

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-24 _____

DOCKET NO. UG-24 _____

EXH. GDF-2

GRANT D. FORSYTH

REPRESENTING AVISTA CORPORATION

Electric and Natural Gas Growth Calculations and Method Comparison

Electric Growth Calculations

Category	Slope 2014-2020	Delta Average 2015-2020
Adjusted Operating Expenses	5,352.0	5,945.0
Total Depreciation/Amortization	5,774.3	5,859.7
Adjusted Taxes Other Than Income Tax	1,180.0	1,186.0
Net Plant After Deferred Income Tax	79,127.7	75,813.2
PIS Intangible	18,093.5	18,959.7
PIS Production	33,847.5	31,881.0
PIS Transmission	27,469.8	28,130.5
PIS Distribution	57,694.6	56,429.3
PIS General	15,483.5	15,144.3
AD Intangible	8,354.7	8,728.2
AD Production	11,582.6	12,872.0
AD Transmission	4,607.6	5,011.5
AD Distribution	17,817.9	16,697.2
AD General	5,077.4	4,971.7
Deferred Taxes	(26,020.9)	(26,451.2)

Electric Regression Calculations (Used For Comparison)

Category	Slope 2014-2020	Constant 2014-2020
Adjusted Operating Expenses	5,352.0	124,253.5
Total Depreciation/Amortization	5,774.3	59,854.0
Adjusted Taxes Other Than Income Tax	1,180.0	38,277.7
Net Plant After Deferred Income Tax	79,127.7	1,130,548.1
PIS Intangible	18,093.5	96,741.0
PIS Production	33,847.5	723,309.0
PIS Transmission	27,469.8	344,829.7
PIS Distribution	57,694.6	790,206.1
PIS General	15,483.5	182,785.1
AD Intangible	8,354.7	7,483.4
AD Production	11,582.6	314,028.4
AD Transmission	4,607.6	119,782.6
AD Distribution	17,817.9	239,682.9
AD General	5,077.4	63,373.0
Deferred Taxes	(26,020.9)	(262,972.6)

2020 Value	Average Delta Growth	Regression	Regression Less Average
167,561.0	3.55%	3.19%	-0.35%
99,614.0	5.88%	5.80%	-0.09%
45,765.0	2.59%	2.58%	-0.01%
1,669,383.0	4.54%	4.74%	0.20%
216,378.0	8.76%	8.36%	-0.40%
937,387.0	3.40%	3.61%	0.21%
540,754.0	5.20%	5.08%	-0.12%
1,181,371.0	4.78%	4.88%	0.11%
287,733.0	5.26%	5.38%	0.12%
72,611.0	12.02%	11.51%	-0.51%
402,763.0	3.20%	2.88%	-0.32%
153,938.0	3.26%	2.99%	-0.26%
352,905.0	4.73%	5.05%	0.32%
95,550.0	5.20%	5.31%	0.11%
(416,473.0)	6.35%	6.25%	-0.10%

Natural Gas Growth Calculations and Method Comparison

Category	Slope 2014-2020	Delta Average 2015-2020
Adjusted Operating Expenses	1,620.1	1,868.5
Total Depreciation/Amortization	1,642.3	1,628.5
Adjusted Taxes Other Than Income Tax	393.5	316.8
Net Plant After Deferred Income Tax	28,810.3	28,229.5
PIS Storage	970.2	978.0
PIS Distribution	29,622.5	28,694.2
PIS General	16,089.9	15,933.0
AD Storage	412.9	417.2
AD Distribution	6,199.1	5,688.2
AD General	4,819.5	5,002.7
Deferred Taxes	(6,440.8)	(6,267.7)

Natural Gas Regression Calculations (Used For Comparison)

Category	Slope 2014-2020	Constant 2014-2020
Adjusted Operating Expenses	1,620.1	30,059.4
Total Depreciation/Amortization	1,642.3	11,737.0
Adjusted Taxes Other Than Income Tax	393.5	5,030.0
Net Plant After Deferred Income Tax	28,810.3	184,709.1
PIS Storage	970.2	23,864.9
PIS Distribution	29,622.5	304,649.7
PIS General	16,089.9	38,680.3
AD Storage	412.9	9,045.3
AD Distribution	6,199.1	110,279.4
AD General	4,819.5	10,391.7
Deferred Taxes	(6,440.8)	(52,769.3)

2020 Value	Average Delta Growth	Regression	Regression Less Average
42,735.0	4.37%	3.79%	-0.58%
23,075.0	7.06%	7.12%	0.06%
7,424.0	4.27%	5.30%	1.03%
395,278.0	7.14%	7.29%	0.15%
31,103.0	3.14%	3.12%	-0.03%
510,059.0	5.63%	5.81%	0.18%
154,767.0	10.29%	10.40%	0.10%
12,024.0	3.47%	3.43%	-0.04%
148,924.0	3.82%	4.16%	0.34%
47,445.0	10.54%	10.16%	-0.39%
(92,258.0)	6.79%	6.98%	0.19%

Table Note: As discussed in my testimony, the average delta method for calculating growth rates was compared to the regression approach, and the delta method produced similar results to the regression method.

