

ATTACHMENT 1

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-170485

DOCKET NO. UG-170486

(consolidated)

AVISTA CORPORATION

COMPLIANCE FILING

WORKPAPERS SUPPORTING COMPLIANCE TARIFFS – ELECTRIC

**AVISTA UTILITIES
WASHINGTON ELECTRIC
PROPOSED INCREASE BY SERVICE SCHEDULE
12 MONTHS ENDED DECEMBER 31, 2016
(000s of Dollars)**

No.	Type of Service	Schedule Number	Base Tariff Revenue Under Present Rates(1)	Proposed General Increase	Base Tariff Revenue Under Proposed Rates(1)	Base Tariff Percent Increase	Total Billed Revenue at Present Rates (2)	Total General Increase	Percent Increase on Billed Revenue
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(i)	(j)	
1	Residential	1/2	\$209,489	\$4,904	\$214,393	2.3%	\$227,178	\$4,904	2.2%
2	General Service	11/12	\$73,766	\$1,291	\$75,057	1.8%	\$77,451	\$1,291	1.7%
3	Large General Service	21/22	\$126,766	\$2,775	\$129,541	2.2%	\$133,184	\$2,775	2.1%
4	Extra Large General Service	25	\$64,348	\$1,405	\$65,753	2.2%	\$67,050	\$1,405	2.1%
5	Pumping Service	30/31/32	\$10,894	\$238	\$11,132	2.2%	\$11,443	\$238	2.1%
6	Street & Area Lights	41-48	\$6,871	\$150	\$7,021	2.2%	\$7,223	\$150	2.1%
7	Total		\$492,134	\$10,763	\$502,897	2.2%	\$523,529	\$10,763	2.1%

(1) Excludes all present rate adjustments: Schedule 59 (BPA Residential Exchange), Schedule 75 (Decoupling), Schedule 91 (DSM), Schedule 92 (LIRAP), Schedule 93 (ERM), and Schedule 98 (REC Revenue).

(2) Includes all present rate adjustments: Schedule 59 (BPA Residential Exchange), Schedule 75 (Decoupling), Schedule 91 (DSM), Schedule 92 (LIRAP), Schedule 93 (ERM), and Schedule 98 (REC Revenue).

