2 million relates to gross plant on an End of Period basis as of December 31, 2016. The amount reflected in this case is the AMA level of capital totaling \$19.06 million.

1 A. AMI meters are expected to have a 15 year life. The Company is proposing in 2 this case that a 15 year life be used instead of the current approved rate of approximately 29 3 years on Washington standard meters. The backend equipment (hardware and software) that 4 will be supporting the AMI meters has a lifetime expectancy of normal hardware and 5 software, and will be depreciated in accordance with the Company's most recent 6 depreciation study. 7 Upon installation of the new electric distribution meters, will the existing **O**. 8 electric meters be fully depreciated on Avista's books? 9 A. No. As of December 31, 2015, prior to the installation of new the AMI 10 meters, the Company will have approximately \$20.2 million on its books related to the net 11 book value of its existing electric distribution meters. 12 Q. How does the Company propose to account for the existing meters? 13 A. The Company is requesting approval in this case, effective January 1, 2016 to 14 transfer the net book value of the existing meters from electric distribution plant, and record 15 as a regulatory asset in FERC Account 182.3 – Other Regulatory Assets, for regulatory purposes. The net impact to net rate base is therefore \$0.⁷ 16 17 The Company is proposing to amortize this regulatory asset balance over a ten-year 18 period through FERC Account 407, starting in January of 2016, or approximately \$2.0 19 million in amortization expense per year. The net impact to expense, therefore, is an 20 increase in amortization expense of \$2.0 million, offset by a reduction in depreciation

⁷ These rate base adjustments reflect a transfer of assets from one category to another therefore; no ADFIT was calculated on the adjustments to move these from traditional rate base to a regulatory asset. As these meters are retired (upon installation of the new meters), appropriate ADFIT will be recorded.

expense of \$900,000 (related to the reduction in net plant), for an overall increase in depreciation/amortization expense of \$1.1 million.

1

2

3	For this case, Ms. Smith's Pro Forma Cross Check Study has accounted for the
4	reduction in net plant and depreciation expense in adjustment 4.02 - Electric Pro Forma
5	2016 Capital Adjustment, and included the regulatory asset and amortization expense in
6	adjustment 4.03 - Meter Retirement Deferral. Ms. Andrews has incorporated the rate base
7	and amortization of these meters within her Attrition study at Exhibit No(EMA-2), pages
8	4-5, column [C]. The Company is requesting that the Commission to issue an order
9	approving the regulatory asset and the depreciation rate associated with the AMI project.
10	
11	V. COMPLIANCE WITH PAST COMMISSION ORDER ON CAPITAL
12	EXPENDITURE REPORTING
13	Q. Please summarize the Company's compliance with the most recent
14	Commission order regarding capital addition compliance reports?
15	A. In Order No. 05, Dockets UE-140188 and UG-140189, paragraph 50, the
16	Commission directed the Company to do the following:
17 18 19 20 21 22 23	"Avista agrees to provide semi-annual reporting of 2014 and 2015 capital expenditures with actual data by expenditure request, in the categories provided in its pro forma "cross check" plant adjustments. The settling parties agree to meet no later than January 31, 2015, to establish any additional details of the capital reporting requirements."
24	The Company conferred with all parties on January 26, 2015, to discuss the details of
25	the capital reporting requirements. Avista provided a proposal that included additional
26	information, and the detail by expenditure request, a construction work in progress (CWIP)

1	roll-forward, and the 2013 -2015 expenditure request detail for capital spend and transfers-
2	to-plant. The parties agreed that Avista will add the business case description, as well as the
3	service and jurisdiction to the report for transfers-to-plant. Avista will also breakout the
4	actual and budgeted data provided in the CWIP roll-forward. Avista will issue its first
5	Capital Compliance Report on March 1, 2015, for the year ended December 31, 2014, and
6	will file the additional required reports on September 1, 2015, and March 1, 2016.
7	
8	VI. 2017 CAPITAL ADDITIONS
9	Q. Why has Avista included information regarding 2017 capital additions?
10	A. The Company has included 2017 information regarding capital additions to
11	provide an indication of the Company's ongoing capital investments beyond December 31,
12	2016. The 2017 plant additions have been included for information purposes only and have
13	not otherwise been included in the Company's revenue increase request. As discussed
14	further in Ms. Andrews and Mr. Thies' testimony, the Company's plans call for significant
15	capital expenditure requirements over the next five years.
16	Q. Please summarize the planned Capital Additions for 2017.
17	A. The capital investment for 2017 was derived as a part of the capital budget
18	process that was completed in the fall of 2014. The current forecasted capital spend for 2017
19	has been approved by the Board of Directors. Table No. 13 below, summarizes the gross
20	capital additions by functional group. Additional details are provided in Exhibit NoKKS-
21	4.
22	

1	TABLE NO. 13	
2	Capital Additions (System)	2017
	Functional Group:	\$ (000's)
3	Generation/Production General Plant	\$ 67,213 21,060
4	Natural Gas Distribution	45,800
	Gas Underground Storage: Transportation	1,117 7,700
5	Enterprise Technology Transmission	44,202 41,412
6	Distribution	94,799
		\$ 323,303
7	Idaho/Oregon Direct Capital Additions	\$ 9,275
8		
0	Total Capital Additions	\$ 332,578
9		
10	The items listed in this table are for the same types of	projects as those described for
11	the October 1, 2014 through December 31, 2016 additions disc	ussed earlier in my testimony.
12	Q. What is the net increase in Washington el	ectric <u>rate base</u> from AMA
13	2016 to AMA 2017 related to 2017 capital expenditures?	
14	A. Washington electric <u>rate base</u> will increase \$13	5,598,000 from the December
15	31, 2016 AMA balance of \$1,399,362,000 to \$1,534,960,000	at AMA December 31, 2017.
16	This adjustment has two components. First, the Decemb	er 31, 2016 AMA net plant
17	balances, net of ADFIT, that were included in the Pro Form	a Cross Check Analysis were
18	adjusted to a December 31, 2017 AMA basis. Next, the 201	7 additions together with the
19	associated A/D and ADFIT were included to arrive at Decemb	er 31, 2017 AMA rate base.
20	Q. What is the net increase in Washington natu	ral gas <u>rate base</u> from AMA
21	2016 to AMA 2017 related to 2017 capital expenditures?	
22	A. Washington natural gas <u>rate base</u> increases \$2	6,415,000 from the December
23	31, 2016 AMA balance of \$255,426,000 to \$281,841,000 at A	MA December 31, 2017. This
	Direct Testimony of Karen K. Schuh	

Avista Corporation Docket Nos. UE-15_____ & UG-15_____

Page 30

5	Q. Does this conclude your pre-filed direct testimony?
4	and ADFIT were included to arrive at December 31, 2017 AMA rate base.
3	December 31, 2017 AMA basis. Next the 2017 additions together with the associated A/D
2	of ADFIT, that were included in the Pro Forma Cross Check Analysis were adjusted to a
1	adjustment has two components. First, the December 31, 2016 AMA net plant balances, net

6 A. Yes, it does.