ELECTRIC COST AND REVENUE TREND CALCULATIONS 2014-2020

Commission Basis Results of Operations

AVISTA UTILITIES

(000'S OF DOLLARS)

Line	2014	2015	2016	2017	2018	2019	2020
No. REVENUES							
1	\$488,372	\$497,229	\$492,413	\$493,969	\$496,969	\$503,862	\$515,431
2	922	928	946	1,005	1,101	1,228	1,173
3	60,998	49,505	57,854	57,892	42,324	36,286	36,044
4	550,292	547,662	551,213	552,866	540,394	541,376	552,648
5	17,163	16,920	17,310	21,855	18,073	23,698	21,765
6	567,455	564,582	568,523	574,721	558,467	565,074	574,413
EXPENSES							
Production and Transmission							
7	120,307	140,485	136,385	136,766	132,992	134,241	125,455
8	116,643	85,107	78,794	77,895	73,968	74,282	74,245
9	23,715	24,947	26,676	27,841	28,724	32,447	38,192
10	8,101	5,974	4,706	3,597	3,308	2,620	(647)
11	12,828	14,133	14,654	14,743	16,795	17,039	16,909
12	281,594	270,646	261,215	260,842	255,787	260,629	254,154
Distribution							
13	21,299	24,056	21,415	21,461	23,753	26,747	22,661
14	23,794	25,379	27,819	29,786	32,066	31,074	32,894
15	25,821	27,448	27,287	27,300	28,420	28,751	28,856
16	70,914	76,883	76,521	78,547	84,239	86,572	84,411
17	11,166	12,363	13,021	12,312	11,983	11,167	11,290
18	1,383	1,454	1,406	1,449	1,551	1,590	1,314
19	0	0	0	0	59	0	0
Administrative & General							
20	46,210	49,942	48,989	47,166	51,109	54,986	72,503
21	16,947	21,503	23,877	25,247	27,999	31,202	28,528
22	0	0	0	(254)	(527)	(711)	389
23	0	0	0	0	0	0	4,687
24	63,157	71,445	72,866	72,159	78,581	85,477	106,107
25	428,214	432,791	425,029	425,309	432,200	445,435	457,276
26	139,241	131,791	143,494	149,412	126,267	119,639	117,137
FEDERAL INCOME TAX							
27	(7,683)	4,968	(29,081)	7,621	12,179	3,484	1,695
28	(136)	1	21	27	125	296	350
29	46,085	29,492	67,191	30,867	1,014	7,763	6,967
30	(128)	(129)	(326)	(226)	(317)	(318)	(318)
Levelized Settlement Exchange Power	0	0	0	0	0	0	0
31	\$101,103	\$97,459	\$105,689	\$111,123	\$113,266	\$108,414	\$108,443
(1) Corrected excise tax error in 2013-2015.							
RATE BASE							
PLANT IN SERVICE							
32	\$102,620	\$144,970	\$156,057	\$163,474	\$189,271	\$211,035	\$216,378
33	746,101	779,441	832,833	879,704	905,266	930,160	937,387
34	371,971	401,700	430,613	451,003	477,024	509,897	540,754
35	842,795	895,055	970,455	1,033,739	1,086,668	1,136,809	1,181,371
36	196,867	212,726	233,266	242,339	260,548	279,555	287,733
37	2,260,354	2,433,892	2,623,224	2,770,259	2,918,777	3,067,456	3,163,623
ACCUMULATED DEPRECIATION/AMORT							
38	20,242	24,943	30,914	37,059	43,469	57,078	72,611
39	325,531	342,899	351,625	352,091	365,167	382,437	402,763
40	123,869	129,936	135,624	136,838	140,271	147,016	153,938
41	252,722	273,578	295,383	314,013	335,270	352,811	352,905
42	65,720	73,050	80,093	85,360	93,140	92,865	95,550
43	788,084	844,406	893,639	925,361	977,317	1,032,207	1,077,767
44	1,472,270	1,589,486	1,729,585	1,844,898	1,941,460	2,035,249	2,085,856
45	(257,766)	(317,860)	(353,900)	(396,851)	(411,001)	(415,541)	(416,473)
46	1,214,504	1,271,626	1,375,685	1,448,047	1,530,459	1,619,708	1,669,383
47	10,846	7,458	4,566	2,110	(2,132)	(2,096)	(4,259)
48	47,807	59,722	62,474	63,549	46,614	40,710	35,853
49	\$1,273,157	\$1,338,806	\$1,442,726	\$1,513,706	\$1,574,941	\$1,658,143	\$1,700,977