**AVISTA UTILITIES
WASHINGTON ELECTRIC
PRESENT AND PROPOSED RATE COMPONENTS BY SCHEDULE**

May 1, 2018 Increase

Type of Service (a)	Base Tariff Sch. Rate (b)	Present Other Adj. (1) (c)	Present Billing Rate (d)	General Rate Inc/Dec (e)	Proposed Billing Rate (g)	Proposed Base Tariff Rate (h)
<u>Residential Service - Schedule 1</u>						
Basic Charge	\$8.50		\$8.50	\$0.50	\$9.00	\$9.00 ✓
Energy Charge:						
First 800 kWhs	\$0.07390	\$0.00756	\$0.08146	\$0.00143	\$0.08289	\$0.07533 ✓
800 - 1,500 kWhs	\$0.08598	\$0.00756	\$0.09354	\$0.00167	\$0.09521	\$0.08765 ✓
All over 1,500 kWhs	\$0.10080	\$0.00756	\$0.10836	\$0.00196	\$0.11032	\$0.10276 ✓
<u>General Services - Schedule 11</u>						
Basic Charge	\$18.00		\$18.00	\$2.00	\$20.00	\$20.00 ✓
Energy Charge:						
First 3,650 kWhs	\$0.11293	\$0.00598	\$0.11891	\$0.00056	\$0.11947	\$0.11349 ✓
All over 3,650 kWhs	\$0.08298	\$0.00598	\$0.08896	\$0.00043	\$0.08939	\$0.08341 ✓
Demand Charge:						
20 kW or less	no charge		no charge	no charge		no charge
Over 20 kW	\$6.00/kW		\$6.00/kW	\$0.50/kW	\$6.50/kW	\$6.50/kW ✓
Minimums:	\$15.00 Single Phase Service \$25.35 Three Phase Service			\$15.00 Single Phase Service \$25.35 Three Phase Service		
<u>Large General Service - Schedule 21</u>						
Energy Charge:						
First 250,000 kWhs	\$0.07089	\$0.00457	\$0.07546	\$0.00100	\$0.07646	\$0.07189 ✓
All over 250,000 kWhs	\$0.06340	\$0.00457	\$0.06797	\$0.00090	\$0.06887	\$0.06430 ✓
Demand Charge:						
50 kW or less	\$500.00		\$500.00	\$0.00	\$500.00	\$500.00
Over 50 kW	\$6.00/kW		\$6.00/kW	\$0.50/kW	\$6.50/kW	\$6.50/kW ✓
Primary Voltage Discount	\$0.20/kW		\$0.20/kW		\$0.20/kW	\$0.20/kW
<u>Extra Large General Service - Schedule 25</u>						
Energy Charge:						
First 500,000 kWhs	\$0.05505	\$0.00244	\$0.05749	\$0.00000	\$0.05749	\$0.05505
500,000 - 6,000,000 kWhs	\$0.04953	\$0.00244	\$0.05197	\$0.00000	\$0.05197	\$0.04953
All over 6,000,000 kWhs	\$0.04235	\$0.00175	\$0.04410	\$0.00000	\$0.04410	\$0.04235
Demand Charge:						
3,000 kva or less	\$21,000		\$21,000	\$3,000	\$24,000	\$24,000 ✓
Over 3,000 kva	\$6.00/kva		\$6.00/kva	\$0.50/kva	\$6.50/kva	\$6.50/kva ✓
Primary Volt. Discount						
11 - 60 kv	\$0.20/kW		\$0.20/kW		\$0.20/kW	\$0.20/kW
60 - 115 kv	\$1.10/kW		\$1.10/kW		\$1.10/kW	\$1.10/kW
115 or higher kv	\$1.40/kW		\$1.40/kW		\$1.40/kW	\$1.40/kW
Annual Minimum	Present:	\$829,950			\$829,950	
<u>Pumping Service - Schedule 31</u>						
Basic Charge	\$18.00		\$18.00	\$2.00	\$20.00	\$20.00 ✓
Energy Charge:						
First 85 kW/kWh	\$0.09546	\$0.00416	\$0.09962	\$0.00166	\$0.10128	\$0.09712 ✓
Next 80 kW/kWh	\$0.09546	\$0.00416	\$0.09962	\$0.00166	\$0.10128	\$0.09712 ✓
All additional kWhs	\$0.06818	\$0.00416	\$0.07234	\$0.00118	\$0.07352	\$0.06936 ✓

(1) Includes all present rate adjustments: Schedule 59 (BPA Residential Exchange), Schedule 75 (Decoupling), Schedule 91 Schedule 92 (LIRAP), Schedule 93 (ERM), and Schedule 98 (REC Revenue).

Avista
TIB Rate Calculation
Schedule 42

	Engineering Estimate of Cost	Capital Cost Recovery Factor	Annual Capital Component Cost	Monthly Capital Component Cost
TIB Rate Credit 70W LED	\$476.77	13.156%	\$62.72	\$5.23 ✓
TIB Rate Credit 107W LED	\$504.77	13.156%	\$66.41	\$5.53 ✓
TIB Rate Credit 248W LED	\$722.77	13.156%	\$95.09	\$7.92 ✓

	<u>70W</u>	<u>107W</u>	<u>248W</u>
Philips Cobrahead LED	\$ 170.00	\$ 198.00	\$ 416.00
Overheads	\$ 135.80	\$ 135.80	\$ 135.80
Labor	\$ 78.83	\$ 78.83	\$ 78.83
Equipment	\$ 66.25	\$ 66.25	\$ 66.25
Photocell	\$ 18.78	\$ 18.78	\$ 18.78
Bonding Clamp	\$ 7.11	\$ 7.11	\$ 7.11
Total Cost	\$ 476.77	\$ 504.77	\$ 722.77

Cost of Capital				Source
Capital Component	Capital Structure	Component Cost	Weighted Cost	
Long Term Debt	51.500%	5.2000%	2.678%	Settlement Stipulation
Preferred Equity	0.000%	0.0000%	0.000%	Settlement Stipulation
Common Equity	48.500%	9.5000%	4.608%	Settlement Stipulation
Total	100.00%		7.286%	

Grossed-up Rate of Return	
Tax Gross-up Factor	1.613
Weighted ROE * Tax Gross-up	1.613 * 4.608% = 7.431%
Long Term Debt	2.678%
Preferred Equity * Tax Gross-up	1.613 * 0.000% = 0.000%
Grossed-up Rate of Return	10.109%

Account Number	Plant in Service	Test Year Depreciation Expense	Effective Depreciation Rate
373 - Street Lighting	\$28,183,000	\$819,000	2.91%
Revenue Conversion Factor (Before FIT)			0.953853
Grossed-Up Depreciation Rate			3.047%

*From Cost of Service (Knox)

Capital Recovery Factor 13.156%

Cost of Capital			
Capital Component	Capital Structure	Component Cost	Weighted Cost
Total Debt	51.500%	5.6200%	2.894%
Preferred Equity	0.000%	0.0000%	0.000%
Common Equity	48.500%	9.5000%	4.608%
Total	100.00%		7.502%

Grossed-up Rate of Return	
Tax Gross-up Factor	1.328
Weighted ROE * Tax Gross-up	1.328 * 4.608% = 6.118%
Total Debt	2.894%
Preferred Equity * Tax Gross-up	1.328 * 0.000% = 0.000%
Grossed-up Rate of Return	9.012%

Account Number	Plant in Service	Test Year Depreciation Expense	Effective Depreciation Rate
373 - Street Lighting	\$40,293,000	\$1,380,000	3.425%
Revenue Conversion Factor (Before FIT)			0.953323
Grossed-Up Depreciation Rate			3.593%

*From Cost of Service (Knox)

Capital Recovery Factor 12.605% ✓

AVISTA UTILITIES PROPOSED COST OF CAPITAL WASHINGTON ELECTRIC			
Proposed Capital Structure*			
Component	Capital Structure	Cost	Weighted Cost
Total Debt	51.5%	5.62%	2.89%
Common	48.5%	9.50%	4.61%
Total	<u>100.00%</u>		<u>7.50%</u>

* Based on rate year capital structure and cost of debt.

**AVISTA UTILITIES
REVENUE CONVERSION FACTOR
WASHINGTON ELECTRIC
TWELVE MONTHS ENDED DECEMBER 31, 2016**

<u>Line No.</u>	<u>Description</u>	<u>Factor</u>
1	Revenues	1.000000
	Expense:	<i>FILED</i>
2	Uncollectibles (1)	0.006183 0.006578
3	Commission Fees	0.002000
4	Washington Excise Tax (1)	0.038495 0.038479
6	Total Expense	<u>0.046677</u>
7	Net Operating Income Before FIT	0.953323
8	Federal Income Tax @ 35%	<u>0.333663</u>
9	REVENUE CONVERSION FACTOR	<u><u>0.619660</u></u>

(1) Revised to reflect Uncollectible correction as provided in Avista's response to Staff_DR_034 -Attachment A (page 8 of 9). The effective Uncollectible rate is also a component within the calculation of the Washington Excise Tax Rate.