ELECTRIC COST AND REVENUE TREND CALCULATIONS 2014-2020**AVISTA UTILITIES****WASHINGTON ELECTRIC RESULTS**

(000'S OF DOLLARS)

	2014	2015	2016	2017	2018	2019	2020
Line							
No.	Exclude Power Supply and Adder Schedule Expenses (DSM Tariff Rider and Residential Exchange Credit) from O&M						
1	Production/Transmission	120,307	140,485	136,385	136,766	132,992	125,455
2	Purchased Power	116,643	85,107	78,794	77,895	73,968	74,245
3	Distribution	21,299	24,056	21,415	21,461	23,753	22,661
4	Customer Accounting	11,166	12,363	13,021	12,312	11,983	11,290
5	Customer Service and Information	1,383	1,454	1,406	1,449	1,590	1,314
6	Sales	0	0	0	0	0	0
7	Administrative and General	46,210	49,942	48,989	47,166	51,109	72,503
8	Total Operating & Maintenance Expenses	317,008	313,407	300,010	297,049	295,415	307,468
9	Deduct Power Supply Expenses	(186,117)	(175,095)	(159,612)	(157,982)	(148,567)	(144,594)
10	Deduct DSM Tariff Rider Expenses	0	0	0	0	0	0
11	Deduct Res X Credit Expenses	0	0	0	0	0	0
12	CS2/Colstrip 2012 Deferral/Amort	1,000	1,000	1,100	0	0	0
13	Remove Wind Storm		(2,303)	0	0	0	0
14	Reclass A&G Payroll Taxes (2020 FERC Change)						4,687
15	Adjusted Operating Expenses	131,891	137,009	141,498	139,067	146,848	167,561
			3.88%	3.28%	-1.72%	5.60%	6.07%
							7.58%
16	Depreciation/Amortization	2014	2015	2016	2017	2018	2019
17	Production/Transmission	23,715	24,947	26,676	27,841	28,724	32,447
18	Distribution	23,794	25,379	27,819	29,786	32,066	31,074
19	Administrative and General	16,947	21,503	23,877	25,247	27,999	31,202
20	Total Depreciation/Amortization	64,456	71,829	78,372	82,874	88,789	94,723
			11.44%	9.11%	5.74%	7.14%	6.68%
							5.16%
	Exclude Adder Schedule excise taxes (DSM Tariff Rider and Residential Exchange Credit) from Taxes Other Than Income Tax						
21	Production/Transmission	12,828	14,133	14,654	14,743	16,795	16,909
22	Distribution	25,821	27,448	27,287	27,300	28,420	28,856
23	Administrative and General	0	0	0	0	0	4,687
24	Total Taxes Other Than Income Tax	38,649	41,581	41,941	42,043	45,215	50,452
25	Deduct DSM Tariff Rider Excise Tax	0	0	0	0	0	0
26	Deduct Res X Credit Excise Tax	0	0	0	0	0	0
	Reclass A&G Payroll Taxes (2020 FERC Change)						(4,687)
27	Adjusted Taxes Other Than Income Tax	38,649	41,581	41,941	42,043	45,215	45,765
			7.59%	0.87%	0.24%	7.54%	1.27%
							-0.05%
28	Net Plant After Deferred Income Tax	1,214,504	1,271,626	1,375,685	1,448,047	1,530,459	1,619,708
			4.70%	8.18%	5.26%	5.69%	5.83%
							3.07%

*Highlighted items are reclassified items per FERC. Benefits ordered to be charged to A&G per FERC effective 1/1/2020. Reclassified Payroll Taxes for consistency year to year.