**AVISTA UTILITIES
REVENUE CONVERSION FACTOR
WASHINGTON ELECTRIC
TWELVE MONTHS ENDED DECEMBER 31, 2016
with Tax Reform**

REVISED TO REFLECT TCJA

<u>Line No.</u>	<u>Description</u>	<u>Factor</u>
1	Revenues	1.000000
	Expense:	<i>FILED</i>
2	Uncollectibles (1)	0.006183 0.006578
3	Commission Fees	0.002000
4	Washington Excise Tax (1)	0.038495 0.038479
6	Total Expense	<u>0.046677</u>
7	Net Operating Income Before FIT	0.953323
8	Federal Income Tax @ 21%	<u>0.200198</u>
9	REVENUE CONVERSION FACTOR	<u><u>0.753125</u></u>

(1) Revised to reflect Uncollectible correction as provided in Avista's response to Staff_DR_034 -Attachment A (page 8 of 9). The effective Uncollectible rate is also a component within the calculation of the Washington Excise Tax Rate.

**AVISTA UTILITIES
WASHINGTON ELECTRIC
STREET & AREA LIGHT REVENUE UNDER PRESENT & PROPOSED RATES
12 MONTHS ENDED DECEMBER 31, 2016**

	<u>Present Rates(1)</u>		<u>Proposed Rates(2)</u>		<u>% Revenue Change</u>	
	<u>Monthly Revenue</u>	<u>Annual Revenue</u>	<u>Monthly Revenue</u>	<u>Annual Revenue</u>	<u>Base Rates</u>	<u>Billing Rates</u>
Schedule 41	\$ 1,357	\$ 16,281	\$ 1,386	\$ 16,629	2.1%	0.0%
Schedule 42	378,023	4,536,279	386,333	4,636,000	2.2%	0.0%
Schedule 44	3,384	40,608	3,457	41,480	2.1%	0.0%
Schedule 45	4,271	51,255	4,361	52,338	2.1%	0.0%
Schedule 46	10,313	123,755	10,533	126,401	2.1%	0.0%
Schedule 47	111,030	1,332,364	113,408	1,360,899	2.1%	0.0%
Schedule 48	64,161	769,926	65,535	786,425	2.1%	0.0%
Total	\$ 572,539	\$ 6,870,468	\$ 585,014	\$ 7,020,171	2.2%	0.0%
Sch 46 Per kWh Rate	\$	\$ 0.10299	\$	\$ 0.10519	✓	

(1) from PDE-E-12/14

(2) from PDE-E-13/14

Schedule 47 Rates

WASHINGTON Area Lights

2.1%

Fixture Type	Pole Facility	Size	Sched	Pres. Rates		Prop. Rates	
				047	048	047	048
Sodium Vapor	Granville w/16' decorative pole	100W	HAG	\$29.35	\$29.35	\$29.98	\$29.98
Sodium Vapor	Floodlight on existing standard	250W	HAI	\$21.72	\$21.72	\$22.18	\$22.18
Sodium Vapor	Kim light w/25' fiberglass pole	100W	HAI	\$28.35	\$28.35	\$28.96	\$28.96
Sodium Vapor	Post Top w/16' decorative pole	100W	HAP	\$27.99	\$27.99	\$28.59	\$28.59
Sodium Vapor	on existing standard	100W	HPA	\$13.46	\$13.46	\$13.75	\$13.75
Sodium Vapor	on existing standard	200W	HPB	\$19.12	\$19.12	\$19.53	\$19.53
Sodium Vapor	on existing standard	400W	HPC	\$26.41	\$26.41	\$26.98	\$26.98
Sodium Vapor	35' wood pole	200W	HPD	\$26.56	\$26.56	\$27.13	\$27.13
Sodium Vapor	35' wood pole	100W	HPE	\$19.72	\$19.72	\$20.14	\$20.14
Sodium Vapor	35' wood pole	400W	HPG	\$33.94	\$33.94	\$34.67	\$34.67
Sodium Vapor	30' steel pole	200W	HPL	\$33.36	\$33.36	\$34.07	\$34.07
Sodium Vapor	25' steel pole	200W	HPO	\$28.89	\$28.89	\$29.51	\$29.51
Sodium Vapor	20' fiberglass pole	100W	HPS	\$19.72	\$19.72	\$20.14	\$20.14
Sodium Vapor	30' steel pole w/2 arms	200W	HPY	\$56.52	\$56.52	\$57.73	\$57.73
Mercury Vapor	on existing standard	7000	MVA	\$15.49	\$15.49	\$15.82	\$15.82
Mercury Vapor	on existing standard	10000	MVB	\$18.55	\$18.55	\$18.95	\$18.95
Mercury Vapor	on existing standard	20000	MVC	\$26.39	\$26.39	\$26.95	\$26.95
Mercury Vapor	30' wood pole	7000	MVD	\$19.33	\$19.33	\$19.74	\$19.74
Mercury Vapor	30' wood pole	10000	MVE	\$22.44	\$22.44	\$22.92	\$22.92
Mercury Vapor	30' wood pole	20000	MVF	\$30.29	\$30.29	\$30.94	\$30.94
Mercury Vapor	25' steel	7000	MVG	\$25.19	\$25.19	\$25.73	\$25.73
Mercury Vapor	25' steel	10000	MVH	\$28.32	\$28.32	\$28.93	\$28.93
Mercury Vapor	25' steel	20000	MVI	\$36.13	\$36.13	\$36.90	\$36.90
Mercury Vapor	30' steel	7000	MVJ	\$26.42	\$26.42	\$26.99	\$26.99
Mercury Vapor	30' steel	10000	MVK	\$29.53	\$29.53	\$30.16	\$30.16
Mercury Vapor	30' steel	20000	MVL	\$37.35	\$37.35	\$38.15	\$38.15
Mercury Vapor	25' aluminum	7000	MVM	\$27.27	\$27.27	\$27.85	\$27.85
Mercury Vapor	25' aluminum	10000	MVN	\$30.38	\$30.38	\$31.03	\$31.03
Mercury Vapor	25' aluminum	20000	MVO	\$38.18	\$38.18	\$39.00	\$39.00
Mercury Vapor	Special	7000	MVV	\$7.75	\$7.75	\$7.91	\$7.91
none	35' wood pole	n/a	PA	\$6.24	\$6.24	\$6.37	\$6.37
none	55' wood pole	n/a	PB	\$11.91	\$11.91	\$12.16	\$12.16
LED	on existing standard	70W	HPAL	\$13.46	\$13.46	\$13.75	\$13.75
LED	on existing standard	107W	HPBL	\$19.12	\$19.12	\$19.53	\$19.53
LED	20' fiberglass pole	70W	HPSL	\$19.72	\$19.72	\$20.14	\$20.14
LED	35' wood pole	70W	HPEL	\$19.72	\$19.72	\$20.14	\$20.14
LED	35' wood pole	107W	HPDL	\$26.56	\$26.56	\$27.13	\$27.13
LED	25' steel pole	107W	HPOL	\$28.89	\$28.89	\$29.51	\$29.51
LED	30' steel pole	107W	HPLL	\$33.36	\$33.36	\$34.07	\$34.07
LED	30' steel pole w/2 arms	107W	HPYL	\$56.52	\$56.52	\$57.73	\$57.73
LED	Granville w/16' decorative pole	70W	HAGL	\$29.35	\$29.35	\$29.98	\$29.98
LED	Post Top w/16' decorative pole	70W	HAPL	\$27.99	\$27.99	\$28.59	\$28.59
LED	Kim-light w/25' fiberglass-pole	70W	HAIL	\$28.35	\$28.35	\$28.96	\$28.96
LED	on existing standard	248W	HPCL	\$26.98	\$26.98	\$27.61	\$27.61
LED	35' wood pole	248W	HPGL	\$34.67	\$34.67	\$35.40	\$35.40