NATURAL GAS COST AND REVENUE TREND CALCULATIONS 2014-2020

AVISTA UTILITIES

WASHINGTON NATURAL GAS RESULTS

Commission Basis Results of Operations

(000'S OF DOLLARS)

Line No.	DESCRIPTION	2014 Restated Total	2015 Restated Total	2016 Restated Total	2017 Restated Total	2018 Restated Total	2019 Restated Total	2020 Restated Total
REVENUES								
1	Total General Business	\$ 154,546	\$ 149,865	\$ 150,970	\$ 157,743	\$ 146,870	\$ 141,562	\$ 150,632
2	Total Transportation	3,960	4,054	4,477	5,049	4,960	5,052	4,441
3	Other Revenues	332	7,129	1,020	(824)	(4,216)	1,767	(2,554)
4	Total Gas Revenues	158,838	161,048	156,467	161,968	147,614	148,381	152,519
EXPENSES								
Production Expenses								
5	City Gate Purchases	84,187	79,634	63,460	64,414	51,519	51,148	48,833
6	Purchased Gas Expense	779	840	994	944	959	956	751
7	Net Nat Gas Storage Trans	-	-	1	-	-	-	-
8	Total Production	84,966	80,474	64,455	65,358	52,478	52,104	49,584
Underground Storage								
9	Operating Expenses	893	857	974	1,032	1,532	1,883	1,865
10	Depreciation/Amortization	402	439	492	537	627	494	435
11	Taxes	184	196	210	85	224	299	304
12	Total Underground Storage	1,479	1,492	1,676	1,654	2,383	2,676	2,604
Distribution								
13	Operating Expenses	10,704	12,315	12,050	12,380	12,308	13,667	11,783
14	Depreciation/Amortization	8,513	9,088	9,866	10,638	11,629	12,458	13,601
15	Taxes	8,719	8,554	8,383	9,144	9,458	9,180	9,080
16	Total Distribution	27,936	29,957	30,299	32,162	33,395	35,305	34,464
17	Customer Accounting	6,108	6,632	6,811	6,991	6,967	6,542	5,158
18	Customer Service & Information	865	837	964	1,000	1,232	1,180	911
19	Sales Expenses	-	-	-	-	-	-	-
Administrative & General								
20	Operating Expenses	12,777	14,007	13,267	13,375	14,612	15,441	21,165
21	Depreciation/Amortization	4,389	5,649	6,260	6,864	7,965	8,758	9,039
22	Regulatory Amortizations	(91)	(2,087)	1,079	917	51	122	1,313
23	Taxes	-	-	-	-	-	-	1,323
24	Total Admin. & General	17,075	17,569	20,606	21,156	22,628	24,321	32,840
25	Total Gas Expense	138,429	136,961	124,811	128,321	119,083	122,128	125,561
26	OPERATING INCOME BEFORE FIT	20,409	24,087	31,656	33,647	28,531	26,253	26,958
FEDERAL INCOME TAX								
27	Current Accrual	(6,945)	(729)	(1,133)	2,630	2,893	(4,692)	(2,517)
28	Debt Interest	(137)	(37)	11	13	43	117	132
29	Deferred FIT	13,105	7,842	9,923	6,462	393	7,205	4,573
30	Amort ITC	(20)	(20)	(17)	(15)	(15)	(12)	(6)
31	NET OPERATING INCOME	\$ 14,406	\$ 17,031	\$ 22,872	\$ 24,557	\$ 25,216	\$ 23,635	\$ 24,776
RATE BASE								
PLANT IN SERVICE								
32	Underground Storage	\$ 25,235	\$ 25,720	\$ 26,868	\$ 27,138	\$ 28,442	\$ 29,714	\$ 31,103
33	Distribution Plant	337,894	360,612	390,508	422,774	455,595	484,536	510,059
34	General Plant	59,169	75,514	82,624	93,491	114,053	141,661	154,767
35	Total Plant in Service	422,298	461,846	500,000	543,403	598,090	655,911	695,929
ACCUMULATED DEPRECIATION/AMORT								
36	Underground Storage	9,521	9,906	10,318	10,493	11,051	11,566	12,024
37	Distribution Plant	114,795	121,623	129,098	136,840	144,969	149,281	148,924
38	General Plant	17,429	20,741	23,473	27,497	32,354	38,750	47,445
39	Total Accumulated Depreciation/Amortization	141,745	152,270	162,889	174,830	188,374	199,597	208,393
40	NET PLANT	280,553	309,576	337,111	368,573	409,716	456,314	487,536
41	DEFERRED TAXES	(54,652)	(64,929)	(74,181)	(83,133)	(89,585)	(90,989)	(92,258)
42	Net Plant After DFIT	225,901	244,647	262,930	285,440	320,131	365,325	395,278
43	GAS INVENTORY	14,762	12,740	9,116	10,595	8,355	10,411	10,143
44	GAIN ON SALE OF BUILDING	-	-	-	-	-	-	-
45	OTHER	(479)	(485)	(249)	2,064	5,331	7,305	5,720
46	WORKING CAPITAL	10,073	16,069	14,800	15,075	7,549	2,350	(189)
47	TOTAL RATE BASE	\$ 250,257	\$ 272,971	\$ 286,597	\$ 313,174	\$ 341,366	\$ 385,391	\$ 410,952

NATURAL GAS COST AND REVENUE TREND CALCULATIONS 2014-2020

AVISTA UTILITIES

WASHINGTON NATURAL GAS RESULTS

(000'S OF DOLLARS)

Natural Gas Data for Escalators

			2014	2015	2016	2017	2018	2019	2020
Line No.	Exclude Gas Cost and Adder Schedule Expenses (DSM Tariff Rider, Decoupling Surcharge/Rebate) from O&M								
1	Underground Storage	CBR Line 9	893	857	974	1,032	1,532	1,883	1,865
2	Distribution	CBR Line 13	10,704	12,315	12,050	12,380	12,308	13,667	11,783
3	Customer Accounting	CBR Line 17	6,108	6,632	6,811	6,991	6,967	6,542	5,158
4	Customer Service and Information	CBR Line 18	865	837	964	1,000	1,232	1,180	911
5	Sales	CBR Line 19	0	0	0	0	0	0	0
6	Administrative and General	CBR Line 20	12,777	14,007	13,267	13,375	14,612	15,441	21,165
7	Operating expenses excluding production		31,347	34,648	34,066	34,778	36,651	38,713	40,882
8	Add Non PGA production O&M expenses		779	840	994	944	959	956	751
9	Deduct Gas Cost Rev Related Expenses		-602	-570	-454	-461	-312	-232	-221
10	Deduct DSM Tariff Rider Expenses		0	0	0	0	0	0	0
11	Deduct Decoupling Surcharge/Rebate Expenses		0	0	0	0	0	0	0
12	Reclass A&G Payroll Taxes (2020 FERC Change)								1,323
13	Adjusted Operating Expenses		31,524	34,918	34,606	35,261	37,298	39,437	42,735
	Annual Percentage Change			10.77%	-0.89%	1.89%	5.78%	5.73%	8.36%
	Depreciation/Amortization								
14	Underground Storage	CBR Line 10	402	439	492	537	627	494	435
15	Distribution	CBR Line 14	8,513	9,088	9,866	10,638	11,629	12,458	13,601
16	Administrative & General	CBR Line 21	4,389	5,649	6,260	6,864	7,965	8,758	9,039
17	Total Depreciation/Amortization		13,304	15,176	16,618	18,039	20,221	21,710	23,075
	Annual Percentage Change			14.07%	9.50%	8.55%	12.10%	7.36%	6.29%
	Exclude Adder Schedule amortizations (Decoupling Surcharge/Rebate) from Regulatory Amortizations								
18	Regulatory Amortizations	CBR Line 22	-91	-2,087	1,079	917	51	122	1,313
19	Deduct Decoupling Surcharge/Rebate Expenses		0	0	0	0	0	0	0
20	Adjusted Regulatory Amortizations		-91	-2,087	1,079	917	51	122	1,313
	Exclude Gas Cost and Adder Schedule excise taxes (DSM Tariff Rider, Decoupling Surcharge/Rebate) from Taxes Other Than Income Tax								
21	Underground Storage	CBR Line 11	184	196	210	85	224	299	304
22	Distribution	CBR Line 15	8,719	8,554	8,383	9,144	9,458	9,180	9,080
23	Administrative & General	CBR Line 23	0	0	0	0	0	0	1,323
24	Total Taxes Other Than Income		8,903	8,750	8,593	9,229	9,682	9,479	10,707
25	Deduct Gas Cost Excise Tax		-3,380	-3,197	-2,548	-2,586	-2,068	-2,053	-1,960
26	Deduct DSM Tariff Rider Excise Tax		0	0	0	0	0	0	0
27	Deduct Decoupling Surcharge/Rebate Excise Tax		0	0	0	0	0	0	0
28	Reclass A&G Payroll Taxes (2020 FERC Change)								-1,323
28	Adjusted Taxes Other Than Income		5,523	5,553	6,045	6,643	7,614	7,426	7,424
	Annual Percentage Change			0.54%	8.86%	9.89%	14.62%	-2.47%	-0.03%
29	Net Plant After Deferred Income Tax	CBR Line 42	225,901	244,647	262,930	285,440	320,131	365,325	395,278
	Annual Percentage Change			8.30%	7.47%	8.56%	12.15%	14.12%	8.20%

*Highlighted items are reclassified items per FERC. Benefits ordered to be charged to A&G per FERC effective 1/1/2020. Reclassified Payroll Taxes for consistency year to year.